Guide to Social Impact Assessment

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Acknowledgements

This guide was inspired by work on several projects:

- Internal guides developed with staff from True North Strategic Communication over the past five years, in particular the process of social impact assessment, sensitivity analysis and definitions (which were elaborated on for the SREBA guidance note).
- My contribution to an Internet resources page for an SIA working group of the Environment Institute of Australia and New Zealand (EIANZ).
- Work for the Northern Territory Government (as part of a CDU team) to develop a social, cultural and economic guidance note for a Strategic Environmental and Baseline Assessment (SREBA) for onshore gas development. The principles and dimensions of social impacts were developed as part of research for this project. The list of indicators evolved from a workshop in January 2019 and benefitted from the contributions of a number of working group members. I acknowledge in particular the input of Bruce Harvey. After feedback, the principles and indicators were not published as affected communities wanted to be involved in their development.
- This document draws largely on my PhD research with the Northern Institute of Charles Darwin University between 2017 and 2020, in particular literature reviews, a values framework, participative justice principles and cultural competence. I acknowledge the support of an Australian Government Research Training Program Scholarship.

I note where the guide draws from the above research.

Thanks also to several colleagues who provided great feedback on a draft of this document. I welcome further feedback.

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Preface

"No one will read your PhD except your mother and your supervisors," someone commented in a workshop. Well, my mother will be proud when I graduate, but I am confident she won't get past the cover of my thesis. As for my supervisors - my guides on a long and torturous PhD journey - I am sure my final, nicely bound thesis is not high on their Christmas reading list.

The purpose of my PhD was to contribute to better policy and practice of social and cultural impact assessment in Northern Australia. As with any academic research, my learning curve was massive. I hope I contributed to academic knowledge. But did I contribute to real world practice?

> That's the challenge of academia. The niggle that your research is divorced from solving real world problems.

In fact, a key finding of my research was that the field of impact assessment is neither reflexive nor particularly academic. It is a field that rarely looks backwards, to absorb the lessons of quality research from the past. It barely glances sideways to learn from case studies, academia, societal expectations and international covenants and guidelines. It rarely peers along the road ahead with any sort of strategic telescope. Everyone is too busy grinding away, preoccupied with the challenges of the present.

Consequently, I conclude in my thesis, social impact assessment risks becoming irrelevant. The discipline is poorly understood and often not valued by those who commission, prescribe and judge its studies. Most practitioners 'fall into' the work from a smorgasbord of disciplines. There are few tertiary qualifications in social impact assessment and no universal professional associations, methodology, ethics or standards.

The old adage of 'rubbish in, rubbish out' is also a factor. Many studies are poor because regulators and clients get what they ask or are prepared to pay for. Poor practice begets carbon copy studies because no one knows the difference or puts a premium on quality research.

Ultimately, social impact assessment practice is influenced more by environmental science than sociology, from which the field emerged. Environmental science values quantifiable metrics, empirical studies and what can be counted. Biocentric methodologies too often dismiss attitudes, beliefs and values as 'perceptions' or 'woolly emotions'[1] rather than valuing real people's insights.

Social science also gathers quantitative data and should follow the scientific method (see 8.5). In addition, however, social science draws on judgement and evaluates what matters, based on the values and lived experience of citizens and societies.

New and emerging practitioners at recent Environment Institute of Australia and New Zealand (EIANZ) workshops are thirsty for knowledge and hungry to learn. They want to do their work well. They are seeking guidance material, mentors, case studies and support. There are moves afoot to define the competencies of social impact assessment and certify practitioners.

So, this guide is intended to make social science matter again (Flyvbjerg 2006). I aim to synthesise relevant learnings, ideas from my thesis and some of the tools developed with colleagues at True North Strategic Communication.

The guide is written for other practitioners. However, with luck, it may be useful for community groups interested in understanding what social impact assessment should be delivering for them. It may guide regulators who want to do their job better. With even better luck, it may inform those clients who intuitively value the insights of good social science research but don't really understand what they are commissioning.

Finally, I would suggest, social science has much to contribute to good planning, reducing conflict, giving citizens a voice and delivering policies and projects that are socially, culturally, ecologically and economically sustainable.

> To make social science matter again, we need to get out of the regulatory straight-jacket that dominates our work and build a community of quality practice.

Practitioners need to show we are a profession; that we add value rather than working to meaningless 'shopping lists' of impenetrable and irrelevant data. I hope this 'community guide to social impact assessment' contributes to these ambitions.

1 Comment by Dr Richard Parsons at IAIA 2019 in Brisbane

The guide starts with an overview of the regulatory impact assessment process as applied to proposals (mining, oil and gas, infrastructure, agriculture) that bring social change to communities. It works through the key steps of doing a social impact assessment: from scoping to gathering data and writing management plans. The guide then addresses the most important element of social impact assessment - meaningful and early engagement - before turning to specific topics such as communication, cultural competence, principles, the scientific method, ethical standards and privacy. Finally, I provide a glossary of definitions and a bibliography for those who want to learn more. For a list of good studies and guidelines, go to the EIANZ SIA resources page.

This is a draft document. It is intended as tool kit. I hope to keep refining its content and welcome any feedback.

Contents

1. Introduction

1.1 The processes of impact assessment

Impact assessment has been around for 50 years, since the American National Environmental Policy Act (NEPA) 1969 was enacted. It has become an internationally recognised approach to determining, in advance, the future consequences of projects on the human and ecological environments and how these impacts might be managed.

Impact assessment is often described as a tool for determining risk to projects or disparaged as a regulatory barrier to approval. It is more usefully envisaged as reducing uncertainty, contributing to good planning and building community confidence in regulatory systems.

These outcomes depend on good process: project definition, early scoping of technical and community issues and studies that are proportionate, purposeful, efficient and effective. In addition, good process means giving the community an influential voice in decision-making.

> "Ultimately EIA (environmental impact assessment) is a structured way of thinking about the environment and development."
> (Morrison-Saunders, 2018, p. 13)

Traditional impact assessment texts refer to the following steps:

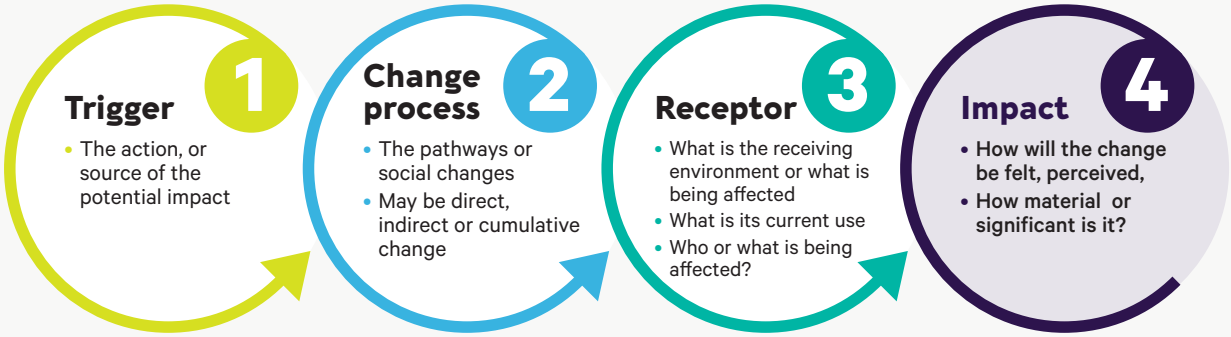


Fig 1-1: The traditional processes of impact assessment

1.2 Social impact assessment

Social impact assessment covers all impacts on humans – individuals, families, communities and societies - positive and negative, as a result of change processes invoked by policies, programs, projects or broader development.

In an early Australian explanation, Lane et al. (1990) described the key variables studied in social impact research as:

- **lifestyle** – the way people **behave**
- **attitudes, beliefs, values** – the way people **think**
- **social organisation** – the way people **meet these needs**, including services, facilities and infrastructure
- **populations** – the way people are **distributed** on the land
- **land use and tenure** – the way people **use the land**
- **economic and employment profile.**

> SIA is "about 'people impacts' – what we are doing to folks where they live, in families and communities, as a consequence of building projects, instituting programs and formulating policies (or not). Its aim is to predict and evaluate those impacts before they have happened."
> (Charlie Wolf, 1982, p.9)

Australian Professor Frank Vanclay, now of the University of Groningen, has led the development of principles, guidelines and a vast body of literature on social impact assessment. He conceptualises SIA as the analysis and prediction of the impacts of major developments on the lives, lifestyles and livelihoods of people and communities, both direct and indirect, intended or unintended.

Impacts may occur across the life cycle of a project: eg from rumours about a proposed mine to its closure. Vanclay suggests the following dimensions of social impacts (Vanclay, 2003, p. 6):

- **people's way of life** – how they live, work, play and interact with one another on a day-to-day basis;
- **their culture** – their shared beliefs, customs, values and language or dialect;
- **their community** – its cohesion, stability, character, services and facilities;
- **political systems** – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose
- **environment** – the quality of the air and water people use, the availability and quality of the food they eat, the level of hazard or risk, dust and noise they are exposed to, the adequacy of sanitation, their physical safety, and their access to and control over resources;
- **health and wellbeing** – a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity;
- **personal and property rights** – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties;
- **fears and aspirations** – people's perceptions about their safety, fears about the future of their community, and aspirations for their future and the future of their children.

Social impact assessment may cover cultural, health, economic, gender and human rights impacts. Or these may be stand-alone studies.

Who does social impact assessment? Vanclay (2003, p 7) describes social impact assessment as an "umbrella or overarching framework that embodies the evaluation of all impacts on humans". The disciplinary umbrella that results is likely to embrace practitioners from the following backgrounds:

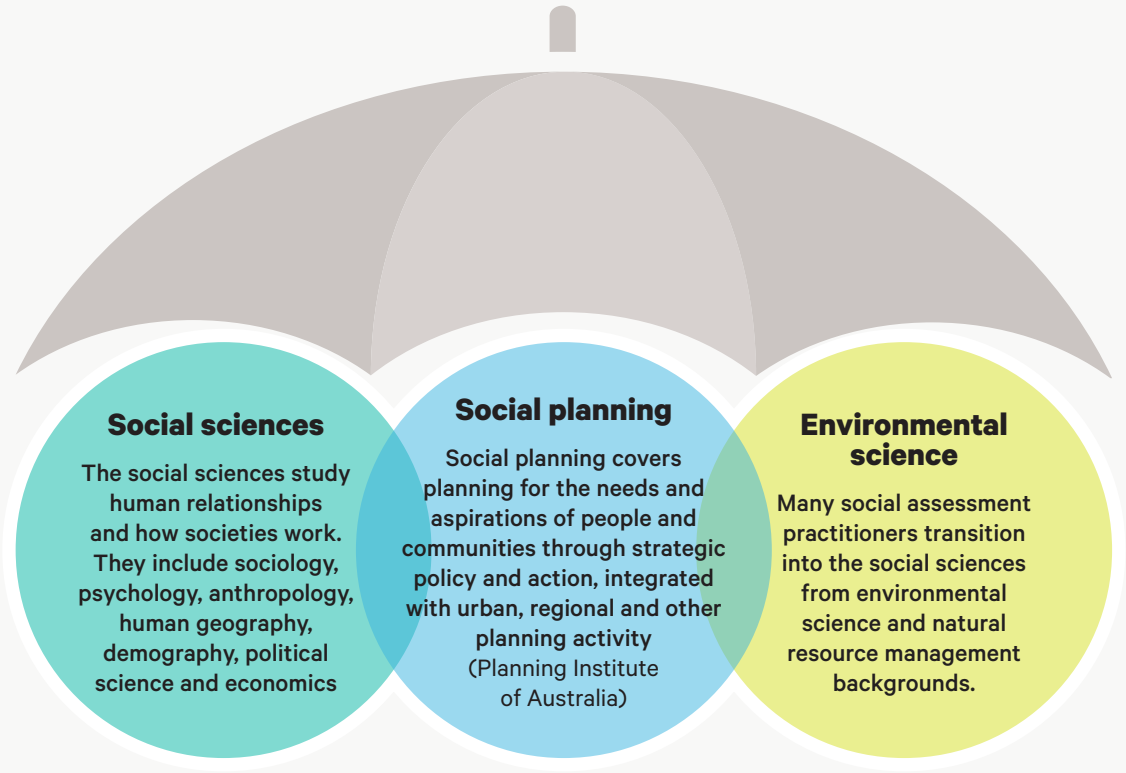


Fig 1-2: Disciplinary backgrounds of social impact assessment practitioners

1.3 Dimensions adapted to a Territory context

To provide a thematic tool that categorises the dimensions of social impact in a way that suits a Northern Australia context[2], I draw on a social wellbeing framework developed by Smyth and Vanclay (2017) as a visual tool for participatory approaches in resettlement work. The dimensions are informed by the following additional literature:

- **Cultural identity** was drawn from New Zealand's Living Standards Framework, which is based on the OECD 'How's Life?' wellbeing indicators;
- **Living environment** was added to cover 'amenity' impacts, or disturbance that annoys us or disturbs our surroundings. Smyth and Vanclay describe 'living environment' as covering noise, traffic, dust, pollution and aesthetic impacts on the landscape. Households and communities need a stable and clean environment in order to maintain wellbeing (Smyth & Vanclay 2017);
- **Healthy country** reflects the cultural and spiritual connection of Aboriginal people to their land and seas and the link with cultural ecosystem services;
- **Strong voice** reflects the concept of 'political efficacy' from a theoretical framework developed by Blishen & Lockhart (1979) in a Canadian First Nations context. It means having a strong voice in the democratic process and good local governance structures.

Advantages of a thematic visual framework

The visual tool that results from these dimensions (see Fig 1-3) is a practical support tool for participative research that helps distil messaging into practical, clear communication. Smyth and Vanclay describe the social framework conceptual model as "highlighting the social issues that contribute to people's well-being and that are impacted by large projects" (ibid. p. 9).

Other advantages of this thematic tool:

- it has theoretical rigour and maintains the intent of Vanclay's well-established dimensions
- it captures both quantitative and qualitative data (aggregated statistics plus values, attitudes and beliefs)
- it can be used for community discussions (eg print outs with infographics)
- it can be used as a training tool for both Aboriginal and non-Aboriginal researchers doing interviews
- it supports semi-structured interviews as well as inviting narrative and visual responses
- it avoids use of academic jargon that can get in the way of good communication - Smyth & Vanclay (ibid.) note that the language of 'capitals', 'assets' and 'shocks' (in the Sustainable Livelihoods framework) does not resonate with communities
- it can be used to categorise baseline data, eg community scorecards to measure longitudinal and cumulative change at different stages of development
- it can be used to measure both positive and negative change
- it can be adapted to values mapping and could be adapted to geospatial mapping
- it captures both what can be counted and what matters to people.

