EIANZ SEQ DIVISION

Environmental and Social Impact Assessment Reform

A Discussion Paper

September 2013

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Summary

A review of ESIA practice in Queensland identified five core issues undermining successful outcomes from the ESIA process:

1. The depth and breadth of issues covered in ESIA is often poorly matched to the potentially significant issues arising from individual projects, resulting in broad ranging, poorly focussed ESIA.
2. The quality and veracity of analysis in ESIAs is lacking with assessments and mitigation measures often presented in generic terms with little relationship to site specific conditions and actual project impacts.
3. The relationship of ESIA with overall project delivery is often mismatched, with proponents seeing the ESIA process as a roadblock to projects, rather than an opportunity for optimisation of projects
4. The openness and transparency of ESIA documentation and associated consultation processes is poor, shutting out many stakeholders from being able to provide meaningful input to the ESIA process
5. The extent to strategic and cumulative impacts and issues are addressed in ESIA is inherently limited and needs to be supported by strategic frameworks that provide a context for identification, assessment and, wherever possible, quantification of cumulative impacts.

In response to these issues, EIANZ developed a series of statements regarding what constitutes good practice ESIA. Analysis of the extent to which good practice ESIA is achieved in Queensland revealed a number of gaps and eight core opportunities for improving the outcomes achieved by ESIA were identified:

1. EIS Scoping:
   - Identifying key issues for individual projects based on potential impacts and hazards and known or likely environmental and social values present
   - Development of project-specific, targeted terms of reference (ToR)
2. Improving the skills of environmental practitioners through the development of guidance notes and delivering professional development activities, including:
   - Collecting and interpreting baseline data
   - Identifying impacts and cause and effect relationships
   - Evaluating the significance of impacts
   - Undertaking cumulative impact assessment at the project level
   - Addressing sustainability in ESIA
   - Overcoming key limitations of ESIA
3. Strategic environmental assessment
4. Coordinated assessment of cumulative impacts
5. Developing guidelines for proponents on integrating the ESIA process into overall project delivery with a focus on:
   - Early integration of environmental and social considerations into project decision making
   - Ensuring adequate project design information is available to support the ESIA
6. Centralised collation and management of data on environmental characteristics, values and condition
7. Guidelines on public participation and engagement in the ESIA process
8. Research on validation of predicted outcomes and effectiveness of mitigation measures.

1. Introduction

The EIANZ is the professional organisation that supports, guides and represents environmental practitioners. It encourages the development and implementation of good practice environmental management through policies, standards and continuing professional development. Members of the EIANZ operate in accordance with its Code of Ethics and Professional Conduct and can be found guiding the implementation of good practice environmental management throughout Australia and New Zealand Among its members are Queensland's leading environmental impact assessment practitioners from government, industry and the consulting sector.

The EIANZ is concerned about the outcomes of the present environmental and social impact assessment (ESIA) process used in Queensland. The ESIA process is seen by project proponents as a time consuming and resource hungry process for getting approval rather than as an essential element in designing robust and environmentally sustainable projects. In that context the EIANZ notes and supports the Regulatory Strategy published by the Department of Environment and Heritage Protection (DEHP) that places much greater responsibility for environmental performance on project proponents and operators. Enhancing the quality of the ESIA process will assist project proponents and operators to focus on environmental performance in the earliest stages of design and execution of projects.

The EIANZ believes that there are opportunities to make some significant changes to the way in which ESIA is carried out in Queensland. ESIA is a process devised in the early 1970s as a means for systematically gathering information that all decision makers need to ensure that the environmental impacts of projects are properly considered in their planning and execution. It has changed little in the intervening decades, and has become focused on decision making by governments rather than fulfilling its potential by informing decisions by project proponents, planners, investors and operators, as well as government decision makers.

While ESIA must remain a cornerstone of good practice environmental management, the ESIA documents currently being produced are unwieldy and inaccessible to stakeholders, with their focus too often on the quantity of information rather than the quality of the analysis and assessment that is undertaken. EISs that are focussed on the key issues can be assessed and processed more quickly because the quality of data and analysis is sufficient to avoid repeated requests for additional information. EIANZ contends that significant time savings can be achieved in the ESIA process by improving the quality of EIS documentation.

ESIA is also a project focused tool and has not been able to take on the challenges of increased development pressure and overlapping and cumulative impacts from multiple large scale projects. Attention needs to be paid to the strategic frameworks in which development takes place and cumulative impacts from multiple developments by different parties.

This discussion paper proposes a path forward for reform of the ESIA process in Queensland by:

- Providing an overview of the purposes and benefits of ESIA
- Identifying and discussing five core issues in relation to current practices
- Presenting a set of statements on what constitutes good practice ESIA
- Identifying opportunities and actions for improvement.

Supporting information is provided in attachments including:

- Background and methodology for preparation of the paper (Attachment A)

- An in-depth analysis of the state of ESIA practice in Queensland through comparison of current practice with the good practice statements (Attachment B)
- A review of ESIA issues in selected jurisdictions (Attachment C).

On terminology, where the word environment is used in this paper, it should be taken in its broadest meaning, to include biological, physical and social elements of the environment. Environmental and social impact assessment (ESIA) and impact assessment should be taken to refer to the process of undertaking the analysis and assessment of impacts, while environmental impact statement (EIS) should be taken to refer to the documentation produced by this process.

2. Purpose and Benefits of Environmental and Social Impact Assessment

In order to set a benchmark for future directions in ESIA, the overarching purpose and benefit of ESIA must be established. Environmental and social impact assessment is defined by the International Association for Impact Assessment (IAIA) 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.* (IAIA 1999)

Environmental and social impact assessment is critical to orderly and sustainable development because it promotes and supports decision making about actions, projects and developments that takes environmental and social matters into consideration.

There are three core types of decisions that ESIA should inform:

- Whether an action, project or development should proceed
- Modifications that should be made to an action, project or development if it is to go ahead
- Conditions and restrictions that should apply to an action, project or development when it is undertaken.

These decisions may be made by proponents when undertaking internal evaluations of actions, projects and developments, and by regulators when evaluating applications for regulatory approval of an action, project or development. It is most common for ESIA to be a tool used by regulatory authorities for the evaluation and approval of projects. Project proponents, particularly those operating in the international arena also often embed ESIA techniques in the design and evaluation of actions, projects and developments, although the extent to which ESIA influences decision making can vary significantly.

In order to fulfil its function in supporting robust environmentally sustainable decision making, the ESIA process must clearly document the gains and losses that will occur if the action, project or development goes ahead.

Where ESIA is used in decision making by a regulatory agency, openness, transparency and full disclosure must be fundamental precepts of the ESIA process.

3. Core Issues and Key Concerns

3.1 Common Issues in ESIA Implementation

The ESIA process is often seen by project proponents as a time consuming and resource hungry process for getting approval rather than as an essential element in designing robust and environmentally sustainable projects. Recent political debate in Australia has focussed on the duplication in process that occurs where actions, projects or developments involve multiple jurisdictional interests; and on the difficulties of assessing and evaluating the cumulative impacts of multiple projects in the same geographical area. Considerable effort has also been made by the Queensland Government to reduce procedural timeframes. EIANZ also contends that improvement in the focus and quality of ESIA documentation will also reduce timeframes and resource requirements.

Randolph in Environmental Land Use Planning and Management identifies a number of perennial problems that limit the effectiveness of ESIA. Of major concern is that it comes too late in the planning process, that information derived through the assessment is not integrated into decision making, and cumulative impacts that extend beyond the immediate project are not assessed. Other issues highlighted by Randolph include the threshold scale of projects at which ESIA is undertaken, the lack of ESIA for policies and programs, the engagement of stakeholders in ESIA is often inadequate, and proposed mitigation actions and monitoring requirements may not be implemented.

Another fundamental issue identified in review of literature on ESIA reform in other jurisdictions is that the EIS process lacks stakeholder “buy-in”. This appears to be principally a result of the process being overly burdensome because of its failings to focus on the most relevant issues at hand. This results in too much attention being given to less relevant issues that are inappropriate to assessment of projects at a conceptual planning level. It also detracts time and resources away from the delivery of effective environmental outcomes, with many projects affording to meet only statutory compliance rather than generate any environmental enhancements.

Common reform objectives identified by stakeholders in various jurisdictions undertaking ESIA reform include:

- Streamlining the EIA process
- More effective integration of stakeholders engaged in the process
- Improving the quality of assessments
- Better justification of decisions made by governments that affect the environment

All of these issues can be seen in the implementation of ESIA in Queensland. A more detailed evaluation of these matters in several jurisdictions is provided in Attachment B.

3.2 Core Issues in Queensland

3.2.1 Introduction

Given that one of the core outcomes sought from the ESIA process is to inform decisions regarding project design, approval and execution about the economic, social and environmental costs and benefits, it is appropriate to evaluate the extent to which the ESIA process is contributing to sound decision making by both project proponents and governments.

The EIANZ has identified five core issues that are critical to achieving the purpose of ESIa and realising its benefits. These issues, together with a brief statement on key concerns at present are set out in Table 1 and discussed in more detail in Sections 3.2.2 to 3.2.6.

Table 1 – Core Issues and Key Concerns

Core Issue	Key Concerns
The depth and breadth of issues covered in ESIA	The scope requirements for ESIA documents are currently very broad with little or no differentiation in scope requirements on the basis of the type of project or project location. Tighter scoping of ESIAs would benefit proponents in terms of cost and time requirements, as well as reducing the burden on regulators and other stakeholders required to review documentation. Tighter scoping would also allow more focus on key issues, delivering more detailed information on the potentially important issues rather than broad information on many issues. [The EIANZ notes that during the preparation of this paper the Queensland Government moved to simplify the guidance material that it issues on the development of terms of reference for ESIA. While the steps taken will potentially refocus the attention of regulators on the appropriate scope for an ESIA, the EIANZ considers that they do not go far enough in improving the process.]
The quality and veracity of analysis in ESIAs	Baseline data is rarely synthesised to create an holistic picture of the environmental and social systems in which a project takes place. Identification and evaluation of impacts is often quite generic and lacks specific reference to the receiving environment characteristics and social settings and project-related impacts. It is difficult in such circumstances to determine which impacts may be significant or unacceptable. Mitigation measures are also often generic and it is not made clear, through the presentation of evidence, how effective the mitigation measure might be for the particular project and receiving environment. It is therefore difficult to clearly identify and evaluate the residual impacts of an action, project or development from most ESIA documentation.
The relationship of ESIA with overall project delivery	ESIA is often seen as a roadblock by proponents, and the substantial benefits of the ESIA process in terms of realising overall improvements in project design and execution are often lost due to the lack of integration of the knowledge derived in this way at the earliest stages of conceptualising a project. When there is lack of coordination between the ESIA and project development and design tasks, the validity of the evaluation conducted through the ESIA process can be derailed by design changes in the project development phase. Equally, studies undertaken for the ESIA can also identify significant constraints or opportunities and it may be too late to address these if the design is fixed.