See Fig 1-3 for the visual tool and table 4-4 for indicators categorised against its dimensions.

2 This framework was developed during research for the Department of the Chief Minister for the SREBA guidance note (see acknowledgements, p. 2)

Fig 1-3: Dimensions of social impacts adapted for a North Australia context

See detailed definitions and discussion in Table 4-4.

1.4 The steps of social impact assessment

I now turn to the steps - or the activities – of social impact assessment. Although this is presented as a linear process in Fig 1-5, it is acknowledged that impact assessment should be an iterative process, with feedback loops at each step.

Screening is often given as the first step to determine whether a project should go ahead. In line with recent New South Wales guidelines (2017), I place scoping as the first step. Good scoping better informs yes/no decisions, alternatives, levels of assessment and terms of reference for what must be covered by studies. Scoping is informed by engagement to find out what the community thinks and what matters to people - or 'people due diligence'. Subsequent sections describe each step in more detail.

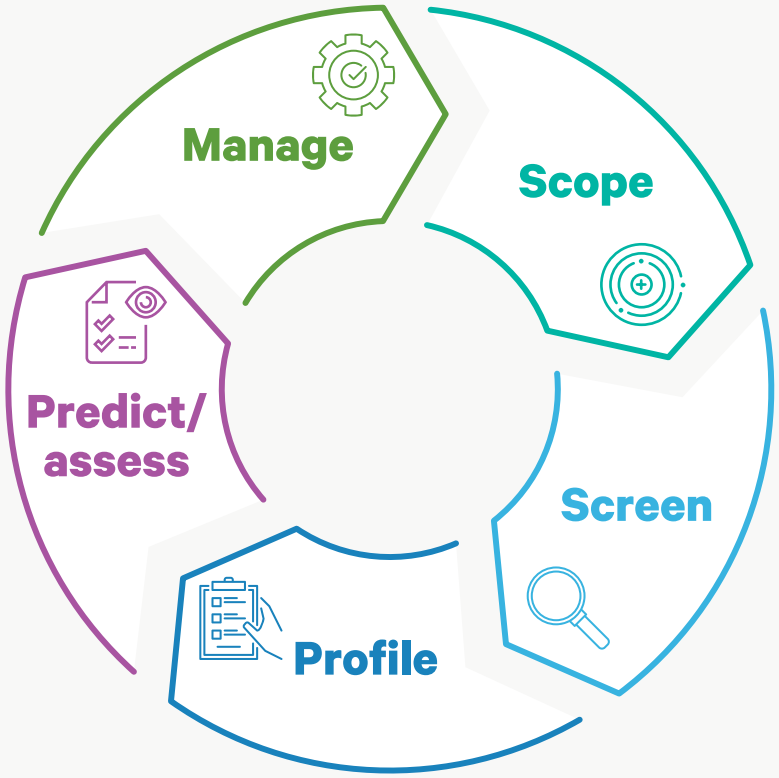


Fig 1-4: An iterative model of impact assessment process

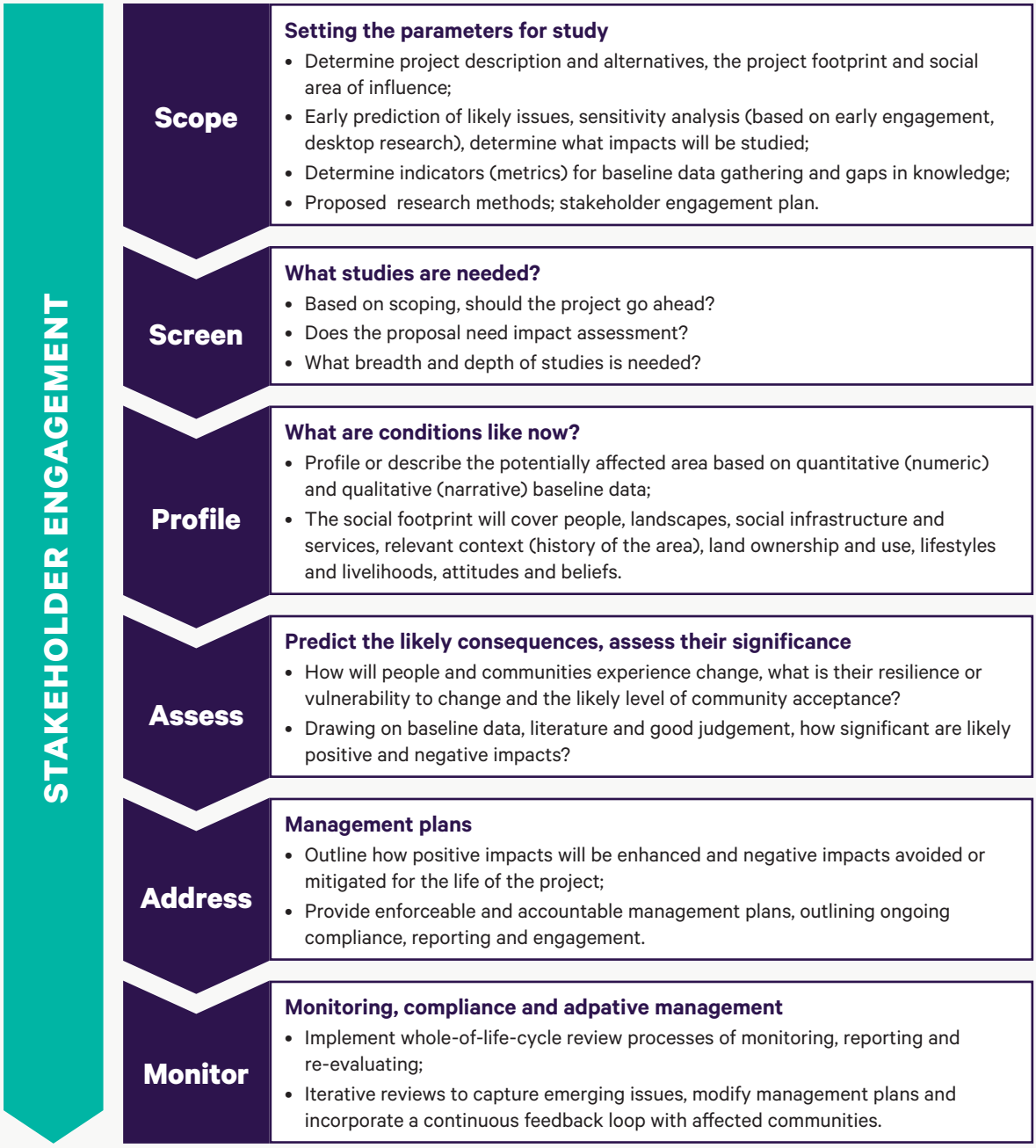


Fig 1-5: The steps of social impact assessment

2. Scoping

A good scoping process will determine what needs to be covered in the study, who needs to be involved and the most appropriate methodologies. The best scoping is highly participative. Approaches should be appropriate to the context and discussed with key stakeholder groups, such as Land Councils.

Scoping is both a planning exercise and a rapid appraisal of risk at a time when it's not too late to consider alternatives or for people to say no. The depth and breadth of subsequent studies will vary according to the complexity, novelty, sensitivity and scale of impacts identified by scoping.

2.1 Purpose

The purpose of scoping is to:

- reduce uncertainty
- provide a preliminary analysis to determine the parameters and footprint of the study
- get input on how people and communities want to be involved
- establish a good description of the project
- determine the consequences
- consider alternatives, including go/no go decisions
- ensure studies are relevant and proportionate and narrow their focus to material issues
- ensure a good understanding of issues, to avoid later surprises, mistakes and delays
- inform evidence-based decisions on the level and focus of impact assessment studies
- define the variables to be studied and indicators for data gathering
- provide a clear plan, or scope of work, for studies.

> "It is better to be roughly correct on important issues than to be precisely correct on unimportant issues."
> (Interorganizational Committee, 1994, p. 23)

2.2 The key activities of scoping

The key activities of scoping are discussed in detail below:

- project description, assumptions
- establish likely pathways of change
- determine the social boundaries for the study (temporal, social, spatial)
- desktop study: what data is available, what are the gaps
- stakeholder and issues analysis (based on initial consultation)
- sensitivity analysis, including preliminary values mapping (see 4.8)
- prioritisation of key positive and negative impacts (the benefits and harms)
- stakeholder engagement strategy (who will be impacted, their needs, best approaches)
- identify approaches to reach stakeholders who may be marginalised or disadvantaged
- appropriate communication materials, to clearly explain the project so people can provide informed and objective feedback
- determine objectives and methodologies that suit the context
- clear scope of work.

> "Scoping is … about determining boundaries for an EIA, where the overall trajectory ought to result in a progressive sharpening of focus upon what matters most."
> (Morrison-Saunders, 2018, p. 51)

The Canadian Mackenzie Valley Environmental Impact Review Board suggests that early, collaborative scoping leads to more focussed studies and better decisions (see below).

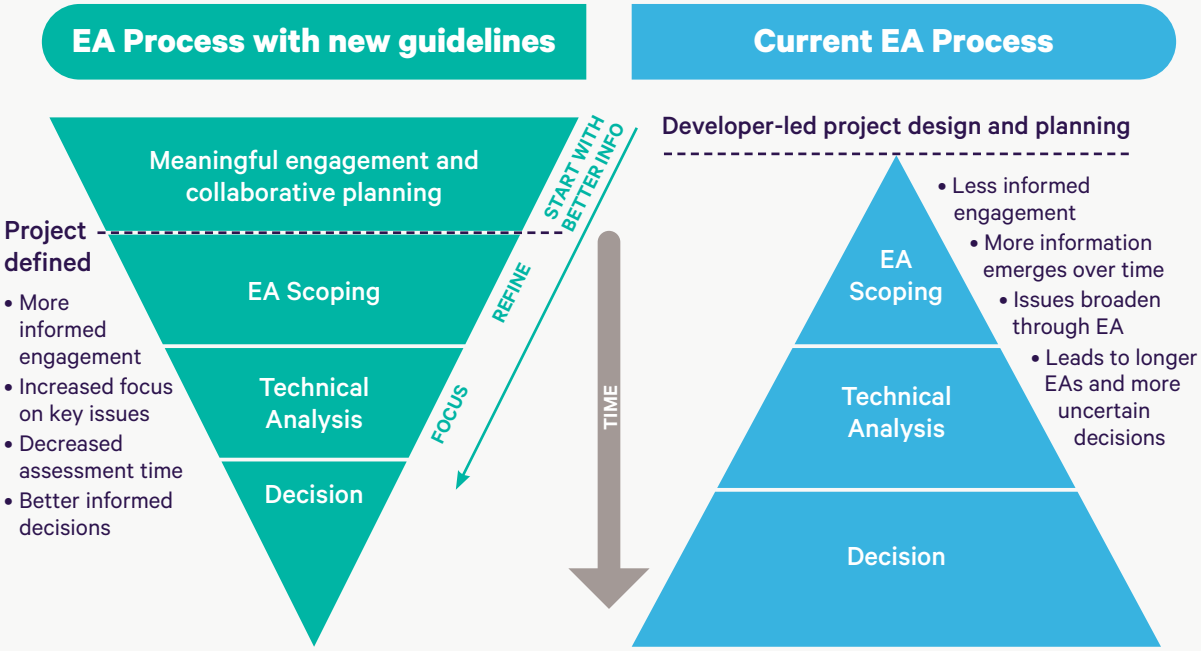


Fig 2-1: (Mackenzie Valley Environmental Impact Review Board, 2020), p. 23 (used with permission)

2.3 Project description and assumptions

Good scoping reduces uncertainty, based on a good understanding of the project and likely impacts. It is important to have early shared agreement on project assumptions, such as: its configuration and footprint, timelines, is it is a greenfield (new) site or expansion of existing activities, the nature of activities, timelines for construction and operations, likely number and type of workers, where will workers be sourced from and the extent and type of likely procurement activities.

Project assumptions should be as accurate as possible. This may be hard to do in the early stages of planning. All specialist studies should work to the same assumptions and work collaboratively to refine the project description.

2.4 Likely pathways of change

The next step is to map likely change processes – or impact pathways - and consider the implications for people and communities. This will draw on initial desktop studies, previous research and project descriptions of potential projects to consider scenarios of how development could unfold across a region. See Table 2-1 for examples.

Fig 2-2: Pathways of change

Table 2-1 – Examples of change processes and issues

Example of change processes	What issues arise from this
Announcements about new industrial development or initial consultation may generate rumours or speculation	People start to worry about what the proposal means for them. Polarised opinions might create conflict and reduce community cohesion (how well people get along together). This may compound existing stresses or coincide with other social change processes taking place (such as people leaving a region). Excitement about opportunities might generate unrealistic expectations about jobs and contracts.
Construction starts: Workers start to arrive in a community, contracts are awarded to businesses, people get jobs.	The construction part of a project is when change is likely to be most intensely felt. Change might be sudden, such as bulldozers moving in to clear land or excavate a pit. Temporary workers may fill local hotels and rental properties. There will be more traffic on the road. People might leave their jobs for better pay, disrupting existing services. Or developers may try to avoid this boom-bust effect by flying workers direct to project sites.
The land is cleared for individual project activities (the project 'footprint')	Clearing may change the landscape, disturb plants and animals, reduce access to picnic or hunting spots or generate noise and dust. Although companies must have Sacred Site Certificates to start work, people may worry about damage to sacred sites or special cultural places.
Industrialisation of a region, generating longer-term or permanent change	New economic sectors and capacities might displace existing sectors or create wealth, build new capacities and longer-term skills development. People may yearn for the 'good old days' and be upset at an influx of new residents with different values and lifestyles.

2.5 Determine the social boundaries for the study

A social, cultural and economic impact assessment should provide advice to decision-makers (political leaders, government authorities and resource developers) on likely changes to people's lives, lifestyles and livelihoods and how these impacts are distributed:

- **locally** (directly affected communities)
- at a **regional** level (which may be the catchment for recruiting workers and sourcing services)
- at the **Territory and national** level (jobs, procurement, economic growth, increased capacity, more government revenue to pay for social services and public works).

The boundaries of assessment studies should include:

- the **footprint** of physical disturbance, which may include transport routes
- the **social connections** of the people living in that area, for example, taking account of Aboriginal peoples' mobility and broad cultural and kinship connections
- **connected communities:** consider ripple effects, such as regional centres providing services, towns that will form part of the project supply chain, airports that workers pass through, the catchment where workers will come from or move to.

Note that 'communities' are unlikely to speak with one voice but will contain people with diverse interests and values (see definitions). Nor do social impacts stop at boundaries, be they geographic, government, council or statistical (such as the Australian Bureau of Statistics' geographical boundaries).

2.6 Deciding what data to gather

Projects rarely start with a blank slate. There is likely to be plenty of secondary data available to inform early scoping, such as studies for other projects, regional and industry strategies, annual reports, academic literature, and statistical data on the region's population, demographic composition and health status.

Determine gaps in knowledge and build a knowledge map of the area under study to share with other technical teams.

2.7 Making a judgement about key issues to be covered

Forewarned is forearmed. A good issues analysis will draw on the desktop studies and initial stakeholder analysis to outline key issues of concern to the community. This exercise calls on both data and expert judgement. It will combine technical expertise with community insights and perspectives of likely disruption or enhancement to their lives, lifestyles and livelihoods.

An impact is a measurable change, positive or negative, that can be felt or perceived (see definitions). For example, fears or the actual experience of large groups of young, single men moving into a community (the change process) may reduce community cohesion or sense of wellbeing (the impact). Procurement of goods and services from local businesses or workers spending their wages locally (change processes) may diversify or strengthen the region's economy (positive impacts).

2.8 Preliminary significance assessment

An impact assessment should cover what matters, not just what can be counted. Deciding what to study is derived from a preliminary significance assessment. A method for doing this is to determine:

likelihood x consequence

Likelihood is an assessment of how likely it is that the impact (perceived or not) will actually happen. Consequences are what happens as a result.

The following criteria are suggested for determining consequence from the community's perspective. This is adapted from a social impact assessment scoping tool developed by the NSW Department of Planning and Environment, 2017, pp 35-36:

a. **extent** - how many people will feel the disturbance, how big is the potential footprint, how widespread are impacts, how many people may be affected;

b. **duration** - are the impacts temporary (eg construction phase) or permanent, short or long-term;

c. **severity** - what is the scale of change from current conditions (a cohesive, long-established community with no experience of industrial activities will be more sensitive to change);

d. **sensitivity:** based on the level of controversy, conflict and people's resilience or vulnerability and capacity to absorb change.

Likelihood x consequence (extent + duration + severity + sensitivity) = significance

Levels of significance are not static. In addition, impacts may be experienced differently by different groups in affected communities and at different stages of development.

Greater weight may be assigned to the 'sensitivity' factor if impacts are likely to affect marginalised and vulnerable people or land-connected peoples who lack options to move.

A good way to determine sensitivity to disturbance is values mapping, which is discussed in depth at Section 4.7.

2.9 Prioritise key areas of study

Quality impact assessment should be rigorous and purposeful. This is not achieved with scattergun approaches or 'data dumps' of every available fact and statistic, but through careful planning. Keeping studies proportionate and focussed calls for prioritisation of impacts that combines expert judgement, technical studies and community input.

2.10 Stakeholder mapping and engagement strategy

The next step is to determine who might be affected, through stakeholder mapping. Describe all affected communities and other stakeholders for the area under study, based on who is:

- **impacted:** directly affected or indirectly affected people and communities
- **interested:** those with an interest in the project or development (decision-makers, potential beneficiaries, industry groups, community groups)
- **Influential:** those with influence on the outcomes.

Prepare a stakeholder engagement plan, incorporating likely levels of interest, concerns, needs, how people may want to be consulted and what information they need. Proactive communication will reach out to marginalised or disadvantaged groups who may otherwise not have a chance to contribute (see more on engagement in Section 8).

2.11 Appropriate communication materials

Communication doesn't flourish in a vacuum. Too often, community outrage develops late in project planning because people were oblivious to a proposed project or its implications. Or they may have felt isolated and unable to be heard until they join up with like-minded individuals and start protesting.

To avoid this, draw on literature and expert judgement to explain implications that may not occur to people. Reach out to affected people rather than expecting them to hear about the project on the grapevine. Then explain the proposal in a way that builds understanding, trust and relationships.

Communication tools will be tailored and flexible in order to meet the needs of diverse stakeholder groups. These tools should ensure people have timely, relevant, accurate and unbiased information on the proposal or regional development plans so they can provide objective feedback and be confident of having their voice heard.

See Section 8 for a more detailed discussion on early and meaningful engagement and communication.

3. Screening

Good scoping will inform screening decisions (by the proponent or the regulator) about whether a project or type of activity should go ahead and the level of assessment required.

In the Northern Territory, impact assessment is triggered by a referral to the Northern Territory Environment Protection Authority (NTEPA), under the *Environmental Protection Act 2019* (NT) and potentially the Australian Government under the *Environment Protection and Biodiversity Conservation Act (EPBC) 1999* (Cwth). The referral is, essentially, a scoping document that spells out a proponent's intentions, outlines the key environmental, economic, social, cultural and technical aspects of the project, and outlines whether the proposal has the potential to significantly impact on the environment.

An accepted referral will be published for public comment. The NTEPA will then decide:

a. whether a project requires assessment;

b. at what level (assessment on referral information, assessment on a supplementary environmental report, by environmental impact assessment or by inquiry);

c. the terms of reference for the Environmental Impact Assessment (as part of recent regulatory reforms, proponents may now prepare their own terms of reference as part of a referral).

(For more information on environmental assessment in the Northern Territory, go to www.ntepa.nt.gov.au/your-business/environment-impact-assessment)

3.1 The purpose of screening is to:

- make go/no go decisions on whether a project should be allowed
- decide whether impact assessment is warranted
- inform decisions on the level of assessment required
- inform terms of reference for studies
- inform decisions of the breadth and depth of studies and appropriate methodologies.

3.2 Key activities

- analysis based on scoping study/formal notice of intent to inform decisions
- determine relevant terms of reference.

3.3 How does community engagement contribute?

The level of studies should be proportionate to the size and complexity of projects, significance of impact and level of community concern. The scale of studies depends on good initial information about likely issues, which will be derived from both technical expertise and community input.

> "An enlightened proponent may.... undertake consultation with relevant stakeholders or investigate different forms of development or location before settling on the proposal that they wish to submit formally to regulators."
> (Morrison-Saunders, 2018, p.49)

A screening tool is shown at Fig 3-1 that might help determine the breadth and depth of social impact assessment, level of participation and appropriate approach to communication. People don't want to be consulted on everything, although they usually like to be given a choice. For more on how to engage well, see Section 8, including IAP2 Core Values.

LEVEL OF IMPACT

High impact, low level of stakeholder interest

High impact/low interest projects often see community anger emerge as it dawns on people what is at stake or they form networks and start to protest.

Ensure people understand the implications of the project. Be transparent, take proactive measures to ensure that lack of interest isn't the result of cynicism, a lack of knowledge, poor access to engagement methods or just people preoccupied with their busy lives.

High impact/high level of stakeholder interest

High level of uncertainty, high level of disturbance to sentimental and societal values; a complex, large project or industrialisation, a new type of activity.

Collaborative/deliberative approaches that involve people in solutions, narrative or ethnographic approaches to ensure contextual insights. May require a high level of fieldwork to understand subjective perceptions, sophisticated data analysis, creative methodologies and a multi-disciplinary team. Take the time to build relationships and trust. Studies should ensure issues are well-understood before key decisions are made.

Low impact/low level of stakeholder interest

Standard, small-scale project, similar to existing industrial activities, people are generally supportive/ passive, likely impacts are well understood.

Likely to be a low-level study, people are kept informed and given choices about contributing, confine analysis to key issues (eg increased traffic near a school crossing). Operate at the 'inform' level of the IAP2 spectrum (see section 8).

Low impact/high level of stakeholder interest

Sometimes relatively low-impact projects evoke a high level of stakeholder interest. This may be because of unrealistic expectations of jobs and business opportunities. It may be caused by misinformation or misunderstandings as to the nature of the project, opposition from vested interests or 'scary' elements that are hard to explain.

Communicate well, manage expectations, ensure people's voices are heard regardless of technical analysis of the level of risk (see Sandman 2012; 2013 on risk communication).

LEVEL OF STAKEHOLDER, AFFECTED COMMUNITY INTEREST

Fig 3-1: social impact screening tool

4. Profile – baseline data gathering

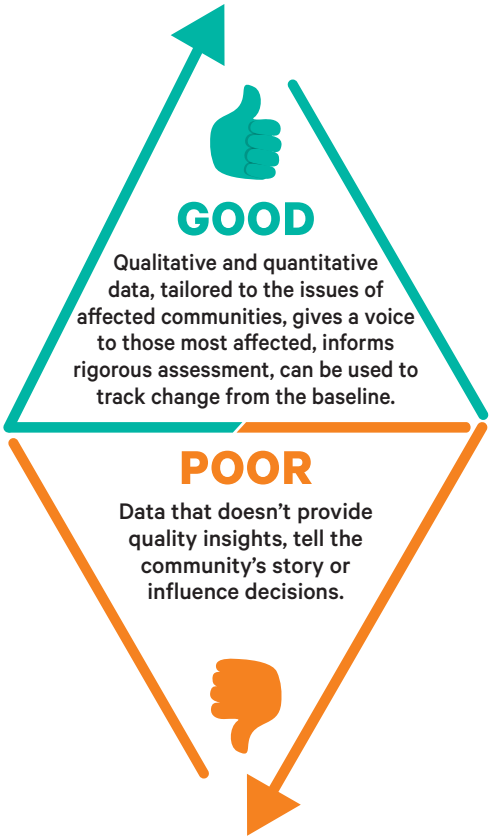
Baseline data helps us describe existing conditions in a project's potential footprint. This data becomes a benchmark for longitudinal research to track change.

Data gathering should be purposeful. The starting point is to determine relevant issues, decide what studies are needed, establish indicators to guide data-gathering (see Table 4-4), establish what data already exists and identify gaps.

4.1 Purpose

The purpose of baseline data gathering is to:

- gather relevant data to inform evidence-based decisions
- gain insights into how impacts are likely to be experienced
- guide prediction and assessment of impacts and their significance
- provide a baseline against which change can be tracked for the life of the project.



4.2 Activities

- identify existing secondary data, including statistical data, relevant studies and literature
- identify gaps in knowledge
- gather primary data against key indicators (established during scoping), including consultation, surveys, site visits, ethnographic anthropological research, narrative, focus groups, community planning
- use grounded questions (see values 4.8) and narrative approaches to determine issues of concern and attitudes, values and beliefs of potentially affected stakeholders, people and communities.

4.3 What are we measuring?

By now, researchers will have done desktop research to familiarise themselves with the region, contextualise key issues and determine what data is already available. Before gathering more detailed data, indicators (or metrics) need to be decided for each identified potential impact.

4.4 Baseline data

Data and knowledge can be quantitative (described using numbers), qualitative (described using words) and narrative (described using stories and metaphors).

Table 4-1: types of data[3]

	Quantitative	Qualitative	Narrative or stories
Examples	Statistics from the Australian Bureau of Statistics' five-yearly Census or government and council reports on services, how many people live in a town or region, their ages and ethnicity, jobs and education, mobility, how many houses and the level of disadvantage in a region.	Attitudes and perception surveys. Once projects start, surveys might ask people about their level of satisfaction with jobs, perceptions of safety or project performance against different criteria.	Studies or interviews that listen to people's stories to understand values, aspirations and concerns. These studies will take longer but provide deeper insights. For example, people may have negative experiences of development in the past, opinions might be quite diverse, some people may be more vulnerable to change than others

Some data is easier to capture because it has been published already (secondary data). Primary data is what a researcher collects first-hand through surveys and interviews and may require more complex field methodologies.

Table 4-2: Primary and secondary data sources

	Primary data (that you collect yourself)	Secondary data (someone has already gathered)
Quantitative	• Quantitative statistics, eg from surveys tailored to the area of study • Economic modelling • Skills audits	• Australian Bureau of Statistics data that provides socioeconomic profiles • Health studies • Government data (eg Treasury data on the economy) • Population and demographic data • National labour force surveys • Indicators of disadvantage, eg ABS's SEIFA Index • Data from annual reports, eg on student enrolments, crime rates, housing availability and affordability, health status, the affordability and availability of housing • Northern Territory and Australian Government tourism research
Qualitative	Interviews and thematic analysis of issues, hopes, attitudes, beliefs, perceptions; • Values mapping • Attitude surveys • Focus groups, deliberative forums, scenario analysis	Existing attitude or wellbeing surveys.

3 Prepared for the SREBA guidance note

4.5 Indicators

Indicators are metrics against which we calibrate and track change: by gathering data against the same indicators over time (longitudinal studies). For strategic and cumulative studies, consistent data-gathering provides an evidence base to track and interpret the positive and negative changes brought about by development across a region.

Table 4-3: Quantitative and qualitative indicators

Examples	Objective indicators		Subjective indicators	
Method	**Quantitative: count**		**Qualitative: listen – data from people**	
Population	Where do you come from?		Where do you call home?	
Houses	How many houses here?		Quality, suitability, affordability of houses	
Jobs	How many jobs?		Job satisfaction, inclusiveness, stability	
Economic	GDP/GSP		How are economic benefits and costs distributed? What livelihoods are valued?	

4.5.1 A toolkit of indicators

The following indicators may serve as a check list for potential areas to be covered by a social impact assessment. They are categorised against the dimensions shown in Fig. 3-1[4]. The table also shows equivalent assets (from the Sustainable Livelihoods Framework) and International Finance Corporation Performance Standards. The right-hand column shows additional indicators that might be introduced as projects get underway.

Red is for core quantitative indicators that are most likely to be covered in most studies. Black are less common discretionary indicators that might be considered, depending on the issues raised during scoping. Green is qualitative indicators that require methods such as attitude surveys. Blue suggests ethnographic or narrative approaches (see explanation in Table 4-5 below).