The openness and transparency of ESIA documentation and associated consultation processes	The sheer volume of ESIA documentation, and the poor standard of presentation of information means that documentation has become unwieldy and inaccessible to stakeholders. In many EISs, the benefits and impacts are not clearly stated and the assessment and evaluation is not presented in a way that can be understood by non-specialists. Consultation processes do not appear to be working as effectively as they might, with stakeholder fatigue reported in some areas where there are multiple projects, and an increasing trend to receive bulk submissions through internet sites. Consultation about actions, projects and developments is too often left by proponents until it is formally required as part of the ESIA process
The extent to strategic and cumulative impacts and issues are addressed in ESIA	In situations where there are multiple projects occurring in close proximity to each other, or projects are being undertaken in areas that are already under pressure from development, project-level ESIA can only successfully address cumulative impacts when there is a broader strategic framework that sets out environmental and social values to be protected and the performance standards that must be achieved. This in turn requires policies, strategies and plans to undergo strategic environmental assessment. There is currently no strategic environmental assessment process under Queensland legislation. Federal processes focus on assessment of development plans rather than higher level policies and strategies.

3.2.2 Core Issue 1 – Depth and Breadth of Issues Covered

Key issues for practice in Queensland are:

- There are significant disadvantages of over-scoping of ESIA processes including additional cost to the proponent and the excessive length and complexity of documents making them difficult for stakeholders to comprehend.
- Often a range of issues that are not particularly relevant to the decision are included in the scope of an ESIA process in the mistaken belief by agencies of government that the ESIA provides the only opportunity to negotiate specific details of projects. For example, Terms of Reference require appraisal of impacts of traffic on road pavements in the ESIA, when, for many projects, this matter could readily be dealt with in later agreements with road managers, once the real traffic impacts become clear.
- The range and severity of impacts varies significantly from location to location and project to project, however the same level of assessment and evaluation is often required. For example, the level of detail of visual impact assessment required in Terms of Reference is often the same for an underground coal mine in an area of existing open cut mining as it is for a development in the Great Barrier Reef World Heritage Area (GBRWHA).
- The scope of issues to be covered in ESIA should be based on an initial appraisal of the likely significance of potential impacts of a project based on appraisal of the environmental

and social values and sensitivities of the study area and likely severity or magnitude of potential impacts by experienced practitioners.
- This would then allow effort and expenditure on ESIA studies to be proportionate to the potential severity and significance of identified impacts.
- As an ESIA process for a large project may take several years; regulatory and policy change is likely to occur in that time frame. A balance is required between ensuring that the ESIA process is flexible enough to respond to emerging issues and concerns, and providing proponents with a degree of certainty about the scope once the process is underway.

Key opportunities for improved practice in Queensland are:

- Development of project-specific Terms of Reference. The Terms of Reference should focus effort on those impacts and risks that are highly or moderately significant. This would require a more formal scoping stage, led by experienced environmental practitioners with opportunities for stakeholder involvement in clarifying the proposed scope.
- Improving the skills of practitioners through professional development and guidelines on particular aspects of ESIA.

Further details on these opportunities are provided in Section 5.

3.2.3 Core Issue 2 - Quality and Veracity of Analysis

Key issues for practice in Queensland are:

- The baseline data collection and analysis aspect of the ESIA process in Queensland is generally done moderately well, with some key deficiencies and issues as follows:
  - Core data requirements such as adequate time series data for ecological values, groundwater and surface water quantity and quality, air chemistry, dust, and noise and vibration are often lacking.
  - Where data have been collected for previous studies, these are not always available to other proponents, or available in a usable format.
  - Variations in baseline data collection methods means that information collected by different processes is not always comparable. This reduces the ability to track and understand temporal and spatial variations.
  - Few ESIA processes result in the synthesis of the data collected so as to provide a holistic view of the baseline conditions. For example, links between the hydrological cycle, water quality and aquatic ecosystem values are not always made. This in turn makes it harder to predict impacts in what are invariably interconnected systems.
- The identification and evaluation of impacts is often poorly done, with key deficiencies as follows:
  - Impacts are not clearly identified and elucidated. Statements on impacts are often broad and cause and effect relationships are not explained and evaluated with clarity.
  - Information on impacts is often generic, or fails to explore the flow on effects or wider implications of an initial disturbance. For example, the impact assessment might state the area of a particular vegetation community to be cleared but does not then analyse the implications of this for local, regional or national biodiversity values or for individual species that may depend on that habitat.
  - The potential significance of impacts is not made clear, either in terms of the scale and magnitude of impact or the importance of environmental and social values that are impacted.

- There is rarely a clear statement of residual impacts that reflects the likely outcomes and the extent to which mitigation measures might really be effective in avoiding or minimising impacts.
- Often, the impact assessment component does not relate back to the baseline conditions. For example, documentation recently released for an ESIA process simply stated that "stormwater generated on the [site] will be managed to minimise potential impacts on the receiving environment" but did not actually identify the receiving environment, the values of the receiving environment that might be affected, what protection levels were appropriate for this receiving environment and how they were to be achieved.
- There is no clear guidance as to when an impact should be considered "unacceptable" and therefore require avoidance or comprehensive measures to mitigate its consequences.
- Cross-correlations are often missed, for example an SIA may identify dust and noise impacts as being significant impacts on local communities while the air quality and noise studies have demonstrated that policy and guideline requirements will be met.
- Inconsistency across documentation is a common failing that acts to the detriment of proponents and results in wasted effort in clarification.
- Mitigation measures are often generic, unrealistic and unlikely to be particularly effective.
- There is a high level of "cut and paste" and duplication in the presentation of documentation.
- There is a strong reluctance to clearly state situations where residual impacts cannot be avoided or effectively mitigated. Rather than acknowledge that there will inevitably be some impacts from all development projects, proponents make commitments to undertake further studies and prepare management plans as a means to avoid acknowledging actual impacts.
- Overall, there is often a very low level of certainty as to the residual impacts, and limited examinations of worst case scenarios which undermines the decision making process.

Key opportunities for improved practice in Queensland are:

- Giving more attention to the ways in which post-ESIA monitoring data is collected and publicly reported to improve its ongoing usability; the ability to compare different datasets; and the role of adaptive environmental management in the approval and conditioning of projects.
- Developing a systematic approach to post-ESIA validation of predicted impacts, together with a requirement to make such studies publicly available. This would particularly assist in improving the accuracy of impact prediction and confidence in the effectiveness of mitigation measures. This would also improve the accountability of environmental professionals and proponents in terms of accurate identification of impacts and the effectiveness of nominated mitigation measures.
- Articulating a robust, performance-based approach to adaptive environmental management where, on the basis of monitoring and performance, the requirements set out in conditions of approval are regularly reviewed and varied.
- Improving the skills of ESIA practitioners through development of good practice guidelines and related professional development activities. In particular, guidance is needed on how

impacts are identified and analysed as well as tools and techniques for exploring when impacts may be unacceptable or require avoidance or mitigation measures.
- Moving towards a system where competent environmental professionals certify the adequacy of the scope and quality of the documentation provided through the ESIA process. The EIANZ has a general certification and has recently introduced specialist certifications for impact assessment practitioners and ecologists.

Further details on these opportunities are provided in Section 5.

3.2.4 Core Issue 3 - Relationship of ESIA with overall Project Delivery

Key issues for practice in Queensland are:

- The ESIA/approvals process is often on the critical path in delivery schedules for major projects as a certain level of design detail is required for the ESIA and approvals must be in place before construction can commence, and often, before financing can be obtained.
- There is often insufficient detail on key design aspects of an action, project or development on which to base the identification and evaluation of impacts. Impact assessment professionals cite this as a key frustration in preparing impact assessments.
- Lack of [early] integration of environmental and social considerations with engineering and cost considerations often means that projects are not put forward in the optimum form.
- Often, insufficient time or funding/resources are available for iterations in or adjustments to designs for them to reflect the findings of environmental and social impact studies.
- Environmental and social impact studies may identify significant impacts too late in the design process for these impacts to be avoided.
- Environmental and social impact studies often identify opportunities to optimise design but these can be lost because of timing.
- The scope of engineering design studies does not always align with the information requirements of environmental and social impact studies.
- Significant project changes are often made during the EIS process. This in turn delays the EIS process and can result in considerable additional expenditure.

Key opportunities for improved practice in Queensland are:

- Preparation of proponent guidelines that would assist project managers and ESIA managers to better align the ESIA process with the overall project delivery process. Such guidelines would draw on knowledge of experienced ESIA and project management practitioners and assist proponents in understanding what was ahead when commencing an action, project or development that involved a requirement for statutory ESIA.
- Early scoping of potentially significant impacts, based on preliminary understanding of environmental and social values and the likely changes that the project may bring about will allow earlier incorporation of important environmental and social considerations into project design.

3.2.5 Core Issue 4 - Openness and Transparency

Key issues for practice in Queensland are:

- Statutory EIS processes in Queensland include requirements for public notification. However, the openness and transparency of the process is affected by:
  - The size and poor presentation of documents, which discourages or even precludes a number of stakeholders

- Reluctance by some proponents to undertake meaningful consultation
- A low level of trust between proponents, consultants working for proponents, regulators and the wider community.

- It is common for stakeholders to engage in mass letter writing/email campaigns in response to formal invitations for comment. Comments made in these responses are typically highly generic and it does not appear that most of the respondents have any real knowledge of the project, the issues that they are raising or the circumstances in which the project is taking place. These campaigns are often lead by core stakeholder groups who then use the internet to seek broad support. While comments from stakeholders must always be encouraged, the comments made in this format are rarely meaningful or helpful to the process and there is negligible benefit to the stakeholders involved, the regulatory authorities or the proponent.

Key opportunities for improved practice in Queensland are:

- Undertaking a review of current public notification and consultation practices within the ESIA process to review whether practices focus on:
- Preparation of guidelines on undertaking stakeholder consultation as part of an ESIA process and the mandating of a minimum level of performance. This action could be undertaken collaboratively with organisations such as the International Association for Public Participation (IAP2). Guidelines should:
  - Explore the benefits of early proactive consultation by proponents
  - Identify means to get stakeholders more meaningfully involved in the ESIA review process, to reverse the trend for generic, mass responses
  - Guide public consultation practices that are effective in identifying and resolving stakeholder issues.

3.2.6 Core Issue 5 - Addressing Strategic and Cumulative Issues

The increased scale and intensity of development in Queensland has meant that landuse planning considerations are becoming increasingly important in guiding appropriate development and that the consideration of cumulative impacts is increasingly important in the decision making process. The Sustainable Planning Act 2009 (SP Act) provides a framework for regional and local planning, however consideration of the environmental and social impacts of development patterns and strategic outcomes established in these plans is generally limited.