4 Developed for the Northern Territory Government's SREBA guidance note methodology

Table 4-4: Outline of dimensions, core and discretionary indicators

Assets (Sustainable livelihoods framework)	**IFC Performance Standards (2012)**	**Dimensions** (see Fig 1.3)	**Baseline indicators that might be used. This list is not intended to be prescriptive. It should be refined at the scoping stage and tailored according to the context of individual studies.**	**Additional reporting indicators that might be considered in recommendations for ongoing monitoring**
Built	PS1: Overview: includes effective engagement and integrated assessment, with particular attention to disadvantaged and vulnerable groups, gender and iterative approaches	**Infrastructure and services**  Infrastructure and services contribute to a better quality of life, by providing places to live, education, healthcare, transport, policing and support services. These often come under pressure from industry activities or they may be enhanced by regional development.	Availability, suitability and affordability of health, housing, education, emergency services, childcare, community facilities such as recreation, human services; Availability and affordability of essential services (power, water, sewerage), good roads and transport infrastructure, telecommunications. Overcrowding (number of people per bedroom) of houses. Proportion of income spent on rent or mortgages, whether mortgaged or owned outright, or proportion of families suffering housing stress. Traffic movements, fatality and injury rates, composition of road users (eg heavy vehicles, tourism traffic) Perceptions of road conditions by current users.	Mobility patterns (in-migration of workers and families, length of stay). Demand by workers, families for social, community, human services; Number of bed nights taken up by short-term accommodation, public housing, public and private rental market; Proportion of non-resident workers in a region.
Social	PS 4 Community, Health, Safety, Security PS1 (as above)	**People and communities**  Our health, wellbeing and safety are fundamental to good lifestyles and include our sense of connectedness, the ability to live in harmony with each other, feel safe, have good physical and mental health and our capacity to absorb newcomers into the community. They can be impacted by an influx of strangers, increased crime, reduced feelings of safety, reduced sense of place, psychosocial impacts (fears and impacts on our mental health) or worries about road safety.	General population data (age, gender, ethnicity, Aboriginal status, population distribution, mobility, density) Perceptions of safety and security in the workplace and neighbourhood; Selected crime statistics (eg break ins, car thefts, assaults, domestic violence offences, drug and alcohol-related offences), victim surveys; Health status, eg prevalence of chronic diseases, infant mortality, life expectancy. Physical and mental health incidents at work; Indicators of disadvantage (see ABS); Psychosocial issues: fears, anxieties and stresses in anticipation of development. Community cohesion, such as indicators of conflict. Levels of civic engagement (eg as measured by volunteering).	Number of complaints; Safety issues (industrial traffic); Workplace physical and mental health incidents or referrals, such as suicides or requests for counselling.

Assets (Sustainable livelihoods framework)	IFC Performance Standards (2012)	Dimensions (see Fig 1.3)	Baseline indicators that might be used. This list is not intended to be prescriptive. It should be refined at the scoping stage and tailored according to the context of individual studies.	Additional reporting indicators that might be considered in recommendations for ongoing monitoring
Human **Financial**	PS1 PS2 Labour and Working Conditions: includes protection of workers' rights and non-discrimination	**Economy**  A strong and sustainable regional and Territory economy ensures economic development outlasts commodity cycles. At a regional level, it ensures we can build our individual and collective skills and capacities, maintain productive livelihoods and diverse industry sectors. At a Territory level, a strong economy means we can count on government revenue to maintain the services we need. Regional and Territory economies can benefit from development by providing jobs, training and boosting business activity. They may be negatively affected if other industry sectors are displaced (eg tourism and pastoral activities or traditional economies), people fail to win work, businesses over-extend themselves to win work or inflation reduces the material wellbeing of communities.	Workforce participation rates, unemployment numbers and distribution among different population sectors, job availability, skills audits, educational attainment, household income, income distribution Labour prices at different scales (local, regional and Territory), hours worked, type of businesses, taxation paid, bankruptcies. Indicators against economic contribution of other sectors, eg tourism, mining, pastoral data, productivity data, contribution to GSP, profitability, number of businesses, business closures Region's contribution to GDP, taxes, mining royalties, effect on export prices in other sectors (eg beef exports). Consumption, disposable income (money left to save or buy things), inflationary pressures (eg basket of goods surveys), financial wellbeing (enough money to cover daily needs). Workplace satisfaction, ability to find work, cultural barriers, employability. Business optimism (based on confidence surveys). Perceptions of land use changes on livelihoods. **Indigenous specific** Number of social enterprises. Number of people involved in traditional livelihood activities, such as caring for country or ranger groups. Number of Aboriginal-owned businesses. Current qualifications and skills. Aspirations for community development.	Project and cumulative industry expenditure, proportion of spend in the local economy; Number and type of jobs created; Proportion of locals in jobs, did workers come from existing jobs or were they unemployed; Skills gained, retention rates, workplace satisfaction surveys, reported incidents of discrimination; Number of workers in short-term accommodation, taking up flights. **Indigenous specific** Number and value of contracts awarded to Aboriginal businesses; Number of social enterprises or community development projects started; Number of local Aboriginal people employed directly or indirectly in the industry; Number and type of qualifications gained.

Assets (Sustainable livelihoods framework)	**IFC Performance Standards (2012)**	**Dimensions** (see Fig 1.3)	**Baseline indicators that might be used. This list is not intended to be prescriptive. It should be refined at the scoping stage and tailored according to the context of individual studies.**	**Additional reporting indicators that might be considered in recommendations for ongoing monitoring**
Political	PS1 PS7 Indigenous Peoples, including free, prior and informed consent	**Strong voice**  A strong voice means we have influence and the ability to shape our own destinies through having a say in decision-making and contributing to our own governance. Communities may feel ineffectual if their voice is not heard or their governance structures are disregarded in industry and project decisions.	Levels of involvement in political activity. Levels of trust in government. Procedural fairness indicators (ability to have a say, be heard, influence decisions, local knowledge considered equal to expert opinions). Perceptions of Free, Prior and Informed Consent being accorded. Number of strong agreements negotiated.	Impacts on local governance, eg from project-controlled governance structures, loss of key staff to project/s. Perceptions of procedural fairness.
Social	PS1 PS 7 Indigenous Peoples: Includes respect for culture, knowledge and practices of Indigenous peoples, using representative bodies, providing sufficient time for Indigenous peoples' decision-making processes PS 8 Cultural Heritage	**Cultural identity**  Cultural identity captures connections to kin and country, cultural authority and respect for Aboriginal worldviews and knowledge. Cultural identity can be affected by reduced access to land and traditional livelihoods, damage to sacred or important cultural sites, threats to traditional leadership, dilution of shared values through the arrival of newcomers and reduced time for customary activities. This dimension recognises our multicultural spirit and the enrichment of a flourishing arts sector, which in turn support creative economies, tourism and a good lifestyle.	Descriptive studies outlining strength of culture, potential threats, worldviews, aspirations and attitudes (likely to be anthropological and contain narrative rather than data). Potential impacts could include challenges to cultural authority, reduced ability to pass on knowledge, reduced cultural ties to family and land, loss of language (through working in an English-speaking environment), reduced access to land, less time for ceremonies, loss of control.	How projects have impacted on the strength of culture of individual communities; Contributions to maintenance of culture; Measures taken to protect culture and cultural heritage, eg cross-cultural training. Reported incidents of human rights breaches.

Assets (Sustainable livelihoods framework)	IFC Performance Standards (2012)	Dimensions (see Fig 1.3)	Baseline indicators that might be used. This list is not intended to be prescriptive. It should be refined at the scoping stage and tailored according to the context of individual studies.	Additional reporting indicators that might be considered in recommendations for ongoing monitoring
Natural	PS1 PS6 on biodiversity conservation and sustainable resource use	**Healthy country**  Access to healthy natural resources is important for our wellbeing, traditional livelihoods and recreation. Sometimes this is described as ecosystem services, which are the commercial, cultural, recreational and aesthetic benefits, goods and services and value we derive from use of our land, clean air and water. Healthy country can be disturbed by land-clearing, mining and pollution. It may benefit from rehabilitation or investment in Landcare or natural resource management activities. Healthy country is likely to be linked to a strong sense of cultural identity.	Uses and values of ecosystems, including cultural ecosystem services, commercial uses. Values associated with use and enjoyment of the environment. Health benefits (good drinking water, ability to swim in rivers and waterholes) and existing public health impacts of pollution or poor quality water. Sustainable land and sea management practices.	Loss of valued biodiversity and ecosystems. Contributions to land management, eg ranger groups.
	PS1 PS4	**Our living environment**  Living in pleasant surroundings means we are not disturbed by industrial noise, dust, traffic, eyesores on the landscape and pollution that detract from the quality of our environs.	Indicators for these dimensions will link with those in technical biophysical studies on existing noise, dust, landscape disturbance, traffic, pollution levels. They should be validated with community perception surveys.	Attitudes and perceptions (eg in community-based surveys)

Table 4-5: Explanation of indicators

	Types of data or knowledge	Some considerations for the Territory
Red	Core quantitative indicators that would usually be considered in an SIA: eg population details, number of houses, educational attainment, disadvantage indexes.	Secondary data, such as the Australian Bureau of Statistics' five-yearly Census, may be unreliable in a Territory context, due to issues such as low population samples, mobility, and cultural complexities in applying classifications such as 'family', 'household' or 'usual place of residence' to many Aboriginal communities (Taylor, et al., 2000).
Black	Discretionary indicators if an issues analysis determines they are measurable and useful.	An example of discretionary data is chronic diseases or indicators of health. It may be beyond the scope of studies to establish causal links with development.
Green	Qualitative indicators, such as measurement of attitudes and perceptions, community attitudes towards development, community cohesion, sense of wellbeing.	Qualitative concepts such as community wellbeing and community cohesion can be defined in many ways. While they might be described, based on community input, operationalising the concepts to define measurable variables is challenging and should be left to specialist researchers. For examples, see the New Zealand Living Standards Framework (2018), CSIRO's attitudes to mining studies (Moffat et al., 2017), CSIRO's community wellbeing surveys (Walton et al., 2014), the Scanlon Foundation's surveys of social cohesion, immigration and population issues (Markus, 2017) or the OECD 'How's Life' survey.
Blue	Narrative approaches: Some impacts may be amenable only to description and based on gathering knowledge and insights.	This includes strength of culture, spiritual ties to the land (much of which will be confidential), wellbeing, how natural resources are valued, hopes and aspirations and people's lived experience of the industry. These may require anthropological studies and community-led research methodologies.

4.6 Baseline data and knowledge gathering

The next key step is gathering the baseline data in order to profile, or characterise, the existing environment. This baseline data will draw on both desk research and fieldwork, including literature, secondary data and qualitative primary data from fieldwork. For example, you might start by accessing Australian Bureau of Statistics or NT Shelter secondary data on number of dwellings, rental occupancy rates in a town and waiting lists for public housing. For this aggregated data to tell a meaningful story, fieldwork is needed. Talking to real estate agents, NGOs or housing staff on the ground might reveal more localised trends, insights and personal stories.

4.7 Values mapping

Where there are emotions, there are disturbed values. Values are deep-seated standards and beliefs that infuse our worldviews, attitudes, positions on issues and decision-making. They are moulded by a lifetime of socialisation, learning and life experience. They drive our psychological responses and resilience or resistance to change. Values are the seeds of conflict and collaboration, the precursor to social movements, the window to individual and community perceptions and the key barrier to persuasion by factual argument.

People's positions on controversial topics are more likely to be influenced by self-interest (what I stand to lose or gain from development) and values (what I believe in and what I will fight to protect) than by technical arguments. Societal values are changing, particularly because of concerns about climate change and the use of finite non-renewable resources. The prospect of development may spark conflict within or between communities, particularly if the distribution of benefits and costs is seen as inequitable.

> "Values are deeply held beliefs about what is good, right and appropriate. Values are deep-seated and remain constant over time. We accumulate our values from childhood based on teachings and observations of our parents, teachers, religious leaders and other influential and powerful people."
> (The Praxis Group 2012, p. 4)

There are different ways to conceptualise values:

- how something is valued by the market = economic values
- values associated with landscapes and natural features will influence where impacts should be minimised and what should be preserved
- internal psychological values = attitudes, beliefs that underlie our interests and the positions we take on issues
- professional and societal values will shape our upbringing and approaches to work
- instrumental values = how we achieve our goals, preferable modes of behaviour
- terminal values = our end goals, such as family security.

Values are best determined by participative research and dialogue that determines worldviews, beliefs and attitudes. Values mapping can contribute to community sustainability planning by considering social, cultural, ecological and economic values (see 4.8.3). It also provides a form of 'people due diligence' into the sensitivity or resilience of a community by considering disturbance to values at a household, neighbourhood, regional, government and societal level (see 4.8.2). Deeply held values are less amenable to trade-offs, such as jobs in return for giving up the peace and quiet of a neighbourhood.

5 Thanks to IAP2 trainer Michelle Feenan (Engagement Plus) for introducing me to grounded questions. See also Mark Strom's 'Lead with wisdom'. For more on values see work by Rokeach.

4.7.1 Determining people's values

Values are determined by people's emotional or subjective responses to grounded questions that trigger experiential responses and rich narrative. Questions might be:

- what do you love about living here?
- what keeps you awake at night?[5]
- what do you want for your children's future?
- what puzzles you about this project?
- what makes you proud?
- to what extent could you call on your neighbour in an emergency (an indicator of social ties).

> "As individuals, our values are personal criteria that govern the way we think things 'ought to be'. Consequently, values are highly personal and can vary significantly from person to person."
> (IAP2 2006, p.16)

These are likely to evoke value statements, as outlined in Fig 4-1.