Much of recent frustration and disillusionment with the ESIA process has arisen because of the limited ability of project impact assessment to address cumulative impacts and provide strategic guidance on the appropriateness of particular types of development in particular locations, particularly where robust and transparent landuse planning processes have not already taken place.

ESIA is a project level assessment tool and does not deal well with strategic issues such as determining the appropriate patterns of development or acceptable thresholds for environmental outcomes. Terms of reference for ESIA generally require examination of the consistency of an action, project or development with various policies and plans. However, if this assessment reveals inconsistency, there are limited mechanisms for further action and no means to manage impacts outside of the commitments that may be given by a project proponent. More importantly, as policies and plans in Queensland do not undergo any kind of strategic environmental assessment, the consistency of an action, project or development with policies and plans does not necessarily mean that, if it proceeds, it can do so without causing unacceptable environmental outcomes.

Key issues for practice in Queensland are:

- ESIA is a valuable project-level tool however it is not an effective tool for addressing cumulative impacts from multiple projects.
- ESIA practitioners continuously struggle with the assessment of cumulative impacts of actions, projects and developments of other proponents within a project specific ESIA.
- Where significant cumulative impacts exist, proponents are not in a position to initiate mitigation measures in response to cumulative impacts. Proponents can only ever address those aspects directly under their control.
- Cumulative impacts of projects often unfairly result in the penalising of the last project to be developed with higher standards of performance while earlier projects may have had less rigorous performance standards applied. In this situation, there is often reluctance on the part of regulatory authorities to modify existing conditions of approval and unsurprisingly, significant resistance from operators to such changes.
- The extent to which consistency with policy and strategy frameworks is addressed in ESIA is variable, and often poor.
- Cumulative impacts of development are sparingly addressed in policy and strategy in Queensland. Objectives or desired outcomes are usually set, but are quite broad and do not help individual proponents relate project-level impacts to overall assimilative capacity of systems and resources.
- Policies, plans and strategies in Queensland do not undergo any form of strategic environmental assessment. There remains considerable confusion between the process of strategic environmental assessment and strategic landuse planning.
- There is some disconnection between regional plans and local planning schemes and some other plans and policies in relation to overall environmental outcomes.
- The Australian and Queensland governments are undertaking a strategic assessment of the Great Barrier Reef World Heritage Area, however it is not clear what actual policies, plans or strategies are being assessed, or whether the assessment is in fact simply reviewing existing patterns of development.
- At a higher level, this means that ESIA in Queensland rarely addresses the overall sustainability of an individual project in any meaningful way.

Key opportunities for improved practice in Queensland are:

- Improving the skills of practitioners in undertaking cumulative impact assessment at a project level, and in addressing policy and strategic frameworks in an EIS. This can be achieved through preparation of guidelines and targeted professional development programs.
- Introducing a process of strategic environmental assessment of policies, plans and strategies. This in turn would provide a robust framework for cumulative impact assessment at the project level as consistency with a policies, plans or strategies would generally mean that cumulative impacts of the project would be within acceptable limits.

4. Good Practice ESIA

4.1 International Standards

While not an exhaustive list, the following international standards and guidelines are of relevance to good practice ESIA:

- International Association of Impact Assessment (1999) *Principles of Impact Assessment* available from http://www.iaia.org/publications-resources/downloadable-publications.aspx
- World Bank Operational Policy OP 4.01 (Environmental Assessment) and Bank Procedures BP 4.01 (Environmental Assessment) http://go.worldbank.org/3LBMXIFF20
- International Finance Corporation *Performance Standards on Environmental and Social Sustainability* 2012, http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_pps.
- Guidelines on screening and scoping issued by the European Union http://ec.europa.eu/environment/eia/eia-support.htm
- EU Guidance on EIS Review: http://ec.europa.eu/environment/eia/eia-guidelines/g-review-full-text.pdf
- Mining and the Environment – EIA review checklist: http://www.miningandtheenvironment.com/images/data/161/EIA%20Review%20Checklist%2007_04_09.pdf.

4.2 Good Practice Statements

To be of maximum benefit to all stakeholders, ESIA needs to be conducted well. The following statements were developed by EIANZ to set out the characteristics of good practice ESIA. The statements are consistent with international practice.

To achieve its purpose, good practice ESIA:

1. Is based on a thorough understanding of the environmental and social values and resources in the receiving environment. Baseline studies are of sufficient geographic and temporal coverage to provide for an understanding of seasonal and regional variations in environmental values. Description of the existing environment includes documentation of the interrelationships between different elements of the physical, biological and social environment.

2. Produces succinct and well-structured documentation that provides the information required for stakeholders to understand the environmental outcomes of the action, and for regulators and decision makers to make informed decisions regarding the action.

3. Clearly states data and information sources, methodologies, assumptions, uncertainties and judgements used in identifying baseline environmental and social values and in predicting environmental outcomes.

4. Includes mechanisms for incorporating new or unforseen issues that may arise during the course of the investigations.

5. Is undertaken in a framework of sustainability, considering effects of the action on the ability of the physical, biological and social environment to support human life both now and in the future.

6. Is integrated into project development and delivery such that the outcomes of studies undertaken for the ESIA can influence design and maximise opportunities to avoid and minimise impacts and enhance positive outcomes. This includes assessment of alternatives such that the action is optimised from an environmental, social, technological and financial point of view.

To assist with orderly development, good practice ESIA:

7. Occurs in the context of a broader strategic planning and policy framework that, among other things, provides guidance in relation to orderly planning and development, thresholds for project level and cumulative impacts and core values and resources that are to be protected.

8. Clearly states the extent to which an action and the associated environmental outcomes are consistent with legislation, policies, guidelines and plans and provides justification where the action is inconsistent or non-compliant with legislation, policies, guidelines and plans.

To rigorously evaluate impacts, good practice ESIA:

9. Focuses effort on the potentially significant impacts of an action with the depth and scope of the assessment proportionate to the values that are potentially impacted and the scale and significance of potential impacts.

10. Presents impacts and overall environmental outcomes in a logical and objective manner, with quantification of impacts wherever possible and, where impacts are presented qualitatively, sufficient context to support evaluation of the significance of impacts.

11. Distinguishes between impacts, which are the planned and foreseeable outcomes of an action, and hazards, which are the unplanned or unforeseeable outcomes of an action.

12. Analyses the significance of each impact using a robust, rigorous and replicable methodology that reflects the magnitude and consequence of the impact and the importance and resilience of the affected value or resource.

13. Clearly sets out cause and effect relationships and explores the indirect and flow on impacts that may occur, highlighting impact pathways that exist due to the interconnectedness that exists in physical, ecological and social systems.

14. Explicitly states the extent to which the action contributes to cumulative impacts and proposes mitigation measures that the proponent will implement in response to cumulative impacts. Proponent's mitigation measures are commensurate with the scale of contribution to cumulative impacts.

15. Explicitly states the overall environmental outcomes that are predicted to occur, taking into account the likely effectiveness of mitigation measures. Predicted environmental outcomes are compared to legislation, policy, guidelines and standards.

16. Explores both the likely and worst case environmental outcomes and explains levels of uncertainty in relation to predicted outcomes.

To gain acceptance, good practice ESIA:

17. Facilitates public involvement and provides for response to issues and concerns raised by stakeholders. In this regard the "consult" or "involve" levels of engagement described in the IAP2 spectrum of public participation (http://www.iap2.org.au/resources/iap2s-public-participation-spectrum) are considered appropriate for most ESIA processes. Engagement approaches and effort is proportional to potential impacts on stakeholder groups, however, all interested parties are provided with opportunity for full participation, even if not directly affected.

18. Supports transparency in decision making by clearly setting out the positive and negative outcomes that can be expected if an action proceeds.

To achieve desired performance outcomes, good practice ESIA:

19. Leads first to development of measures to avoid or minimise adverse impacts and maximise positive impacts and then, where impacts cannot be avoided or minimised, proposes measures to manage, repair, compensate for or offset impacts.

20. Leads to development of effective mitigation measures specific to the action, location and identified impacts and does not defer to future studies or management plans to be developed in the future.

21. Proposes performance standards in relation to environmental outcomes that are consistent with legislative and policy requirements and stakeholder expectations and protect important environmental values and resources. These performance standards will provide the basis for monitoring actual outcomes and effectiveness of proposed mitigation measures, and as a benchmark in the event that there are later changes in the action.

22. Proposes contingency measures in the event that monitoring indicates that actual outcomes are more significant than predicted outcomes or that proposed mitigation measures are not effective in controlling impacts and achieving performance standards.

23. Leads to a monitoring program that will allow validation of the accuracy of predicted outcomes and the effectiveness of mitigation measures and will check for unforseen impacts.

24. Includes clear, quantitative and accountable commitments from proponents that are appropriate to the significance of impacts.

25. Provides a basis for concise performance-based conditions to be imposed by decision makers. This in turn provides a basis for future compliance.

An analysis of the extent to which these guidelines are achieved in ESIA practice in Queensland at the current time is provided in Attachment B.

5. Opportunities for Improving ESIA Practice and Outcomes

5.1 Overview of Opportunities

Based on the definition of good practice set out in 4, analysis of the extent to which good practice is achieved (Attachment B) and the key issues and concerns with current practice discussed in Section 3, the following opportunities have been identified to strengthen ESIA practice and the outcomes of the ESIA process:

1. EIS Scoping:
    - Identifying key issues for individual projects based on potential impacts and hazards and known or likely environmental and social values present
    - Development of project-specific, targeted terms of reference (ToR)
2. Improving the skills of environmental practitioners through the development of guidance notes and delivering professional development activities, including:
    - Collecting and interpreting baseline data
    - Identifying impacts and cause and effect relationships
    - Evaluating the significance of impacts
    - Undertaking cumulative impact assessment at the project level
    - Addressing sustainability in ESIA
    - Overcoming key limitations of ESIA
3. Strategic environmental assessment
4. Coordinated assessment of cumulative impacts
5. Developing guidelines for proponents on integrating the ESIA process into overall project delivery with a focus on:
    - Early integration of environmental and social considerations into project decision making
    - Ensuring adequate project design information is available to support the ESIA
6. Centralised collation and management of data on environmental characteristics, values and condition
7. Guidelines on public participation and engagement in the ESIA process
8. Research on validation of predicted outcomes and effectiveness of mitigation measures.

In combination, these opportunities will assist in closing the gap between current practice (as assessed by the IA reform group) and good practice. A correlation between the eight opportunities and the good practice statements is provided in Attachment B. Note that the numbering of the opportunities does not necessarily represent priorities for action.

The actions in these eight areas of opportunity could also be underpinned by:

- Action to evaluate whether legislative and/or process reform is required to support good practice ESIA.
- Moving toward a process whereby key ESIA documentation is certified by suitably qualified and experienced environmental practitioners for the conformity of its content with statutory requirements, formal standards for the process of preparing documents and their content, and general good practice for conducting ESIA.

The EIANZ has a formal system for accrediting qualified environmental practitioners that has both general certification and specialist certification, including in the areas of impact assessment and ecology. Members of the EIANZ are bound by a Code of Ethics and Professional Conduct and can have their membership suspended or revoked for non-compliance with its terms.

Certification of ESIA documentation by environmental practitioners has the potential to reduce the burden for regulatory agencies in reviewing and assessing the adequacy of presented documentation, and improving the quality of outcomes of the ESIA process because there is greater professional oversight of the preparation of ESIA documentation and its contributory studies.

5.2 Opportunity 1 – EIS Scoping and Targeted Terms of Reference

The need for EIS documentation to be better targeted to the potentially significant impacts of an action has been identified by a wide range of stakeholders as a critical step for improving the overall quality of the ESIA process. A more rigorous and project-specific approach to scoping will contribute to the quality of ESIA and to the overall decision making process by:

- Reducing the content of ESIA documentation to that which is pertinent to the decision
- Increasing the depth and quality of assessment of potentially significant impacts, their avoidance and mitigation.

A new approach to scoping of ESIA studies could involve:

- A revised approach involving the project proponent preparing a more comprehensive initial advice statement/referral with a specific focus on identifying the potential impacts of an action, project or development, having regard to the action, project or development itself and the environmental values present in the receiving environment.
- Guidelines for initial identification of potentially significant impacts to support preparation of the initial advice statement/referral, including:
  - Scoping checklists to assist in identification of the full range of impacts. There are already examples of checklists used in other jurisdictions.
  - Methods for determining significant versus non-significant impacts. An example of such a tool is the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) Policy Statement 1.1 which guides proponents on whether impacts on matters protected under the EPBC Act are potentially significant.
- Preparation of draft terms of reference by proponents that match the level of effort applied to investigations and analysis to the potential significance of impacts. Terms of reference would be project and location specific in regards to matters such as the methodology and sampling programs required for baseline studies and application of modelling and other impact prediction methodologies. This stage would be supported by guidelines on matching the content of terms of reference to identified potentially significant impacts.
- Staged review of terms of reference on completion of baseline studies and on development of the project description to check that the initial scoping had not over- or under-emphasised the significance of potential impacts.

A key matter underpinning this approach would be the involvement of experienced environmental practitioners to review the initial advice statement and provide input to the terms of reference.

Over time consideration could be given to the development and implementation of a requirement that initial advice statements/referrals be certified by environmental practitioners as to their conformity with guidelines for their development.

Table 2 – Opportunity 1 – EIS Scoping – Core Actions

Key Stakeholder	Actions
Regulator/Decision	• Amend legislation and procedures to strengthen the scoping

Maker	stage • Work with the EIANZ to develop and implement good practice guidelines • Work with the EIANZ to develop and implement arrangements for the certification by environmental practitioners of the conformity of initial advice statements/referrals with guidelines for their development
Environmental Practitioners	• Improve skills of self and others in scoping through professional development and mentoring
EIANZ	• Assist with the development and implementation of good practice guidelines on scoping impacts and preparing targeted terms of reference • Develop guidelines for impact significance assessment at the scoping stage • Develop and/or adapt checklists to support the scoping process • Provide professional development activities to support impact scoping and terms of reference preparation

5.3 Opportunity 2 – Professional Skills for Environmental Practitioners

The need for the development of better skills in environmental practitioners working in the area of ESIA arises from analysis of current levels of practice and the identification of a range of issues, particularly associated with the quality and veracity of analysis presented in ESIA documentation.

There is a lack of good guidance to environmental practitioners on appropriate approaches and regulatory expectations in relation to ESIA, and poor practice is being reinforced when practitioners attempt to self-learn by reference to poorly prepared ESIA documentation.

The initial analysis indicates that guidelines could be provided in the following priority areas:

- Identifying impacts and cause-and-effect relationships and evaluating the significance of impacts
- Undertaking cumulative impact assessment at the project level
- Addressing sustainability in ESIA.

Preliminary outlines of these four guidelines are provided in Attachment D.

Guidelines would be developed in a consultative manner, and then delivered to practitioners through a professional development program. In practical terms, funding for a lead author would assist in minimising dependence on volunteers with the associated delays that can occur.

Case studies could also be prepared to support the guideline.

EIANZ- SEQ Division has a strong history in delivering professional development activities and many environmental professionals, whether members or not, look to the Institute for professional development.

Professional development activities associated with improving skills of practitioners would include the following forums and events:

- Invited speakers from government and private sectors, who would be asked to speak on topics and issues selected by the organising committee
- Formal training sessions on application of guidelines
- Workshops on guidelines to identify opportunities for improvement (senior IA professionals)
- Panel discussions.

Forums on professional skills will be presented at two levels:

- For less experienced practitioners who may have been involved in one or two impact assessment projects (either as a government officer performing review or an environmental practitioner in the private sector). At this level, the focus would be on hands-on training and practical approaches to IA
- For mid to senior level practitioners who have been involved in management, assessment and/or authoring of a number of impact assessments. At this level, the forum would include sharing of experiences and feedback on guidelines.

Table 3 – Opportunity 2 – Professional Skills for Environmental Practitioners

Key Stakeholder	Actions
Regulator/Decision Maker	• Endorse the use of the proposed approach to assessing significance of impacts • Be involved in developing the guidelines, particularly to assist in exploring regulator's viewpoints and information requirements to support regulatory decision making • Participate in professional development activities
Environmental Practitioners	• Be involved in developing the guidelines • Participate in professional development activities • Utilise the guidelines in practice
EIANZ	• Lead preparation of the guidelines • Seek funding or sponsorship for lead author(s) • Develop and deliver professional development activities

5.4 Opportunity 3 - Strategic Environmental Assessment

The need for strategic environmental assessment in Queensland has arisen from the increasing scale and complexity of development and increased concern about how development patterns and practices affect environmental and social values, including unique values such as the Great Barrier Reef.

SEA is generally considered the province of government rather than private sector as it is this sector that makes plans and policies that guide development and performance across a range of economic sectors.

Strategic environmental assessment of strategies, plans and policies has the following benefits:

- Identification of inconsistencies between plans and policies
- Increased efficiency of decision making processes at both strategic and project levels
- Strengthening of cooperation of relevant public authorities through participatory and cooperative approaches required

- Increased general awareness of the complexity of inter-linkages between environmental and social issues and development
- Increased transparency of decision making
- Improved acceptance of decisions, particularly in complex situations
- Fairer and more transparent allocation of resources
- Identification and establishment of cooperative frameworks for managing cumulative impacts
- Improved compliance with environmental policies
- Avoiding avoid costly mistakes in decision making processes by examining longer term, strategic views
- Strengthening governance and accountability
- Assisting in identifying better alternatives and new opportunities.

SEA of plans, policies and programs would also assist in the identification and management of cumulative impacts which is better undertaken with reference to a strategic framework. This however requires that plans and policies have undergone strategic environmental assessment such that there is a reasonable assurance that if an action aligns with plans and policies, cumulative impacts will be acceptable and manageable. It may also require policies, plans and guidelines to include regional thresholds and management approaches where cumulative impacts from current or proposed development may be significant.

As SEA of strategies, plans and policies is not routinely carried out in Australia, the level of skills among practitioners will be low and this will be a significant impediment to introducing SEA. EIANZ will look to assist in professional skill development if SEA initiatives are adopted.

Table 4 – Opportunity 3 – Strategic Environmental Assessment

Key Stakeholder	Actions
Regulator/Decision Maker	• Introduce requirements for strategic environmental assessment of policies, plans and strategies prepared by State and local governments (A pilot project involving review of a selected regional plan could be conducted without any legislative change) • Introduce requirements for collective and coordinated management of cumulative impacts where required (for example where there is significant development pressure and/or particularly high environmental or social values or sensitivities)
Environmental Practitioners	• Increase linkages between regional plans and other plans/policies/guidelines in project level ESIA • Provide more meaningful assessment of consistency with strategies, plans and policies in project level ESIA
EIANZ	• Assist with developing guidelines for SEA • Assist with professional development in relation to the conduct of SEA.

5.5 Opportunity 4 – Coordination of Cumulative Impact Assessment

Where cumulative impacts may arise from projects and actions of a range of proponents, these impacts can only be effectively evaluated and managed where a coordinated approach is taken to cumulative impact assessment. There a small number of examples of cumulative approaches to assessment and monitoring of cumulative impacts, including:

- In the Moreton Bay catchment, industries with authority to discharge to surface waters can elect to participate as funding members in the Healthy Waterways ecosystem health monitoring program rather than implement individual mid and far-field monitoring activities. The Healthy Waterways program has also led to setting of strategic water quality objectives for the area for point source discharges and surface run off and a model for predicting cumulative impacts of additional point source discharges has also been developed.
- At Gladstone, a regional air-shed model was developed covering existing developments and was available to proponents to assess cumulative impacts of new developments
- At Abbot Point, North Queensland Bulk Ports Corporation, several private developers of coal export terminals and the operator of the existing coal export terminal worked collaboratively to prepare a cumulative impact assessment of a range of coal export terminal developments. A joint monitoring framework was developed. One of the coal export terminals has received EPBC Act approval however approval conditions did not reference the need to participate in the ongoing cooperative monitoring and management of cumulative impacts.

In most cases, proponents of projects are often in competition with each other, and also concerned about potential delays if projects are at different stages in the assessment process or that an individual proponent will have to bear an unequal burden for mitigation and management of cumulative impacts.

Regulatory agencies and other statutory authorities therefore could play a crucial role in the coordination of cumulative impact assessment and, importantly, coordination of the management of cumulative impacts across multiple projects. This role could initially include:

- Identifying “hot spots” where cumulative impacts are already occurring, or likely to occur based on existing and planned development
- Identification of the key environmental or social values most likely to be affected by cumulative so that any cumulative impact assessment can be properly focussed
- Establishment of monitoring networks or, where monitoring is already being undertaken by individual proponents, linking of monitoring programs and centralisation of data collection. This may also require negotiating with those undertaking existing monitoring activities to ensure consistency in monitoring methods and data collection and reporting.
- Establishing suitable guidelines and thresholds for cumulative impacts and communication of these to all stakeholders
- Undertaking regional studies as required to investigate potentially significant cumulative impacts.

A coordinated approach to cumulative impacts will also need to have mechanisms in place for dealing with some of the key blockages to participation of proponents and existing developers in cumulative impact assessment, and for resolving conflicts that may arise, including:

- Situations where assessment and monitoring of cumulative impacts leads to identification of unacceptably high levels of cumulative impacts. In this instance, it would be preferable to

have agreed in advance how various stakeholders will be required to respond and ensure that all stakeholders are in (broad) agreement. This will be particularly important where existing industries are required to take action to reduce contribution to cumulative impacts retrospectively.