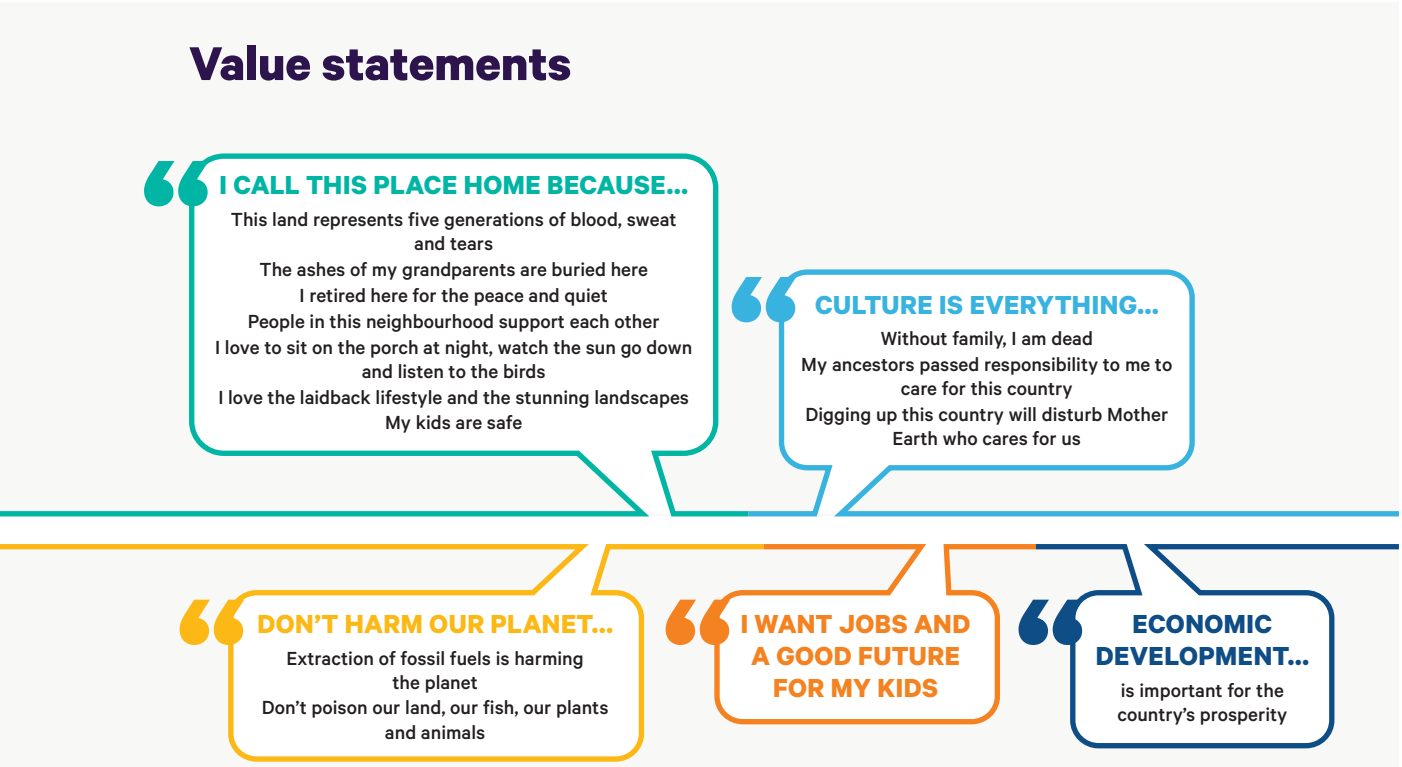


Fig 4-1: Examples of value statements (for illustrative purposes only)

4.7.2 Values by segments of scale

Values mapping should consider the context of an affected community and values, attitudes and beliefs in the following segments (see Fig 4-2):

Sentimental values are attached to the place we call home, where we raised our children, buried our grandparents, where we treasure the peace and quiet, know the neighbours, walk the dog and value our privacy. Disturbance to sentimental values includes the concept of 'solastalgia' (Albrecht 2005). This is the psychological distress at unwelcome change to our home environment, loss of place, identity, general wellbeing and fears of pollution and toxicity. Our sentimental values will be influenced by the perceived effects of development on our quality of life and material wellbeing. We are unlikely to accept trade-offs for the loss of these values, so disturbance of sentimental values is best avoided.

Neighbourhood: Development may affect our sense of community wellbeing and safety, appreciation of landscapes and degree of political efficacy (voice in our own governance). Disturbance may come from an influx of strangers changing the composition and liveability of our neighbourhood, pressures on the suitability and affordability of social services (housing, education, transport) and health and safety issues (including traffic and worker behaviour). It may come from disruption to cultural and spiritual ties to land, kin, leadership and cultural practices or disrupted ecosystem services, such as clearing of land, pollution and industrialisation of the local landscape. Neighbourhoods may value benefits such as jobs, improved social services and projects' social investment strategies.

Regional effects incorporate supply chains, the distribution of economic benefits such as jobs and local procurement, accommodation of workers, possible inflationary and displacement effects, pressures on infrastructure and potential contributions to regional capacity building. Disruption may include changed governance structures or their reduced effectiveness due to loss of human capital. Benefits may include more jobs and industry development, reversing the decline of regional communities and diversifying economies. The extent to which we will accept trade-offs is likely to depend on the strength of our values and how we perceive them being disturbed.

State and Territory or national values captures the enhanced revenue and financial viability of governments from taxes and royalties, economic growth and enhanced ability to provide services, as well as a reputation for being investor friendly and enforcing rigorous and quality impact assessment. Some states (eg Tasmania) may promote 'clean green' values.

Societal values affected by projects are likely to be deep-seated, more disparate and less localised, such as concerns about climate change, use of fossil fuels, opposition to fracking or nuclear developments, scarcity issues such as use of groundwater, or impacts on Aboriginal rights. Industry and societal values are often polarised. Fixed positions are unlikely to shift, hence the futility of persuasion by 'facts' and 'education'. Societal values are best considered at a strategic level to provide an early indication of likely acceptance or conflict.

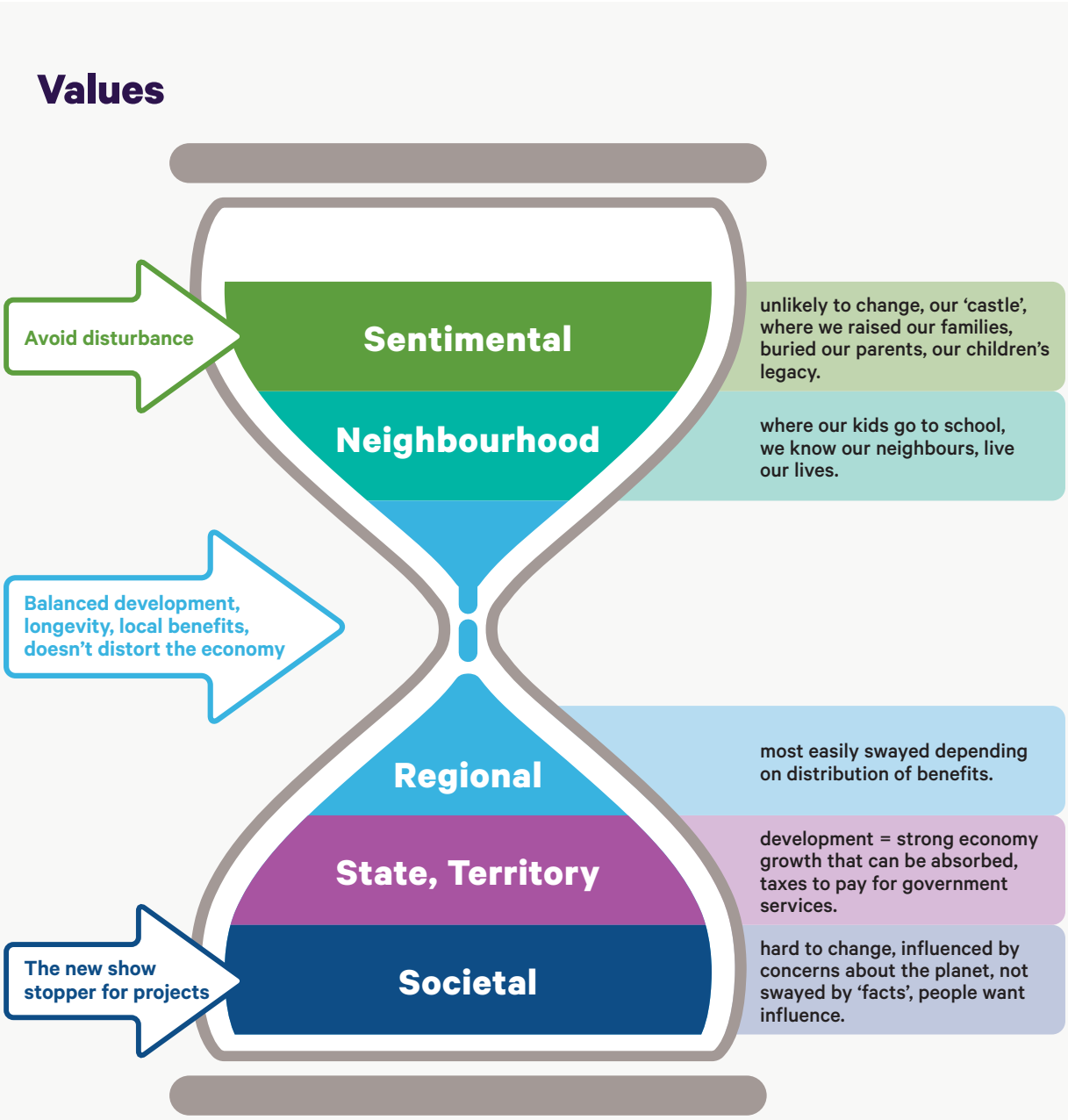


Fig 4-2: A tool for values mapping

The best time to do values mapping is before values are disturbed. Values are a weather vane of the community mood. Taking the local temperature is a risk reduction strategy. Values mapping is also a useful planning tool that can be applied to strategic assessments to capture diverse perspectives and decide what type, pace and scale of development is compatible with local values. Governments can then take development opportunities to market, rather than being driven by external agendas typical of project-level assessment on a trajectory to approval.

4.7.3 The values of sustainability

Sustainability is futures oriented. What sort of society, economy, environment and strength of culture do we want to bequeath to our children and grandchildren? How sustainable is a project in terms of the longevity of the harms and benefits it brings? Will it build and strengthen a community, diversify the economy and leave our landscape in a good condition? What will happen when the project comes to an end?

A values analysis could consider sustainability from the following perspectives:

- **Social** sustainability covers "the ability of human beings of every generation to not merely survive but to thrive" (Magis & Shinn 2009) based on principles such as equity, diversity, quality of life, interconnectedness, democracy and governance (Barron & Gauntlet 2002).
- **Cultural** sustainability includes enduring knowledge and spiritual connections to kin and country. For Aboriginal people, commonly held values include respect for elders and cultural authority, the ability to pass on cultural knowledge and practices to future generations as well as aspirations for better housing, education, health and jobs.
- **Economic** sustainability from a government's standpoint may be diversification of the economy and nation-building growth that builds value-adding capacity to a regional economy. From a community's perspective, economic sustainability may be more about "sustainable prosperity" (Chambers et al. 2018; Morrison 2015). This encapsulates land-based livelihoods while avoiding dependence on one external economic activity, such as mining, where many of the benefits flow away from the affected region.
- **Ecological** sustainability in a North Australia context may be considered from an ecosystems services approach, which considers the benefits and services provided by the environment to humans (Archer et al. 2019) or "the ecological characteristics, functions or processes that directly or indirectly contribute to human wellbeing" (Russell-Smith et al. 2019, p.192). Heiner et al. (2019) propose the concept of cultural ecosystems services, which considers the non-material benefits of ecosystems and human-environment interactions and draws on Indigenous ecological knowledge to identify and solve environmental problems.

The International Association for Public Participation (IAP2) suggests that sustainable decisions are those that will look good in the future, as well as being technically feasible, economically viable, publicly acceptable and environmentally compatible (IAP2 2006). Well-informed decision-making considers impacts on both human and natural ecosystems, therefore, requires a balanced evidence base that incorporates all dimensions of sustainability and their associated values (see Fig 4-3 below for a diagrammatic representation of this).

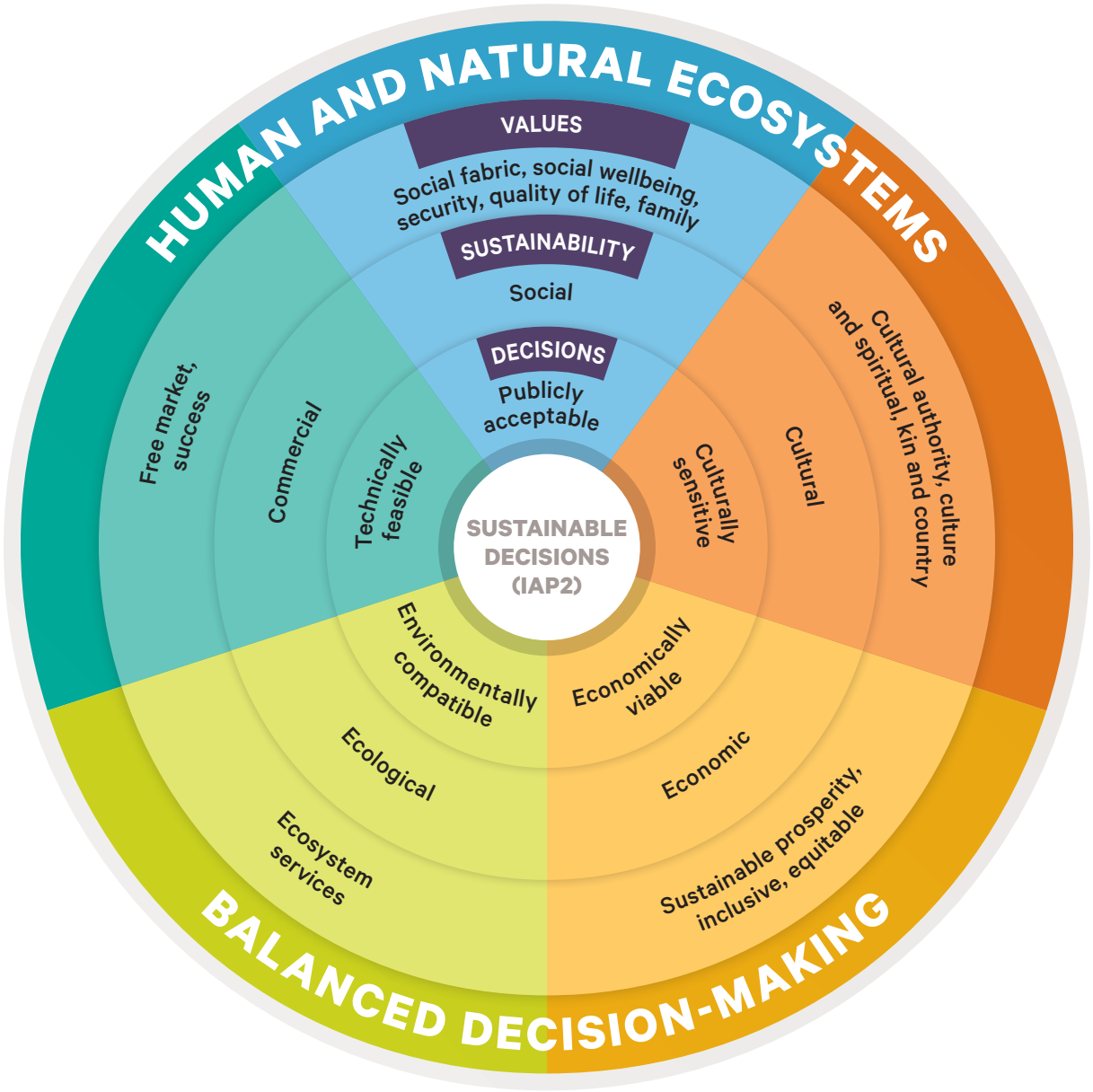


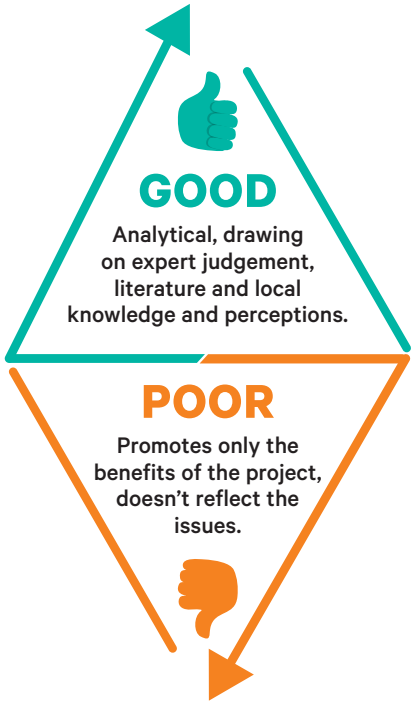
Fig 4-3: Sustainable decisions are informed by consideration of the diverse values

5. Identify and assess potential impacts

Data is only as good as its interpretation to predict likely impacts and assess their significance, in line with the DIKW hierarchy: data-information-knowledge-wisdom (Rowley, 2007). It is easy to produce volumes of data. It is much harder to convey pearls of wisdom or use data to tell a meaningful story.

5.1 Purpose

- to guide proponents and regulators on the social consequences of the project or policy
- to contribute to project planning and design through robust and relevant findings
- to transform data into valued knowledge and insights
- to inform sound decision-making that takes account of diverse perspectives
- to provide analytical rather than encyclopaedic assessment
- to make recommendations for management interventions.



5.2 Activities

- critical analysis of the data, including community insights
- draw on literature and case studies of comparable projects
- determine causal pathways of the project and the direct and indirect impacts (these are complex and might be mapped)
- consider different scenarios or alternatives of development
- take account of context and the influence of historic events or reactions to previous development
- take account of the complex interaction between social, cultural, economic and ecological impacts
- consider how positive and negative impacts will be perceived, felt and distributed
- apply values mapping to determine resilience or sensitivity to project disturbance
- categorise and discuss impacts against the key dimensions outlined during scoping
- apply judgement to predict likely positive and negative consequences of project actions and the stages of the project at which impacts will be experienced (from project announcements to closure)
- consider what constitutes social, cultural, ecological and economic sustainability from the perspective of affected people and communities
- apply sensitivity analysis (a risk and opportunity assessment) to prioritise the most material impacts
- suggest mitigation or enhancement measures to optimise beneficial impacts and minimise harms
- summarise risk and opportunity ratings and prioritise key positive and negative impacts
- identify gaps in knowledge.

5.3 Identification, evaluation, prediction

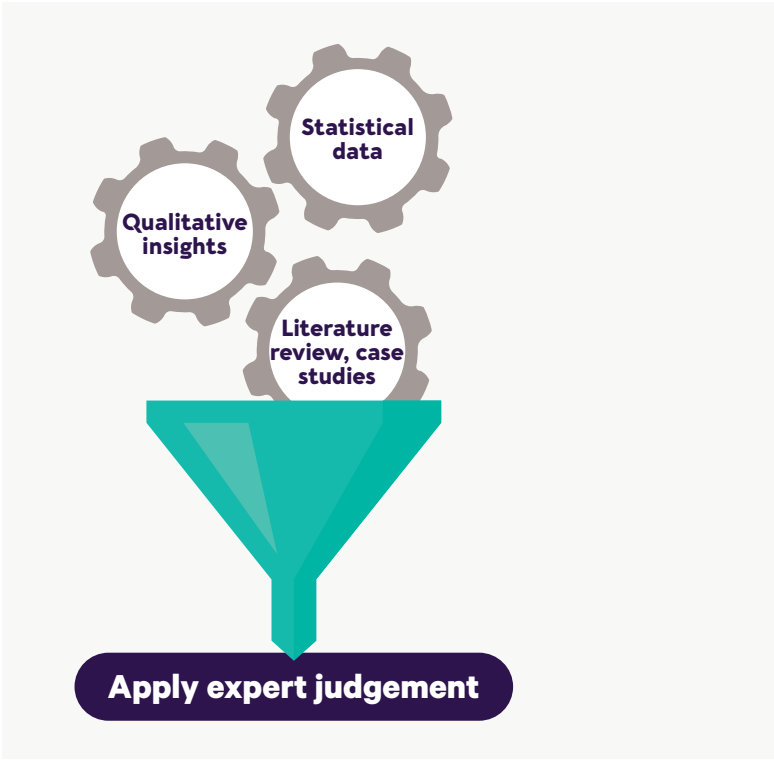
Analysis of the data will draw on case studies and literature on what has happened with similar development elsewhere, community perspectives derived from consultation with affected communities, the detailed data gathered for the baseline assessment and researchers' expert judgement. What did the data tell us? What did the community tell us? What does the literature or case studies tell us about similar development elsewhere? How is development likely to unfold for affected communities?

Things to consider:

- potential change processes or pathways and their implications;
- 'ground-truthing' technical studies and statistical data with the perceptions of potentially affected people;
- taking account of existing change processes, such as other economic development in the region, existing social stressors, or negativity because of past experience with development or dispossession;
- whether proposed development accords with existing land uses and aspirations for the future;
- the extent to which diverse values are shared or contested by different social groups and the range of ways that impacts may be experienced by different people;
- what does the literature say about similar development in other regions;
- cross-referencing to the findings of other studies;
- considering both direct and indirect, short and long-term, positive and negative effects;
- being clear about impacts that can be predicted with reasonable certainty and those that are complex, ambiguous and possibly shifting;
- note assumptions made for the study, any gaps and recommendations for further work.

The assessment stage will incorporate data from the other technical studies.

> "The need for professionally qualified, competent people with social science training and experience cannot be overemphasized. An experienced SIA practitioner will know the data, and be familiar and conversant with existing social science evidence pertaining to impacts that have occurred elsewhere... This breadth of knowledge and experience can prove invaluable in identifying important impacts that may not surface as public concerns or as mandatory considerations found in agency... compliance measures."
> (Interorganizational Committee, 1994, p. 21)



5.4 For the regulator

Some things to consider:

- was the study done by a suitably qualified practitioner?
- has the regulator been provided with sound, evidence-based research to reduce certainty and inform good decisions?
- did studies address the key issues outlined in Terms of Reference and Statement of Reasons?
- do studies adequately describe impacted people and communities?
- do studies adequately capture the issues and concerns of communities?
- do studies contain relevant data against relevant indicators?
- does the management plan address the priority positive and negative issues, provide for whole-of-life cycle adaptive management and describe accountable and transparent commitments to ongoing monitoring and reporting?
- are studies credible, proportionate and independent?

5.5 Determine significance ratings and descriptors

The final stage of the assessment should be to determine the likely significance of potential impacts before and after mitigation or enhancement measures. This will inform Section 6 on management plans. A significance assessment is a value judgement. It should follow a similar – but more rigorous - approach to that used during the scoping phase (see Section 2.8). This process is often referred to as a 'risk and opportunity assessment'. Given that the term 'risk' tends to be used in project management terminology to signify risk to the company, the term 'significance assessment' is preferred a) to convey consideration of risk from the community's perspective, b) to be clear that significance considers both beneficial and adverse impacts and c) to avoid ambiguity given the range of meanings associated with the term.

A scoping tool should assign descriptors to likelihood and consequence ratings (see the NSW scoping tool described in Section 2.8 for an example). It may use a simple scoring sheet or adopt approaches closer to the Standards Australia/Standards New Zealand, 2009. *AS/NZS ISO 31000:2009 - Risk management - Principles and guidelines*. The following is a guide to significance ratings.

Table 5-1: negative impact ratings (based on ISO 2009)

		Negative consequence (for harms, disturbance)				
		1	2	3	4	5
Likelihood	**Descriptor**	**Insignificant**	**Minor**	**Moderate**	**Major**	**Extreme**
A	Almost certain	A1	A2	A3	A4	A5
B	Likely	B1	B2	B3	B4	B5
C	Possible	C1	C2	C3	C4	C5
D	Unlikely	D1	D2	D3	D4	D5
E	Rare	E1	E2	E3	E4	E5

Table 5-2: Descriptors for negative impacts

Catastrophic	Intolerable social, cultural and economic cumulative impacts that are unlikely to be amenable to management.
High	Intolerable cumulative impacts that might be accepted if managed to as low as reasonably practicable, taking account of community perceptions, values and resilience.
Medium	Tolerable (depending on the level of community acceptance) cumulative impacts if managed effectively, but requires close monitoring.
Low	Tolerable, barely perceptible negative impacts, but implement adaptive management approaches to ensure the threat level doesn't increase and exacerbate emerging threats as development unfolds across the region.

Table 5-3 – positive impact ratings

		Importance consequences (for benefits, opportunities)				
		1	2	3	4	5
Likelihood	Descriptor	Insignificant	Minor	Important	Very important	Extremely important
A	Almost certain	A1	A2	A3	A4	A5
B	Likely	B1	B2	B3	B4	B5
C	Possible	C1	C2	C3	C4	C5
D	Unlikely	D1	D2	D3	D4	D5
E	Rare	E1	E2	E3	E4	E5

Table 5-4: Descriptors for positive impacts

Transformational	Transformational collective and socially, culturally and economically sustainable opportunities for the region, by building enduring capacity that benefits future generations
Beneficial	Beneficial cumulative benefits across the region that may be of a smaller scale or incremental, but which may suit culturally appropriate sustainable development.
Noticeable	Benefits are noticeable but may be quickly absorbed.
Imperceptible	Little change in the way of life, livelihoods and lifestyles of the region

5.6 Final report

The terms of reference for researchers will specify what is required. The following is a guide:

1) **Outline stakeholders, study approach, methodologies, assumptions and limitations.**
2) **Describe** or profile the affected area: background information to provide context, including historical information, populations, land use, governance structures, industry sectors, previous development and previous and existing change processes.
3) **Summarise** key issues raised during consultation.
4) **Analyse and provide expert judgement** on likely cumulative adverse or collective beneficial impacts based on the various scenarios of possible development. This will incorporate a strong account of community perspectives of development alternatives, based on public participation.
5) **Assess** the significance of potential adverse and beneficial impacts based on community perceptions and likely sensitivity or resilience of diverse sectors to change.
6) **Recommend** actions and commitments to inform management plans.
7) **Outline** management to mitigate potential adverse effects and optimise collective opportunities.
8) **Suggest reporting mechanisms** for ongoing adaptive management:
   a. establishing what will be reported
   b. scorecards or annual reports to track and report on change or progress on issues raised by the community (such as jobs, community development projects)
   c. participatory monitoring
   d. a process for quickly identifying emerging issues that may require responses or further research
   e. the level of ongoing involvement desired by the community, which may include community reference groups, sustainability reporting, community updates, newsletters or industry updates.
9) **Summary report:** Prepare a summary report for the community, including feedback on how the issues they raised have been addressed or informed planning and design.

6. Management

6.1 Purpose

Once key impacts have been identified and prioritised, management plans should be prepared to:

- summarise key findings and outline commitments
- guide transparent and accountable social performance and reporting
- inform regulators and the community of ongoing management approaches
- optimise beneficial impacts and minimise harms
- inform adaptive management of emerging issues over the project lifecycle.

6.2 Activities

- summarise the key findings of the impact assessment study, risks and opportunities and their level of significance
- outline proactive measures to enhance each of the identified project benefits
- outline mitigation strategies to avoid, mitigate or offset each of the identified negative impacts
- where negative impacts are uncertain, apply the precautionary principles (ie be conservative and monitor closely)
- provide a list of accountable commitments
- outline how these commitments will be managed, monitored and reported against (to both regulators and the community)
- discuss ongoing community engagement strategies, which might include citizen participation plans in monitoring projects
- identify how emerging issues and concerns will be captured for the life cycle of the project (adaptive management)
- outline indicators for ongoing monitoring and performance measures, including community feedback (eg satisfaction surveys, five-yearly updates)
- outline reporting mechanisms and governance, eg score cards, social performance reports, sustainability reporting, annual reports, community reference groups.

6.3 Social Impact Management Plan

Management plans will be outlined in a Social Impact Management Plan (SIMP). This should reiterate the key positive and negative impacts described in the Social Impact Assessment. It should outline accountable and enforceable mitigation and enhancement measures.

The first step in mitigation is avoidance, the next is to reduce the impact. This might include rerouting a road that is going to run past nearby houses or not disrupting mustering with helicopter surveys. It could include restrictions on operating hours to avoid disturbing residents at night or not operating road trains through residential areas at peak hour. It could mean changing project design to reduce the level of impact on sensitive habitats or town drinking water. The final step in the mitigation hierarchy is offsetting or compensation. Offsetting is a problematic option for impacts on humans. Compensation might include buying a neighbouring property – but this can lead to impacts on social cohesion and sense of community for other residents.

Enhancement measures might include packaging scopes of work to suit the size and capacity of local businesses, putting in place special work-ready training courses to help local Aboriginal people get jobs or funding for social enterprises.

To measure progress and verify the accuracy of our predictions, we need to track change against baseline data. A good approach is to establish indicators against the issues of concern to stakeholders and affected communities.

Commitments should be enforceable, accountable and easy to understand. Reporting against these commitments should be transparent, relevant and credible. Reporting tools might range from corporate reporting to shareholders to visual score cards for affected communities. The management plan might include key performance indicators, roles and responsibilities and a statement about how proponents will provide whole-of-life cycle monitoring and reporting.

Examples of issues covered by management plans:

- Indigenous employment strategy
- local industry participation plan
- a workers' accommodation strategy
- community benefits plan (this may form part of agreement making such as an Indigenous Land Use Agreement or ILUA)
- ongoing community engagement plan
- worker code of conduct
- cultural competence plans (from human resource strategies to ensure Aboriginal workers feel safe to cultural awareness training for other staff)
- links to other plans, such as work health and safety, traffic management plans
- grievance procedures.

7. Monitoring

Just as important as a social impact management plan is implementing it! Adaptive management covers the life cycle of a project, checking for emerging issues, tracking change against baseline data, determining whether predicted impacts occurred, ensuring that commitments are met and reporting back to communities.

7.1 Purpose

- Management plans are written to show regulators and the community, in a transparent and accountable way, how the detrimental and beneficial impacts of a proposal will be managed. The purpose of monitoring, therefore, is to:track change against baseline data
- show how commitments are being met
- adapt management plans to emerging issues
- measure actual impacts against predictions
- maintain reporting to the community.

7.2 Activities

- implement provisions from social impact management plan (ongoing indicators, key performance measures, individual plans)
- seek advice from the community about ongoing engagement and two-way communication
- implement engagement activities, such as community reference groups, liaison officers, site visits, open days
- publish annual reports, community updates and community score cards against commitments
- maintain a database of baseline data to track change
- regular (five-yearly) reviews of the social impact management plan
- regular (annual) community satisfaction surveys
- seek ways to involve the community in ongoing research, such as citizen monitoring
- establish an effective grievance procedure, so it is easy to raise concerns
- monitor grievances, complaints and positive feedback for trends or issues that need to be remedied.