- Funding mechanisms, including how new entrants will contribute such that founding members are not disadvantaged.
- Avoiding delays to proponents, for example to avoid the situation where early starters are not forced to wait until later starters are sufficiently advanced to participate meaningfully.
- Applying the results of coordinated cumulative impact assessment to project level decisions.

Enabling assessment (and management) of cumulative impacts of actions would be strongly supported by strategic environmental assessment of plans and policies (opportunity 3). A particular focus would be using strategic environmental assessment to strengthen regional plans and planning schemes to better support assessment and management of cumulative impacts.

Centralised coordination and management data (opportunity 6) would also strengthen the ability to monitor and manage cumulative impacts and reduce costs associated with collation of data.

Table 5 – Opportunity 4 – Coordination of Cumulative Impact Assessment

Key Stakeholder	Actions
Regulator/Decision Maker	• Develop a policy, overall approach and guidelines for coordinating cumulative impact assessment, monitoring, management and mitigation, including mechanisms to deal with potential conflict that may arise during and after cumulative impact assessment • Identify key hotspots where the coordinated cumulative impact assessment approach could be trialled and conduct trials. • Adjust the policy and guidelines on the basis of review of outcomes of trials and implementing the revised policy and guidelines more broadly.
Environmental Practitioners	• Assist with data collection and interpretation on behalf of proponents and existing developers
EIANZ	• Assist with developing guidelines for coordinated cumulative impact assessment • Assist with development of approaches for cumulative impact assessment and management of “hotspot” trials and review of outcomes of trials.

5.6 Opportunity 5 – Proponent Guidelines

The proponent is arguably the most a critical stakeholder in any ESIA process and yet, the ESIA process is often, by default, led by the regulatory agencies. A major cause of delays in the ESIA process appears to be caused by lack of proponent understanding of input requirements, particularly around baseline studies and project definition. Even with experienced proponents, there is often a tension between completing the ESIA in a timely fashion and having sufficient information on the project definition to allow impact assessment studies to be undertaken.

Many proponent organisations do not routinely undertake major development projects and hence undertaking an ESIA is an infrequent occurrence, and proponents may have limited experience in undertaking ESIA. This also gives rise to a lack of integration of ESIA into the overall project delivery cycle with negative ramifications including:

- Opportunities to optimise project design to avoid or minimise environmental impacts can be lost. This in turn can lead to increased effort and cost to manage environmental impacts to achieve compliance with approval conditions
- Baseline studies may not target appropriate matters or may not be commenced in a timely manner
- Implications of design changes for approval processes and ongoing compliance may not be understood.

Guidelines would be prepared to assist proponents in managing the ESIA process and in particular, integrating the ESIA process into project delivery processes. The guidelines would cover recommendations for:

- Roles and responsibilities in the ESIA and approvals process
- Internal resources to manage the ESIA process
- How to link the ESIA process (baseline studies, impact assessment, development of mitigation measures) with the overall project delivery process (project identification, concept, feasibility and detailed design stages) to minimise delays and maximise opportunities for integration of environmental considerations into site selection, design and other aspects
- Incorporating sustainability considerations into project design and decision making
- Guidance on the minimum acceptable environmental and social outcomes that should be sought for projects
- The level of project definition detail required for the ESIA and minimum acceptable information requirements for certain types of projects
- Integration of schedules
- Developing mitigation measures
- Internal review and sign off processes
- Selecting, appointing and managing ESIA consultants
- Interacting with regulators and decision makers including negotiating conditions.

Table 6 – Opportunity 5 – Proponent Guidelines

Key Stakeholder	Actions
Regulator/Decision Maker	• Provide feedback on key challenges and opportunities for proponents in undertaking ESIA • Be involved in developing guidelines • Promote and explain the guidelines to proponents
Environmental Practitioners	• Be involved in developing guidelines • Promote the guidelines to clients who are proponents
EIANZ	• Engage with proponents and practitioners on key matters to be included in guidelines • Lead preparation of the guidelines

5.7 Opportunity 6 – Centralised Collation and Management of Data

Significant amounts of information are collected during baseline studies for ESIAs. This includes surface water quality and flow data, groundwater data, geology, flora, fauna and vegetation community survey data, ambient air quality and noise levels, traffic counts and topographical survey. Data is also collected as part of environmental management of mining and industrial activities or through government led monitoring activities.

There is a wide range of data that is publicly available however the temporal and geographic coverage remains patchy. There are significant additional datasets, particularly generated by the private sector that are not publicly available, or only made available in forms that limit use of the data in preparation of EIS baseline studies and other environmental assessment and management activities. Further, inconsistencies in data collection methodologies and reporting can mean that data sets cannot always be compared or combined.

ESIA studies are often limited or delayed by lack of baseline data and robust baseline data is also required at a regional level to support strategic environmental assessment and cumulative impact assessment. Timeframes for ESIA studies necessarily mean that only baseline data may only be collected over a period of one to two years, whereas long term datasets are required to really understand complex and highly variable environmental systems.

Centralised data collection may also allow increased transparency in validating predicted environmental outcomes.

It would appear that this opportunity would need to be led by State Government since State Government is responsible for monitoring of certain attributes of the environment and is also the key regulator setting terms of reference and conditions of approval requiring data collection.

As a starting point, a review of existing databases and data repositories could be undertaken to identify what systems and data are already available and how these might be updated to improve access to data. A gap analysis should also be undertaken to identify areas where baseline data is not stored or available.

Recommendations would then need to be made as to:

- What data could reasonably be stored in centralised repositories
- Who should be responsible for data collation, storage and access, and what resources might be required
- Protocols for data collection and reporting to ensure consistency
- Protocols for
- Protocols to ensure and maintain integrity of data, including data collection and reporting requirements
- Funding and cost recovery mechanisms.

Table 7 – Opportunity 6 – Centralised Collation and Management of Data

Key Stakeholder	Actions
Regulator/Decision Maker	• Review existing databases and data repositories and determine what data is available, and gaps in data availability • Develop data storage and access systems • Develop protocols for data collection, reporting and maintenance of databases • Set requirements in Terms of Reference and conditions of approval requiring collection of data in formats that can be

	added to a central repository
Environmental Practitioners	• Ensure data collection follows established protocols and that data integrity is maintained • Cooperate with any centralised data collection programs
EIANZ	• Provide advice on data collection and monitoring protocols • Provide advice on target areas for data collection and management

5.8 Opportunity 7 – Public Participation and Engagement in ESIA

Public participation and transparency are critical aspects of ESIA, on the basis that community and other stakeholders have a right to be informed about decisions that may affect their interests.

In Queensland, public participation generally involves:

- Provision of information on projects through newsletters and websites
- Public information sessions undertaken one or more times during the ESIA preparation and/or public review phases
- Face to face meetings with targeted stakeholders
- Making the initial advice statement, terms of reference and EIS documents available for public comment and review.

In some cases, community reference groups are convened by proponents. Policy on social impact assessment and management for major resource sector projects led to more widespread consultation amongst government and, to a lesser extent, non-government organisations involved in community and social services, however this policy has now been withdrawn.

Officers from regulatory agencies do not typically participate in face to face consultation activities during the EIS, except where meetings take place with other government departments. Government representatives may meet with stakeholders on related matters such as land acquisition and strategic declarations such as state development areas.

The extent to which issues raised by stakeholders is addressed in EIS documentation is patchy, particularly in the EIS itself. Certainly, a supplementary EIS is expected to address issues raised, however responses provided are often superficial. Assessment reports prepared by DSDIP and EHP generally refer to issues raised by stakeholders and whether these have been addressed by proponents and facilitating officers will often push proponents to provide a higher level of information in response to stakeholder concerns.

Community stakeholders often comment that the EIS documentation difficult to review, both because of the volume of material and because chapters are not written clearly and in layperson's terms. Conclusions in relation to likely impacts are not always clearly presented and this makes the overall environmental outcomes difficult to discern. This may be one reason why stakeholders are often critical of the transparency of the process.

Proponents are often resistant to consultation. Stakeholders often state that they have been over or under consulted.

It is noted that in Canada, stakeholders may apply to the Government for funding to assist with participation in the ESIA review process.

Guidelines would assist in:

- Identifying stakeholders and suitable engagement activities for different categories of stakeholder
- Setting out minimum requirements for consultation during the ESIA process and potentially the overall project delivery cycle
- Linking ESIA consultation with SIA and SIMP consultation
- Providing guidance on undertaking consultation in locations where a large numbers of projects may be occurring simultaneously
- Providing guidance in reporting on outcomes of consultation activities
- Providing guidance in addressing stakeholder issues on EIS documentation

Enhancing skills of environmental professionals undertaking impact assessment should cover skills of presenting information in a clear and transparent manner that assists stakeholders in clearly understanding the overall predicted environmental outcomes of each project or action.

Table 8 – Opportunity 7 – Public Participation and Engagement in ESIA

Key Stakeholder	Actions
Regulator/Decision Maker	• Advise on statutory requirements for consultation in the ESIA process • Advise on expectations in relation to public participation and engagement in ESIA and include requirements in Terms of Reference if guidelines are not available • Promote transparent and open public participation practices amongst proponents
Environmental Practitioners	• Implement guidelines on public participation and engagement in ESIA
EIANZ	• Working with other professional bodies, and in consultation with regulatory agencies and key stakeholders, develop guidelines on public participation and engagement in ESIA • Develop and deliver professional development in public participation and engagement in ESIA, in collaboration with other professional bodies.

5.9 Opportunity 8 – Validation of Impact Prediction and Mitigation Effectiveness

ESIAs make a wide range of predictions regarding both the nature and extent of impacts that might occur, and the mitigation measures that will be used to minimise impacts. While some of the techniques for making these predictions are quite sophisticated, there is rarely any validation of the outcomes of an action once an approval is issued. Where proponents are required to conduct ongoing monitoring of impacts this information may not be publicly available, and also may not be synthesised, interpreted and compared back to the predictions made in the ESIA.

Benefits to ESIAs from formal validation of impact predictions and the effectiveness of mitigation measures would include:

- Improved accuracy in the prediction of impacts in future ESIAs
- A better understanding of the likely effectiveness of mitigation measures and hence, clearer, more accurate statements on residual impacts.

Other benefits would include:

- Increased accountability of proponents and environmental practitioners in predicting impacts and applying mitigation measures
- Increased transparency of outcomes
- Better information for regulators and decision makers on which to base decisions.

Conducting validation studies will be complex, both from the point of view of conducting statistically valid research that can relate actual impacts to particular projects and actions and in gaining cooperation from proponents and operators. It may be appropriate for masters or PhD students to undertake validation studies as research projects.

Table 9 – Opportunity 8 – Validation of Impact Prediction and Mitigation Effectiveness

Key Stakeholder	Actions
Regulator/Decision Maker	• Include requirements for validation studies in conditions of approval, including that studies be made publicly available • Report on the implementation of conditions of approval for major developments such as coordinated projects. • Identify key "hotspots" where validation studies could be undertaken and seek funding or sponsor students to undertake studies
Environmental Practitioners	• Seek factual information when predicting impacts and determining the effectiveness of mitigation measures • Encourage proponents to undertake validation studies • Publish articles on ESIA validation studies • Encourage proponents to fund students and others to undertake validation studies
EIANZ	• Assist with developing protocols for validation • Conduct research projects on validation of impact prediction and mitigation effectiveness

6. References

COWI 2009 Study concerning the report on the application and effectiveness of the EIA Directive

Environment and Natural Resources Committee 2011 Inquiry into the Environmental Effects Statement Process in Victoria

EPA 2009 Review of the Environmental Impact Assessment Process in Western Australia

European Commission 2012(a) Report on the Application and Effectiveness of the EIA Directive

European Commission 2012(b) Proposal for amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment

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IEMA 2012 Special Report – The State of Environmental Impact Assessment Practice in the UK

International Association of Impact Assessment (1999) Principles of Impact Assessment? Available from http://www.iaia.org/publications-resources/downloadable-publications.aspx

International Association of Impact Assessment (undated) What Is Impact Assessment? Available from http://www.iaia.org/publications-resources/downloadable-publications.aspx

Randolph J, 2012, Environmental Land Use Planning and Management, 2nd Edition, Island Press.

World Bank 2006 Environmental Impact Assessment Regulations and Strategic Environmental Assessment Requirements – Practices and Lessons Learned in East and Southeast Asia

Attachment A – Methodology

Background

On 8th March 2012, EIANZ hosted a breakfast forum on environmental impact assessment entitled "State of Play – ESIA in Queensland". The main speaker was Claire Gronow, an impact assessment professional of 23 years experience, and a response was provided by Dean Ellwood, Assistant Director – General, Environment & Natural Resource Regulation of the then Queensland Department of Environment and Resource Management. 106 people attended and at the end of the session, attendees were asked to submit three things that they felt could improve impact assessment in Queensland.

Members

In September 2012, members and associates of EIANZ SEQ Division were invited to nominate to participate in an EIA reform process. Nomination required a submission on what nominees could offer the process and commentary on key areas that nominees felt could be improved.

Claire Gronow, a practitioner with 23 years experience in ESIA and a fellow of the EIANZ was asked by the SEQ Division Executive Committee to lead the process and the following were appointed to the reform group:

- Jayne Rutter, Associate Environmental Manager at Coffey Environments with 11 years experience in environmental and social impact assessment.
- Penn Lloyd, Principal Ecologist with Biodiversity Assessment and Management Pty Ltd and 15 years experience in ecological research and five years in ecological consulting
- Toivo Zoite, an ESIA specialist with CDM Smith
- Peter Jones, member of GHD's Impact Assessment and Approvals Team who has worked on development projects across several jurisdictions including Europe, Southeast Asia and Australia, gaining experience in a range of approaches to EIA, sustainability and approvals during his ten year career
- Chris Milligan, a principal ESIA specialist at KBR
- Jon Womersley, President of the SEQ Division.

Terms of Reference

The IA reform group set itself a terms of reference as follows:

- Represent environmental impact assessment practitioners and members of the institute
- Review EIA processes to identify strengths and weaknesses and evaluate the extent to which the EIA process is contributing to sustainable decision making by proponents and government
- Examine and document the needs of the participants in the process, including the community, and evaluate the extent to which the EIA process is meeting those needs
- Identify key issues relating to the quality and veracity of EIA in Queensland
- Develop a working paper on potential reforms to the EIA process with a key focus on opportunities to resolve issues and improve process and outcomes
- Ensure recommendations are realistic, targeted and achievable

- Provide a strategic direction for implementing recommendations.

Information Gathering and Consultation

Sections 5, 6 and7 of this paper are based on:

- Discussion amongst and experience of the IA reform group members. The IA reform group met on eight occasions over 10 months
- Reviews of ESIA in Queensland and other States and Territories undertaken by IA reform group members.
- Feedback from attendees at an EIANZ forum on impact assessment. Over 100 people attended and were asked to nominate three things that would improve the quality of environmental impact assessment in Queensland.
- Discussions with senior officers involved in impact assessment of major projects and resource sector projects from the Department of State Development, Infrastructure and Planning and the Department of Environment and Heritage Protection.

Attachment B – State of ESIA Practice in Queensland

The IA reform group examined the extent to which the good practice statements were achieved in Queensland, based on information gathering and consultation activities set out in Section 0. The analysis presented in Table B.1 reflects the IA reform groups views, but is not considered inconsistent with broader views canvassed as part of the preparation of this paper.

Table 10 also provides an analysis of the extent to which the opportunities for improving ESIA practice and outcomes identified in Section 0 would contribute to addressing the gap between current practice and good practice. In this regard, "H" indicates a high contribution and "M" a moderate contribution. The Competency/certification opportunity was not included as this underpins most aspects of good practice.