8. Other considerations

8.1 Early and meaningful engagement

An important aspect of social, cultural and economic impact assessment is the early and meaningful participation of affected people and communities. Engagement is not counting inputs and outputs: number of meetings, people spoken to or fact sheets produced. Engagement (or public participation) is not a linear approach of seeking feedback at the end of regulatory timelines. It is not DAD consultation (Decide-Announce-Defend).

Early and meaningful engagement is an authentic process of involving people in solutions and decisions, listening to understand their perspectives, providing an honest account of people's input and taking seriously the lived experience of communities.

Participation starts with giving people objective and accurate information about proposed development or programs so they can form a view on what proposals mean to them.

Engagement should start at the scoping or planning stage (see Fig 1-5) and continue throughout the project life cycle. Community input should have equal status with technical reports. Aboriginal people should have control over research and use of their knowledge, as well as opportunities to build new skills as researchers.

Once people have been informed and consulted, they should receive feedback on how their input influenced decisions (both impact assessment and project design). They should be asked how they want to remain involved and kept informed as long as there is project activity in their region.

All public participation should align with the best practice standards of the International Association for Public Participation (IAP2) Core Values (www.iap2.org.au/About-Us/About-IAP2-Australasia-/Core-Values). For best practice Indigenous engagement, refer to O'Faircheallaigh (2009) and Hunt (2013).

8.1.2 The purpose of engagement

Real public participation is democracy at work between elections. The best participation is inclusive and deliberative, allowing people to come together, consider and debate proposals and act as the ultimate decision-makers. This ideal is not always realistic. But participative approaches should be tailored to the level of impact and people's level of interest (see the IAP2 Spectrum of Participation at www.iap2.org.au/resources/spectrum/).

The primary purpose of engagement (or public participation) is to give the community influence on decisions that affect them. In addition, the purpose of engagement is to:

- inform rigorous scoping
- enhance community confidence through quality, participative process
- provide regulator confidence that the community's attitudes, beliefs, values and concerns are well understood
- inform balanced decision-making by giving equal weight to community knowledge and technical studies
- provide subjective insights into issues, attitudes and beliefs
- provide the community with objective information (see below) and keep them informed
- avoid mistakes and missteps by eliciting community knowledge
- build relationships and trust
- avoid the cost of conflict and delays.

8.1.3 The activities of engagement

- stakeholder mapping (who is affected, the needs, likely attitudes, best way to reach them)
- communication materials that clearly explain the project and implications (see below)
- fieldwork (methods will vary depending on the project and needs of stakeholders)
- issues analysis
- recording all stakeholder contact
- reporting on approach, methodologies used, key issues raised, what information was provided and ongoing engagement plans
- reporting on ethical and privacy issues.

> "People have a right to be involved in the decision making about the planned interventions that will affect their lives."
> (Vanclay, 2003, p.9)

8.1.4 Early and meaningful engagement for impact assessment

The following guidelines for early and meaningful engagement were developed by John Sinclair and Meinhard Doelle in Canada.[6 7]

1. Participation begins early in the planning and decision-making processes, is meaningful and builds public confidence;
2. Public input can influence or change the outcome/project being considered;
3. Opportunities for public comment are open to all interested parties, are varied, flexible, include openings for face to face discussions and involve the public in the actual design of an appropriate participation program;
4. Formal processes of engagement, such as hearings and various forums of dispute resolution, are specified and principles of natural justice and procedural fairness are considered in formal processes;
5. Adequate and appropriate notice is provided;
6. Ready access to the information and the decisions at hand is available and in local languages spoken, read and understood in places potentially affected by proposed undertakings;
7. Participant assistance and capacity building is available for informed dialogue and discussion;
8. Participation programs are learning oriented to ensure outcomes for all participants, governments, proponents and participants;
9. Programs recognise the knowledge and acumen of the public;
10. Processes are fair and open in order for the public to be able to understand and accept decisions.

6 The terms 'public participation' and 'community engagement' are used interchangeably and generally mean the same thing. Public Participation is used more in America, while 'community engagement' is more common in Australia. The term is synonymous with 'public involvement', often used in the UK. The term is broader than 'consultation', which is only one level of engagement. Stakeholders are generally people with influence on or interest (or stake) in decisions whereas the word 'community' generally refers to a broader group of potentially affected people with often diverse perspectives (see definitions). Sometimes an undue focus on 'key stakeholders' can privilege 'in groups' at the expense of those most affected.

7 These were provided at a public participation section meeting at the IAIA conference in South Africa in 2018 and are similar to suggestions in a blog (Doelle 2018).

8.1.5 IAP2

The International Association for Public Participation (IAP2) is the gold standard for quality engagement practice. IAP2 has readily available tools such as its Spectrum of Participation, Core Values, Ethics and 2015 Quality Assurance Standard (www.iap2.org.au). The IAP2 Core Values of Public Participation are:

1. Public participation is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process.
2. Public participation includes the promise that the public's contribution will influence the decision.
3. Public participation promotes sustainable decisions by recognising and communicating the needs and interests of all participants, including decision makers.
4. Public participation seeks out and facilitates the involvement of those potentially affected by or interested in a decision.
5. Public participation seeks input from participants in designing how they participate.
6. Public participation provides participants with the information they need to participate in a meaningful way.
7. Public participation communicates to participants how their input affected the decision.

> "... some groups low in power that may be adversely affected do not necessarily participate in early project stages..."
> (Interorganizational Committee, 1994, p.20)

8.1.6 Participative justice principles

Having a voice is increasingly seen as a human right, particularly for marginalised and vulnerable people who tend to be excluded from decision-making. Having an influential voice is articulated as the concept of free, prior and informed consent (UN 2007).

Shrader-Frechette (2002) suggests a concept of 'participative justice' as "institutional and procedural norms that guarantee all people equal opportunity for consideration". In my thesis, I draw on rights, environmental and distributive justice and procedural fairness literature to develop eight principles of participative justice as an evaluation framework for effective participative process.

Table 8-1: The principles of participative justice

Trust and relationships	Trust, gained through relationship building, is an important predictor of community acceptance. Trust is especially important when there is high uncertainty or insufficient knowledge to make lay judgements and residents have to weigh up potential risks and benefits based on the perceived credibility of scientific information (Luke 2017; Parsons et al. 2014).
Voice	is people's ability to express what they feel or think. Having a voice means that community knowledge is seen as authoritative and signifies a belief that people's views are being considered by authorities, who are making an effort to be fair. Consultation fatigue sets in when people feel their input is tokenistic and that the real decisions have already been made (Coakes 1990; Porter 2018).
Power	comes from being part of a dominant culture, with better access to resources and decision-makers. It includes bargaining power and consideration of whose definition of an impact, value or fact is accepted or dismissed as subjective, emotional or irrelevant. Empowerment is aided by giving affected social groups greater influence and standing, such as hearings in less formal settings, giving communities control over technical inputs and negotiating comfortable environments in which to provide input (Preston 2014; Berger 1977; Lockie 2001).
Control	People affected by projects desire good process (the ability to state their case) and decision control. They are likely to want greater control over important issues, while delegating decisions that matter less. Active participation, or the ability to present their views, makes people more likely to accept the final decision (Ross 1990; Coakes 1990).
Standing:	Justice as recognition relates to who is given respect and valued. Some processes devalue Aboriginal people and cultural minorities, whereas all people should be accorded respect, dignity and equal worth so they can be confident that decisions are not biased by power imbalances or technical credentials. The voices of marginalised 'others' should have equal standing with those of dominant groups (Preston 2014, Chambers 1996; Porter 2018).
Inclusiveness	covers culturally appropriate participation, adapting to local decision-making procedures, providing time and resources to respond to proposals (O'Faircheallaigh 2009) and giving equal weight to other knowledge systems and worldviews. The 1977 Berger Inquiry in Canada adopted an integrated approach of informal hearings to incorporate "the world of the everyday, where most witnesses spend their lives" and formal hearings, or "the world of professionals, the specialists and the academics" (Berger 1977, p. 387)
Legitimacy	or fair decision-making, includes the credibility and trustworthiness of authorities and degree to which people are treated with dignity and respect (Tyler 2000). To be seen as legitimate, a company needs to provide believable information, deliver on commitments, demonstrate a high level of technical competence and a commitment to social performance (Jijelava & Vanclay 2017).
Independence and impartiality	Impacted groups will look for an unbiased decision-maker who is honest and open and uses appropriate information to make decisions based on the perceived honesty, impartiality and objectivity of authorities (Coakes 1990; Tyler 2000).

8.1.7 Some common pitfalls of engagement

Pitfalls of engagement to watch for include:

- gravitating to consultation with 'in groups' or well-known stakeholders rather than those most affected
- mistaking large numbers and quantitative metrics (how many people spoken to, how many meetings) for effectiveness
- a lack of independence, for example company strategies may be 'preaching to the converted' and miss the voice of aggrieved citizens
- people don't understand the implications of a project so don't speak up until it's too late
- a lack of feedback being mistaken for apathy, rather than poor practice or a disengaged public
- relying on one method, such as public meetings, that some stakeholders may avoid
- not seeking out people who are marginalised or disadvantaged
- being in such a rush that there's no flexibility to accommodate delays, such as a death in the community
- seeing consultation as a one-off meeting rather than an exercise in building trust and relationships
- saving consultation to the end, when all key decisions have been made
- ignoring complaints so that aggrieved citizens resort to protest or legal action to be heard
- not using complaints as a research tool
- conflating a lack of complaints with public satisfaction.

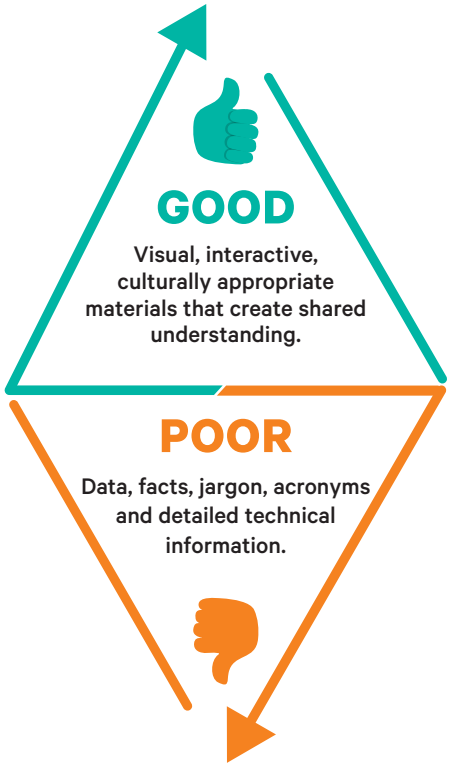
8.2 Good communication

Objective, timely and relevant communication helps people make informed decisions. It is a two-way process that incorporates active listening (or listening to understand).

Proponents often suggest that all opposition to proposals comes from misinformed 'greenie activists', who just need to be given the 'facts' and 'educated'. This is rarely the case. First, serious opposition to proposals will come from people with different value sets who may feel they are not being heard. Second, communication rarely flows from facts and data, but from trust and relationships that leads to shared understanding.

The basic steps of a communication strategy are:

- project objective (link communication to business strategy)
- situation analysis (what is the context)
- communication objectives (measurable objectives that guide evaluation of success)
- stakeholders (those with a stake in the project, including affected people and communities)
- key messages tailored to different community segments
- overarching strategic approach: face to face is deep communication, online is shallow but provides 24/7 access
- tactics (eg website, public meetings, deliberative forums, visual aids, storybooks)
- evaluation.



8.3 Cultural competence

A culturally competent system is one that has the skills, knowledge and respect for other cultures. Barriers to cultural competence can be organisational (the degree to which leadership and the workforce reflect the composition of the population), institutional leadership (including diversity) and structural (bureaucratic processes, use of interpreters and communication).

A culturally competent system would include:

- a mandate for cultural impact assessment, which considers a broader set of values and impacts than are covered in mainstream scientific studies;
- alternative governance structures that give Aboriginal people real input to decision-making;
- intercultural capacity, or the skills, knowledge and aptitude to incorporate Aboriginal knowledge systems, shared decision-making and co-managed natural resource management.

Cultural impact assessment is a dedicated approach to defining how projects impact on both traditional and living cultures. Cultural impacts may include reduced capacity to pass on culture. They include impacts on commonly held values such as respect for elders, oral history, spiritual practices, language, values associated with the land and intergenerational relationship patterns, practices, knowledge and skills (Mackenzie Valley Environmental Impact Review Board 2009; Gibson et al. 2008; World Bank 2017; Satterfield et al. 2013; Jolly 2014).

Cultural impact assessment is not the same as cultural heritage assessments, although the two are obviously related. See Table 8-2, which outlines the differences.

Table 8-2: Comparison between cultural heritage and cultural impact assessment

Cultural heritage assessments	Cultural impact assessment
Archaeological	**Anthropological**
Elicited through cultural heritage assessments	Elicited through social or cultural impact assessments
Covered by legislation, eg *Heritage Act 2011* (NT), *Sacred Sites Act 1989* (NT), *EPBC Act 1999* (Cwth).	Not generally covered by legislation or any agreed charters but assessed voluntarily by proponents.
Covers tangible heritage and associated values, such the aesthetic values of natural features and landscapes, as covered by the Burra Charter (International Council on Monuments and Sites, 2013) or places, objects or relics (artefacts or human remains) that might be disturbed by a physical act and are therefore required to be conserved. This includes archaeological places that relate to the past human occupation of the Territory, as defined by the Heritage Act [6]. The heritage significance of a place or object "includes its aesthetic, historical, scientific and social significance" [11]. The Sacred Sites Act defines sacred sites as "places within the landscape that have special meaning or significance under Aboriginal tradition. Hills, rocks, waterholes, trees, plains, lakes, billabongs and other natural features…". They are protected as part of the NT's cultural heritage under the ALRA and Sacred Sites Act. This includes world and national heritage sites covered by the EPBC Act such as Uluru-Kata Tjuta and Kakadu national parks.	Intangible, associated with values, qualities, beliefs and behaviours associated with living cultures. Examples include: • disruption to song lines and ancestral beings; • impacts on totemic species; • reduced ability to care for country and maintain stewardship responsibilities; • working conditions where contact with the dominant culture might change cultural norms and values; • a loss of language from speaking English in the workplace; • reduced time or access to land for traditional practices, such as harvesting, hunting, gathering bush medicines or materials for art; • diminished health of country or landscapes; • reduced cultural identity and wellbeing; • reduced connections to place, leading to feelings of disconnectedness and reduced self-esteem; • displacement of cultural economies or livelihoods (small scale aquaculture, fishing, agriculture) due to loss of species, reduced access to land, disturbance or pollution. (Taken from Munday 2017; Gibson et al 2008)

8.4 Principles

Social research should be guided by principles. The following are examples of principles that might be considered when working in a Northern Territory context, in particular when working with Aboriginal communities[8]

- **Purposeful** - the purpose and intended outcomes must be clear
- **Proportionate** - to the likely level of disturbance and community sensitivity
- **Participative** – culturally appropriate processes, early and meaningful engagement and communication
- **Procedural fairness** – good process that gives the community an influential voice in decisions
- **Equitable** – must consider all impacted people and communities, in particular those who may be marginalised, disadvantaged or hard to reach
- **Subsidiarity** – decisions should be made closest to those affected
- **Respectful** – acknowledging Aboriginal cultural authority and knowledge systems and how knowledge is owned, produced and shared
- **Ethical** – in line with industry and professional codes of conduct
- **Social justice and human rights** focussed, including the principle of Free, Prior and Informed Consent
- **Proactive** – considers how development can contribute to community wellbeing and capacity - see for example the United Nation's Sustainable Development Goals (2015)
- **Flexible and adaptive** – responding to the context of the area under study and informing adaptive management and a whole-of-life-cycle approach.