Table B.1 – Gaps between Good Practice and Current State of Play

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
1. Good practice ESIA is based on a thorough understanding of the environmental and social values and resources in the receiving environment. Baseline studies are of sufficient geographic and temporal coverage to provide for an understanding of seasonal and regional variations in environmental values. Description of the existing environment includes documentation of the interrelationships between different elements of the physical, biological and social environment.	• Baseline studies are generally fairly well done • Time (and cost) constraints means that some EISs are being presented without sufficient longitudinal data, particularly in areas such as groundwater and surface water characteristics • There is no central repository for data collected for ESIA and hence, while large quantities of data are often compiled for ESIA of an individual project, this information is not readily available to other proponents, government agencies or other stakeholders • Data is often not interpreted or poorly interpreted such that there is no complete understanding of the systems and resources potentially affected by the project or action • There is often a lack of connection between data collected for different study disciplines	EIS scoping (1) Professional skills (2) Data management (6)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
2. Good practice ESIA produces succinct and well-structured documentation that provides the information required for stakeholders to understand the environmental outcomes of the action, and for regulators and decision makers to make informed decisions regarding the action.	• EIS documentation is often presented with significant gaps, and there is a trend for significant new information to be presented in a Supplementary Report • Strictly following the structure of the generic Terms of Reference used for most ESIAs in Queensland leads to confusing document structure • There is a lack of precision and clarity in ESIA documentation regarding impacts and overall environmental outcomes of projects • Discussion of impacts is often high level and generic without proper reference to the particular project in the particular location	EIS scoping (1) Professional skills (2) Proponent guidelines (5) Public participation and engagement guidelines (7)
3. Good practice ESIA clearly states data and information sources, methodologies, assumptions, uncertainties and judgements used in identifying baseline environmental and social values and in predicting environmental outcomes.	• The extent to which this occurs in EISs in Queensland is patchy • Conclusions regarding baseline conditions are often high level or do not show a sound understanding of the data and information that is being presented • Technical studies are poorly summarised in the EIS documentation	Professional skills (2) Data management (6)
4. Good practice ESIA includes mechanisms for incorporating new or unforseen issues that may arise during the course of the investigations	• This becomes particularly important if initial scoping is to narrow the scope of the assessment • Lack of scoping means that key issues are not highlighted early enough and studies may not be focussed on the most critical aspects • There is no formal step in the EIS process in Queensland to review the ESIA scope part way through the assessment • There is a reluctance to address unexpected findings particularly when these arise late in the process as this may cause delays	EIS scoping (1) Professional skills (2) Proponent guidelines (5)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
5. Good practice ESIA is undertaken in a framework of sustainability, considering effects of the action on the ability of the physical, biological and social environment to support human life both now and in the future.	• While terms of reference usually require some of kind of assessment of sustainability issues, only a very cursory assessment is typically provided. The usual methodology is to review the project against principles in the 1992 *National Strategy for Ecologically Sustainable Development.* • There is a lack of guidance on sustainability assessment in the project development phase • The Inter-Government Agreement on the Environment requires the concept of sustainable development to be considered in decision making. This is also referenced in the objectives of number of Queensland legislation • The EP Act requires consideration of defined "standard criteria" in decisions made under the Act. The standard criteria include "the principles of ecologically sustainable development as set out in the *National Strategy for Ecologically Sustainable Development* • ESIA does not necessarily underpin fully sustainable outcomes but can minimise unsustainable outcomes	EIS scoping (1) Professional skills (2) Strategic environmental assessment (3) Coordinated cumulative impact assessment (4)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
6. Good practice ESIA is integrated into project development and delivery such that the outcomes of studies undertaken for the ESIA can influence design and maximise opportunities to avoid and minimise impacts and enhance positive outcomes. This includes assessment of alternatives such that the action is optimised from an environmental, social, technological and financial point of view.	• Opportunities to enhance projects are often missed due to lack of integration of environmental, social and technical studies • The environmental approval process is seen by most proponents as one of the most significant project delivery risks, particularly in relation to the potential for delays to occur • The ESIA process is often misaligned with the overall project delivery process and timeframes do not allow for iterative refinement of the project design, even where this might save time and cost in future • There is a tension between starting detailed ESIA studies early enough in the project cycle to influence project design and delivery, and having sufficient detail on the project definition to undertake impact assessment studies • Environmental considerations are not always integrated with commercial and technical considerations from the earliest stages of projects • Alternatives are usually presented, but can often be fairly superficial • Environmental considerations are not always integrated with commercial and technical considerations from the earliest stages of projects and therefore, it can be difficult to demonstrate that the most favourable alternative has been selected • There is a reluctance to acknowledge that a preferred alternative was selected on the basis of commercial or technical considerations rather than being the preferred alternative from an environmental point of view and this can lead to some illogical arguments as to preferred alternatives.	EIS scoping (1) Professional skills (2) Proponent guidelines (5)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
7. Good practice ESIA occurs in the context of a broader strategic planning and policy framework that, among other things, provides guidance in relation to orderly planning and development, thresholds for project level and cumulative impacts and core values and resources that are to be protected.	• Strategic environmental assessment, and to a large extent, cumulative impact assessment, cannot be fully explored in project level ESIA • Strategic environmental assessment and cumulative impact assessment should be led by government agencies • The formation of the Independent Expert Scientific Committee (on coal seam gas and large mining development) will promote consideration of cumulative impacts particularly on water resources (if this committee continues after proposed amendments to the EPBC Act) • Initiatives such as the model water conditions for the Fitzroy Basin also address cumulative impacts but it is noted that this was a reactive rather than proactive mechanism, introduced to address significant issues that had already arisen from mining projects • Strategic environmental assessment of plans, policies and programs does not typically take place in Queensland. • Hence evaluation of a project against plans, policies and programs cannot currently be used as a proxy for cumulative impact assessment • Government has had limited effectiveness in enforcing requirements in relation to avoidance or management of cumulative impacts on proponents	EIS scoping (1) Professional skills (2) Strategic environmental assessment (3) Coordinated cumulative impact assessment (4)
8. Good practice ESIA clearly states the extent to which an action and the associated environmental outcomes are consistent with legislation, policies, guidelines and plans and provides justification where the action is inconsistent or non-compliant with legislation, policies, guidelines and plans.	• EISs generally contain information on applicable legislation and the range of approvals required for the action, with the level of detail and accuracy varying significantly. • Most EISs provide an assessment of compliance with the environmental quality objectives for air, noise and water set out in Environmental Protection Policies • Most EISs provide some level of assessment against State Planning Policies • Assessment against regional plans, planning schemes and other plans and policies is often absent or patchy. • Justification for inconsistencies with legislative and policy frameworks is not always provided	EIS scoping (1) Professional skills (2) Strategic environmental assessment (3)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
9. Good practice ESIA focusses effort on the potentially significant impacts of an action with the depth and scope of the assessment proportional to the values that are potentially impacted and the scale and significance of potential impacts.	• Often a range of issues that are not particularly relevant to the decision are included in the ESIA documentation. This increases resources required to undertake ESIA and can also obfuscate the key issues • The range and severity of impacts varies significantly from location to location and action to action and a generic approach to terms of reference is not usually appropriate • Accurate initial scoping of an ESIA requires experienced ESIA practitioners so that the appropriate level of investigation can be proposed for each potential impact • In Queensland, options for the type of assessment that can be undertaken are limited to a full EIS under the SDPWO Act (significant projects) or EP Act (resource projects only), or to a development approval application under the SP Act. There is no intermediate level of assessment available.	EIS scoping (1) Professional skills (2)
10. Good practice ESIA presents impacts and overall environmental outcomes in a logical and objective manner, with quantification of impacts wherever possible and, where impacts are presented qualitatively, sufficient context to support evaluation of the significance of impacts	• Impacts are not clearly identified and elucidated in most EIS documents. • Impacts are often presented generically with limited reference to the actual project, or the actual receiving environment in which the project will take place • Statements regarding impacts are often unfounded and/or illogical • There is rarely a clear statement of residual impacts that reflects the likely outcomes and the extent to which mitigation measures might really be effective in avoiding or minimising impacts • Information on impacts is often generic and high level with limited reference to the actual project or location in which the project takes place. • Statements regarding impacts are often unfounded and poorly argued • Discussion on impacts often fails to explore flow on effects or wider implications of an initial disturbance, particularly in terms of cross-correlation between different technical study areas • Negative residual impacts are rarely acknowledged	EIS scoping (1) Professional skills (2) Validation of outcomes (8)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
11. Good practice ESIA distinguishes between impacts, which are the planned, likely and foreseeable outcomes of an action, and hazards, which are unplanned or low likelihood events that may occur as a result of an action.	• This distinction is often missed and leads to lack of clarity in relation to the actual impacts and environmental outcomes that might occur • Environmental outcomes are often presented in terms of "environmental risk" which does not acknowledge that many impacts are planned • Risk assessment is still required to address hazards, that is unintended events that may occur as a result of the action such as uncontrolled explosions or bushfire	EIS scoping (1) Professional skills (2)
12. Good practice ESIA analyses the significance of each impact using a robust, rigorous and replicable methodology that reflects the magnitude and consequence of the impact and the importance and resilience of the affected value or resource	• The potential significance of impacts is often not made clear • A "risk assessment" approach which determines a "risk rating" in terms of the product of consequence and likelihood is often erroneously applied to evaluation of impacts (this approach was designed for use in qualitative assessment of hazards) • Statements in relation to the significance of impacts often fail to recognise the value or sensitivity of the receiving environment • The risk assessment approach is overly simple and cannot reflect the complexity of matters that contribute to the significance of an impact • The risk assessment approach to assessment of impact significance does not allow for evaluation of the value or sensitivity of the receiving environment, not does it fully explore other dimensions relevant to the significance of impacts such as magnitude, duration or reversibility. • Where risk or significance tools are used, there is often no clear statement of the expected outcome against which to relate the level of risk/significance identified	Professional skills (2)
13. Good practice ESIA clearly sets out cause and effect relationships and explores the indirect and flow on impacts that may occur, highlighting impact pathways that exist due to the interconnectedness that exists in physical, ecological and social systems	• Cause and effect relationships are typically not clearly set out, or are illogical • Cross-correlations and inter-relationships are often missed as impact pathways are not fully explored and linkages between different disciplines are often not understood • There are often inconsistencies in cause and effect relationships throughout EISs	Professional skills (2)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
14. Good practice ESIA explicitly states the extent to which the action contributes to cumulative impacts and proposes mitigation measures that the proponent will implement in response to cumulative impacts.	• Cumulative impact assessment is generally cursory • There is no overall strategic framework within which cumulative impacts of individual projects can be assessed • Proponents inherently struggle with assessment of cumulative impacts of actions/developments/projects because of lack of knowledge of other proponents projects • Proponents are not in a position to initiate mitigation measures in response to cumulative impacts. Proponents can only address those aspects directly under their control.	EIS scoping (1) Professional skills (2) Strategic environmental assessment (3) Coordinated cumulative impact assessment (4)
15. Good practice ESIA explicitly states the overall environmental outcomes that are predicted to occur, taking into account the likely effectiveness of mitigation measures. Predicted environmental outcomes are compared to legislation, policy, guidelines and standards.	• Clear statements of predicted environmental outcomes are rarely provided in EISs • Analysis of the potential effectiveness of mitigation measures is often not provided. • Most EISs do provide a clear assessment of compliance with environmental quality objectives in Environmental Protection Policies	EIS scoping (1) Professional skills (2) Strategic environmental assessment (3) Validation (8)
16. Good practice ESIA explores both the likely and worst case environmental outcomes and explains levels of uncertainty in relation to predicted outcomes.	• Impacts are often not clearly stated at all • Worst case scenarios are rarely explored, except for in the hazard and risk component, where the discussion is limited to consequences of accidents • Levels of uncertainty in relation to predicted outcomes are rarely stated • Likelihood of occurrence is often downplayed, particularly in relation to weather-related extremes	EIS scoping (1) Professional skills (2) Validation (8)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
17. Good practice ESIA facilitates public involvement and provides for response to issues and concerns raised by stakeholders. In this regard the "consult" or "involve" levels of engagement described in the IAP2 *spectrum of public participation* (http://www.iap2.org/displaycommon.cfm?an=5) are considered appropriate for most ESIA processes. Engagement approaches and effort is proportional to potential impacts on stakeholder groups, however, all interested parties are provided with opportunity for full participation, even if not directly affected.	• The size and poor presentation of documents shuts out a number of stakeholders • Many proponents are very reluctant to undertake consultation • Consultation with key stakeholders often commences too late • Some stakeholders have limited resources to participate in consultation activities • The analysis of and response to stakeholder views is often perfunctory • Stakeholders often have a low level of trust of proponents and regulators • Not all stakeholder views have equal weight in decisions about the impacts of actions/developments/projects • Public participation and engagement processers are often isolated from the actual ESIA process • Done by the proponent – is there a role for government to do consultation (rather than just receive comments) (in WA, government officials visit the site and meet with stakeholders) • The trend for significant new information to be presented in a Supplementary Report that is not subject to public comment, and to defer the preparation of management plans and offset strategies until after a project has been approved, constrains public participation in key elements of the ESIA process	EIS scoping (1) Public participation and engagement guidelines (7)
18. Good practice ESIA supports transparency in decision making by clearly setting out the positive and negative outcomes that can be expected if an action proceeds.	• Regulators and decision makers find it difficult to clearly identify the positive and negative outcomes associated with proposed actions from the EIS documentation • The processes in Queensland do not allow for early in-principle refusal or acceptance of actions • Uncertainty in outcomes of approval processes is seen as a major risk for proponents	EIS scoping (1) Professional skills (2) Proponent guidelines (5) Public participation and engagement guidelines (7)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
19. Good practice ESIA leads first to development of measures to avoid or minimise adverse impacts and maximise positive impacts and then, where impacts cannot be avoided or minimised, proposes measures to manage, repair, compensate for or offset impacts.	• There is a general understanding of this hierarchy, particularly in relation to mitigating raw impacts • Opportunities to optimise design to avoid or minimise impacts may be lost due to lack of alignment between the ESIA process and the overall project delivery process • Treatment of residual impacts is often weak, and there is a reluctance to clearly acknowledge that there may be residual impacts that cannot be further mitigated	EIS scoping (1) Professional skills (2) Proponent guidelines (5)
20. Good practice ESIA leads to development of effective mitigation measures specific to the action, location and identified impacts and does not defer to future studies or management plans to be developed in the future.	• Mitigation measures are often presented generically • The likely effectiveness of mitigation measures is rarely discussed • Due to lack of information on baseline conditions and/or impacts in the ESIA, mitigation measures are often in the form of commitments to undertake further studies and/or prepare management plans, with limited certainty on how these studies or management plans might lead to an acceptable level of impact • There is an increasing tendency to rely on adaptive management, often inappropriately	EIS scoping (1) Professional skills (2) Proponent guidelines (5) Validation (8)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
21. Good practice ESIA proposes performance standards in relation to environmental outcomes that are consistent with legislative and policy requirements and stakeholder expectations and protect important environmental values and resources. These performance standards will provide the basis for monitoring actual outcomes and effectiveness of proposed mitigation measures, and as a benchmark in the event that there are later changes in the action.	• For air, noise, surface water and groundwater studies, performance standards are usually presented in terms of compliance with environmental quality and protection objectives in environmental protection policies and water resource plans. In many cases however, insufficient baseline data is available at the ESIA stage to specify quantitative performance standards (and to evaluate whether these can be achieved). • For other disciplines, performance standards are rarely considered. • Monitoring programs presented in ESIAs are usually high level and generic and defer to detailed programs that are to be developed in future. • Most projects undergo change between the ESIA and commencement of construction and/or implementation. While some changes require amendment of approvals already issued, other changes may not, and in this case, proponents rarely reconsider the overall impacts of a project once approvals are issued. • The new performance-based regulatory approach adopted by the Queensland Government may sharpen the focus on setting performance standards at the ESIA stage	EIS scoping (1) Professional skills (2) Strategic EA (3) Validation (8)
22. Good practice ESIA proposes contingency measures in the event that monitoring indicates that actual outcomes are more significant than predicted outcomes or that proposed mitigation measures are not effective in controlling impacts and achieving performance standards.	• As worst case scenarios are rarely explored, contingency measures are rarely considered or presented.	Professional skills (2) Validation (8)

Good Practice Statement	State of Play in Queensland	Opportunities to address the gap
23. Good practice ESIA leads to a monitoring program that will allow validation of the accuracy of predicted outcomes and the effectiveness of mitigation measures and will check for unforseen impacts.	• There is no information on the extent to which proponents undertake monitoring to validate predicted environmental outcomes • Conditions of approval traditionally do not require monitoring results to be published • Validation of predicted environmental outcomes does not appear to be occurring and this undermines the ability to determine the effectiveness of mitigation measures proposed in ESIAs • Lack of validation means that prediction of impacts remains theoretical and does not continuously improve	Professional skills (2) Data management (6) Validation (8)
24. Good practice ESIA includes clear, quantitative and accountable commitments from proponents that are appropriate to the significance of impacts	• Commitments are often quite generic and do not relate specifically to the action and its impacts • Commitments are not always proportion to the significance of impacts • There is often confusion between commitments and mitigation measures • There may be inconsistency or even conflict between commitments and mitigation measures in different sections of the EIS and in the EIS compared to technical appendices. • Commitments and mitigation measures are often ambiguous or confusing • Proponents are not always fully aware of commitments and mitigation measures proposed in EIS documentation	EIS scoping (1) Professional skills (2) Proponent guidelines (5)
25. Good practice ESIA provides a basis for concise performance-based conditions to be imposed by decision makers. This in turn provides a basis for future compliance.	• There has been a recent shift in the Queensland Government from prescriptive conditions of approval to conditions that seek positive environmental outcomes. This is embodied in DEHP's regulatory strategy which focusses on performance based conditions • In implementation of projects, compliance requirements are interpreted very narrowly by proponents and contractors • Environmental compliance requirements are usually seen by proponents as a cost imposition • Conditions are rarely amended because of ineffectiveness in controlling impacts • Regulators have limited resources to check and enforce compliance	EIS scoping (1) Professional skills (2) Strategic environmental assessment (3) Data management (5) Validation (8)

Attachment C – A review of ESIA Issues in other Jurisdictions

A review of revisions to the EIA Process undertaken by other jurisdictions demonstrates that the issues and opportunities in Queensland are not unique and, more importantly, that actions to implement beneficial reform can be realised. Examples of where revisions to the EIA process have recently occurred include Western Australia (EPA, 2009) and Victoria (VCEC, 2009). Within the European Union, revision and reform is an ongoing process although here this is driven by the more litigious nature of the consenting regime (COWI, 2009; European Commission, 2012a and 2012b).

Interestingly, the findings of these reviews and others (e.g. IAIA, 1996; World Bank, 2006 and IEMA, 2012) present limitations that are somewhat universal to EIA processes across jurisdictions, despite the idiosyncrasies of environmental and planning law between states. The fundamental issue which these reviews have found is that the EIS process lacks stakeholder buy-in. Furthermore, it is shown that this is principally a result of the process being overly burdensome because of its failings to focus on the most relevant issues at hand. This results in too much attention being given to less relevant issues that are inappropriate to assessment of projects at a conceptual planning level. It also detracts time and resources away from the delivery of effective environmental outcomes, with many projects affording to meet only statutory compliance rather than generate any environmental enhancements.

Common reform objectives proposed and in some cases implemented by these reviews undertaken elsewhere relate primarily to:

1. Streamlining the EIA process
2. More effective integration of stakeholders engaged in the process
3. Improving the quality of assessments
4. Better justification of decisions made by governments that affect the environment

Tables C.1 to C.4 below present each of these objectives and lists the actions required for their delivery. It is clear that from this summary, the opportunities presented within this present paper are broadly consistent with those implemented or proposed in other jurisdictions.

Table C.1 – Streamlining the EIA process

State	Action
WA	• Implement a risk based approach to identify environmental risks that matter and form the focus of the remainder of the EIA process • Implement transparent reporting on process timelines including analysis of delays and recommendations for improvement
VIC	• Encourage early agency consultation prior to referring a project • Clear legislative triggers for when a project should be referred • Three levels of assessment commensurate to risk of significant impacts and best practice principles
EU	• Introduction of timeframes for each stage of the EIA process • Improved and clarified screening process to ensure only projects

State	Action
	with potentially significant environmental impacts are subject to an EIA based on resource use, location or potential for hazardous or irreversible effects • Mandatory scoping stage to the EIA process • Facilitation of process where multiple assessment and permits required
UK	• Improve government EIA screening processes with a move towards a check-list type process rather than using size or emission thresholds • Reduce duplication where separate assessments required by UK and EU governments (which is commensurate to the separate Commonwealth and state assessment processes in Australia) • Enable a culture of effective scoping by increasing stakeholder collaboration and understanding of what the EIA and design process can deliver. Scoping should not be risk averse.

Table C.2 – More effective integration of stakeholders engaged in the process

State	Action
WA	• Reduced stakeholder confusion by simplifying the levels of assessment and approvals • MoUs between government departments • Guidelines and tool kits for authorities and proponents
VIC	• Mandatory requirement for an inquiry panel for high risk projects • Greater public appeal rights throughout the process
EU	• Provide a clearer framework of assessment and decision making
UK	• Engage with stakeholders once sufficient EIA and design information is available so as to help manage expectations and understanding • Local communities should have greater say in decisions affecting the area where they live • Requirement in Scotland for a minimum of one public event to be held

Table C.3 – Improving the quality of assessments

State	Action
WA	• Significance/risk based approach during evaluation, assessment and mitigation of impacts
VIC	• Legislation to define ‘significant impact’ • Guidance on what constitute a significant impact by government to be readily available to proponents, decision-makers and community

State	Action
	• Standards and expectations of impact assessments to be defined at scoping stage
EU	• Provide a quality control mechanism of the data collected in the EIA report • Mandatory assessment of reasonable project alternatives • Allow consideration of emerging issues in assessments e.g. climate change, resource efficiency, disaster prevention
UK	• Ensure government agencies have access to competent EIA professionals able to meet their statutory obligations • EIA Quality Mark registration for proponents, consultancies and agencies, with rigorous review of members' work on an annual by Institute of Environmental Management and Assessment • Enable the exchange of knowledge and experience to tackle difficult issues e.g. cumulative impacts, valuing the environment in decision making, sharing of information between assessments.

Table C.10 – Better justifying decisions that affecting the environment

State	Action
WA	• Greater transparency in decision making process • Revise State Planning Policy and develop policies for key topics (e.g. marine ecosystems, wetlands, GHG, etc) to better guide environmental outcomes and increase certainty and consistency • Permits to provide clear, relevant, reasonable and auditable conditions • Improved accountability of proponents
VIC	• Legislation amended to emphasise protection of the environment matters should be considered first during decision making and confirm ESD principals underpin all decision making • Minister to publish a statement of reasons with each decision made • Legislative requirement for independent monitoring and auditing of proponent monitoring programmes and compliance with conditions
EU	• Approval authorities required to justify their final decisions • Monitoring to be required for projects with negative impacts
UK	• Greater emphasis on developing approval conditions which enable outcomes • Writing approval conditions which can be understood by contractors during construction programmes • Strengthening of legislation to include monitoring requirements of actual impacts that result from developments that underwent an EIA

Attachment D - Preliminary Outlines of Guidelines

Evaluating impacts and cause and effect relationships and evaluating the significance of impacts

EISs produced in Queensland often lack clear identification and enunciation of impacts particularly in a site and project specific context. Generic descriptions of impacts are provided but the analysis often fails to state what changes to the particular values identified in the baseline studies will occur as a result of project activities. Interconnections between impacts are often missed or treated inconsistently in different sections of the EIS

This guideline would closely complement the guideline on evaluating the significance of impacts and would provide tools, techniques and examples to assist IA practitioners to:

- Understand cause-and-effect relationships
- Identify and set out impact pathways
- Identify links between study areas, for example links between impacts on soils, impacts on water quality and impacts on aquatic ecosystems.
- Structure impact assessment sections to minimise repetition, overlap and inconsistency between sections.

This guideline would also support the EIS scoping opportunity.

A robust, rigorous and replicable approach to measuring and describing the significance of impacts is lacking in many EISs. This reduces the transparency of the ESIA process and makes decision making difficult. Generic, qualitative discussions of impacts with little reference to the actual study area or project specific impacts reduces the effectiveness of ESIA as a project-specific assessment.

A guideline on identifying impacts and assessing the significance of impacts would be developed. The guideline would cover:

- Defining the values and sensitivities of environmental and social systems, resources and receptors present in the area of impact
- Defining the scale (magnitude, duration, geographic extent) of changes that might occur as a result of the action
- Determining significance taking into account the values affected and the scale of changes that are expected to occur
- Techniques for examining significance where impacts are difficult to quantify, for example due to complex cause and effect pathways or lack of data
- Exploring the significance of both likely case and worst case environmental outcomes
- How to address hazards (unplanned events)
- Possible approaches to determining whether impacts might be unacceptable
- Exploring whether additive or cumulative effects might be present that would exacerbate the scale of impacts.

Undertaking cumulative impact assessment at the project level

Many jurisdictions undertaking ESIA, and most publications on cumulative impact assessment have identified a number of limitations to effective assessment of cumulative impacts at the project level. A formal cumulative impact assessment requires significant

information on the impacts of existing and proposed developments and can require significant coordination between multiple proponents. Effective cumulative impact assessment also requires agreement on thresholds and acceptance levels of impacts, and rules for situations where one or more of these thresholds is exceeded. Experience from around the world indicates that this not likely to occur without leadership and guidance from the government agencies involved in stewardship of the environment and natural resources.

Nevertheless, there are opportunities to improve the way that cumulative impacts are examined in ESIA. This includes:

- How to identify thresholds and acceptance limits against which to consider cumulative impacts
- Use of existing environment quality data and social data to understand existing levels of environmental and social stress
- Guidance on meaningful assessment of projects against existing policy and strategic frameworks
- Methods for evaluating an individual project's contribution to cumulative impacts of regional development
- How to present mitigation and management measures for cumulative impacts.

Addressing Sustainability in ESIAs

Terms of reference typically require assessment of projects against the principles of ecologically sustainable development. Fundamentally, the principles of sustainable development advocate achieving balance between social, economic and environmental dimensions of development such that benefits of development that are allocated in the short term do not affect the ability of future generations to maintain or even enhance quality of life. It is the role of an ESIA to explore these issues such that decision makers can consider these matters in decision making.

While there are a number of tools available to assess various aspects of sustainability, there is rarely sufficiently detailed information at the stage of projects where ESIA is undertaken to, for example, predict materials or energy consumption quantify energy or material savings that can be made.

The guideline on assessing sustainability in ESIA would focus on:

- Definitions of and dimensions of sustainability
- Interpretation of the concept of sustainability at the individual project or action level
- Important matters that should be addressed in the scope of an ESIA to allow sustainability issues to be elucidated and to support sustainable decision making at a project level
- Guidance on how to address the inherent conflicts between social/economic benefits and social/environmental impacts.
- Guidance on how regulators consider the principles of ESIA in decision making processes and the means by which information should be presented to support regulators in this assessment

This guideline would also link to proponent guidelines to explore means by which proponents can better incorporate sustainability considerations into decision making.