Some additional principles common to impact assessment include:

- the precautionary principle (a lack of certainty should not be used as a reason for approval)
- the polluter pays principle (the full costs of avoiding of compensating for impacts should be borne by proponents of actions)
- intergenerational equity (ensuring the needs of future generations are not compromised by today's decisions)
- intragenerational equity (the benefits of a project or policy should address the needs of all, while impacts should not fall disproportionately on certain groups in the community)
- the principle of subsidiarity (decision-making should be decentralised, with decisions made as closely to affected citizens and communities as possible).

The New South Wales guidelines for social impact assessment of state significant projects (amended in 2020), suggest:

- action-oriented
- distributive equity
- impartial
- inclusive
- integrated
- life cycle focus
- precautionary
- proportionate
- rigorous
- transparent
- adaptive
- material
- human rights oriented.

The Queensland Guidelines for Social Impact Assessment (p 3) includes:

- lifecycle-focused
- reasonable
- participatory
- rigorous
- effective management
- adaptive: management measures are to be monitored, reviewed, and adjusted to ensure ongoing effectiveness.

8 This is based on principles prepared for a discussion paper prior to a January 2019 workshop on the SREBA guidance note in 2019. The principles are drawn from several Aboriginal Social Impact Assessments, work by O'Faircheallaigh and the IAIA's principles for social impact assessment (Vanclay 2003).

8.5 The scientific method

Good social science research is guided by the 'scientific method'. This is planned, methodological research based on observing, analysing and interpreting research data. Research done according to the scientific method will be done with professionalism and ethical integrity. It will be transparent and rigorous based on good research design and not influenced by preconceived ideas or external pressures.

Scientific method is the technique used to gather data. The conceptual framework is the theoretical frame used to analyse and interpret data.

Some common terms used from scientific method in social impact assessment include:

Variable: Something that varies by quantity or quality or a characteristic that can take on different values eg age, gender or health status, difficulty of a test, intensity of noise.

Independent variable: An independent variable is one that is changed in a scientific experiment to see what change this causes in dependent variables, for example whether population increases leads to changes in housing availability.

Confounding variable is interference from a variable not included in the study.

Correlation: Comes from assessing two variables and measuring the relationship between the two, for example, the correlation between increased income and home ownership. A statistical relationship doesn't mean X causes Y but may be useful exploratory research.

Indicators: Indicators are measures that are observable and measurable. Quantitative indicators are those that can be expressed in numbers. Qualitative indicators are expressed in words. For example, life expectancy is a quantitative indicator. Sense of wellbeing is a qualitative indicator. Indicators are important in tracking change against baseline data and gathering evidence-based data.

Social indicators include:

- the poverty rate
- inequality rate
- educational attainment
- life expectancy
- unemployment rates
- rates of housing stress
- health expenditure
- occupancy rates of dwellings.

Primary data: Is data you gather yourself, through research, experiments, surveys or interviews.

Secondary data: Is data that has already been gathered, such as the Australian Bureau of Statistics, opinion polls or attitude surveys.

Triangulation: combines different research approaches to produce reliable results that can be generalised, for example ground-truthing statistical data with qualitative research from interviews.

Quantitative data is numerical data, or things that can be counted.

Qualitative research covers things that can be described. It provides insights into subjective experiences or the meanings behind quantitative data or behaviour.

8.6 Ethical standards

Research with people and communities should adopt the standards set out by The National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council, 2018). In 2018 the National Health and Medical Research Council released updated guidelines for conducting research with Aboriginal and Torres Strait Island people. For example, Charles Darwin University's Ethics Committee (www.cdu.edu.au/research/ori/human-ethics) now stipulates that ethics clearance will be accompanied by agreements between researchers and relevant peoples and communities that:

- delineate how researchers and communities will work together respectfully
- define roles and responsibilities throughout the research process
- identify conflict resolution and complaints processes
- outline communication and dissemination strategies
- outline protection of intellectual property
- be endorsed and signed by appropriate Aboriginal people or community representatives.

Research with Aboriginal communities should include cross-disciplinary teams, including members with anthropological, inter-cultural expertise and local Aboriginal researchers. Aboriginal researchers should be paid appropriately.

8.7 Privacy

All research should be in accord with Australia's *Privacy Act 1988*. In particular:

- people should be told the purpose of any research
- people should be advised on what personal information is being collected and how it will be managed and used
- they should be given the opportunity to opt out of having data kept in databases
- their permission should be sought for the use of individual comments in reports or presentations
- tools such as surveys should include a privacy statement
- anonymity and confidentiality should be respected, such as use of deidentified or aggregated data
- Aboriginal people, in particular, should retain control over how their knowledge is used and made public
- university research should obtain human ethics approvals.

9. Glossary

The following section contains definitions of commonly used terms in impact assessment[9]. A more comprehensive list can be found in Vanclay et al. (2015).

Table 9-1 – glossary of terms used in this document

Aboriginal	The term 'Aboriginal' is used throughout this document, as this is generally preferred by First Nations people of the Northern Territory. However, this doesn't exclude people covered by the broader definition of Indigenous peoples of Australia, or Aboriginal and Torres Strait Islander peoples.
Assessment	Assessment, in the context of impact assessment, means a study that outlines existing conditions, predicts potential impacts, makes an assessment (findings) of their significance and includes recommendations for management. Regulatory assessments are processes that review studies and make findings on their adequacy and recommendations on project approvals and conditions.
Baseline data	Baseline data forms a benchmark against which change can be tracked. Data may be qualitative (attitudes and perceptions) and quantitative (such as demographic data from the ABS Census or data on health status or demand for government services from departmental annual reports).
Baseline study	A baseline study describes the status quo or existing social, cultural and economic conditions for a project footprint or region. It should include a community profile and outline of existing social stressors and likely resilience, or ability to absorb and rebound from change. A baseline study is a benchmark against which direct, indirect and cumulative impacts can be tracked over time.
Community	A 'community' is a grouping of people bound by common ties to a geographic location, social group, professional or industry group or shared interests. 'Communities' are rarely homogenous. Most will contain groups and individuals who may be quite mobile, with diverse values, attitudes, beliefs and interests. Social research is needed to determine the strength and diversity of a community's social fabric, the extent to which values are shared or contested and how different community members may experience or perceive impacts. Vanclay et al. (2015) refer to 'communities of place' and 'communities of interest'. 'Affected communities' are those impacted by projects, which can extend to regional centres as part of project supply chains.
Community cohesion	Refers to the sense of harmony in a location which can be established by levels of acceptance and valuing of social diversity; a shared sense of belonging across all groups; a broadly accepted vision and image of the location; reasonably similar life opportunities and access to services; and positive social relationships between people from different backgrounds (Vanclay et al. 2015).
Community development	Community development, which has a strong focus on the participation of affected peoples, involves "a set of principles and processes that build self-reliance, strengthen communities and promote good governance through the participation of local people in designing and implementing their own development projects". It should deliver social, cultural and economic outcomes that benefit Aboriginal people and are valued by them (Central Land Council, nd)
Cultural heritage	Refers to the legacy of physical artefacts and the intangible qualities of a group or society that are inherited from past generations, maintained in the present, and bestowed for the benefit of future generations. Cultural heritage includes tangible culture (such as buildings, monuments, books, works of art and artefacts), intangible culture (such as folklore, traditions, language and traditional knowledge) and natural heritage (including culturally significant landscape, important wildlife habitats and biodiversity) (Vanclay et al. 2015; IFC, 2012).
Cultural heritage assessment	The process of evaluating the likely impacts of a proposed development on a community's cultural heritage, including sites, structures and remains of archaeological, architectural historical, religious, spiritual, cultural, ecological or aesthetic value or significance. Significant heritage sites are likely to have legislative protection.

9 Drawn from an internal True North Strategic Communication guideline, which was further developed for the SREBA (see p.2).

Cultural impact assessment	Looks at how development might disturb (or enhance) the living culture of people who use or value the land. It would consider values, belief systems, laws, languages, economy, relationships with the local environment, practices and social organisation that provide the identity of a social group. Cultural impact assessment is generally taken to mean the study of how projects impact on First Nations or Aboriginal culture that goes beyond archaeological cultural heritage studies to consider living cultures.
Culturally appropriate consultation	Takes account of issues such as language barriers, willingness to share knowledge, trust and relationships with the researcher, appropriate methodologies, time and resources, whether interpreters are needed, the best time and place to meet people, and presenting information in a way that increases understanding and improves feedback. See O'Faircheallaigh (2009), Kahn & O'Faircheallaigh (2010) and Hunt (2013).
Cumulative impacts	The successive, incremental and combined positive and negative impacts of multiple projects in a region, either resource projects, or their combined positive and negative effects with other development on the land, natural resources, the economy or the culture of a region.
Economic impact assessment	Identifies the positive and negative, direct and indirect, economic impacts of development including the distribution of these effects among industries, regions and population groups. Economic assessment can draw on modelling or cost-benefit analysis at a Territory or national level. A baseline assessment will cover issues likely to affect communities such as employment, income, proportion of workers living locally; industry effects such as direct and indirect expenditure on services and supplies; the flow on effects of local wages circulating in local economies and the potential displacement of other local businesses or economic sectors. In a Territory context, this should include an analysis of both market and traditional economies.
Impact assessment	Identifies the future consequences of a current or proposed action (International Association for Impact Assessment [IAIA]). The term is used in preference to the more common 'environmental impact assessment'.
Impacts – direct (means the same as 'effects')	Direct impacts are those directly triggered by a project or cluster of cumulative developments. Mobilisation of workers may put pressure on housing and rental affordability and availability; clearing land can directly impact on the plants and animals of a region.
Impacts – indirect (or secondary impacts)	Indirect impacts include flow-on impacts or unintended consequences that are further removed in space and time than direct impacts. An example is a new access road bringing unwanted people into an isolated area. When people get jobs with a project and have higher disposable incomes, a secondary impact might flow from how those wages are spent (from consumer goods to drugs and alcohol). Pollution of a river from waste water discharge is a primary impact while a consequent 'fish kill' and loss of a food source would be regarded as indirect impacts. Separating direct and indirect impacts is not straight forward as many impacts of a project can have multiple causes. Higher incomes might lead to increased capacity to purchase homes, which is an indirect positive impact, but adds to scarcity of affordable and suitable housing.
Indicator	A measure used to guide baseline data gathering and track change. Quantitative indicators for measuring employment impacts might include the number of people employed on a project, proportion of local people or proportion of Aboriginal employees. Qualitative indicators might be levels of wellbeing, workplace satisfaction or community attitudes.
Infrastructure and services	Social infrastructure generally refers to health, education, housing, transport and policing infrastructure and services that contribute to our quality of life. Community infrastructure is sometimes used to mean the same thing but this term also covers public facilities such as community halls, parks and recreational facilities. Essential services cover utilities such as power, water and sewerage. Economic infrastructure enables development, such as roads, ports, airports, common user logistics facilities.
Lifestyles	Lifestyles covers the local way of life: values, attitudes and beliefs, how people interact with each other, the community's social fabric, the material and spiritual quality of life and wellbeing, worldviews and strength of culture.
Livelihoods	Livelihoods covers how people earn a living. Sustainable livelihoods approaches use a 'capitals' framework to analyse the potential effects of proposals on communities and livelihoods. In a Territory context, a livelihoods approach explores the coexistence between people and country while recognising the ecosystem services provided by a healthy environment.

Lives	Includes daily activities, our access to and quality of services such as schools, health, education, transport, childcare and society's safety nets such as human services (welfare).
Living environment	Living environment is our surroundings, often described as 'amenity'. Smyth & Vanclay (2016) describe the 'living environment' as a stable and clean environment that maintains families' wellbeing, covering: noise, dust, pollution, traffic, light and aesthetic impacts on the landscape that detract from wellbeing.
Local, regional and Territory-wide	a) Local covers individual communities or homelands in the study footprint. This would generally equate to Australian Bureau of Statistics regional towns (SA2), state suburbs (SSC), urban locality or Indigenous location and outstations (ILOC) level data. b) Regional covers broader social groups, for example the Barkly Region would incorporate regional towns such as Tennant Creek that might provide services to areas as far away as the Queensland border. This would generally be at the Regional (SA3) or Local Government (LGA) level of ABS data. c) Territory data covers the whole Territory or State and might include data such as Gross State Product (GSP). These categories do not always fit neatly over bioregional or cultural boundaries. People might live in one regional area but obtain services from another.
Risk	The meaning of 'risk' in project management literature tends to follow the AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines which defines risk as the "effect of uncertainty on objectives". In other words, risk is seen as risk to an organisation or project and its objectives. The International Risk Governance Council's (IRGC) Risk Governance Framework (2017) defines risk in more contemporary terms as "uncertainty about and the severity of the consequences of an activity or event with respect to something that humans value".
Public participation	Public participation (or community engagement) means giving the public early and meaningful input to decisions on policies and projects that affect their lives. The level of participation will depend on severity of impact, community concern, perceived disturbance and interest in being involved (see IAP2 core values and spectrum of participation). Public participation is not a process of persuasion or aimed at reaching unanimity. Rather it should ensure people have a voice in decision-making and capture diverse views and perspectives.
Scoping	"Scoping is the process of identifying and prioritising the key issues associated with a project and the extent to which each will be investigated in a subsequent impact assessment." (IAIA, Fastips, 2018)
Significance assessment	Significance assessment is used during the scoping phase to determine material impacts to be covered by impact assessment studies. The process is applied after gathering baseline data to determine which potential positive and negative impacts should be prioritised in management plans and long-term monitoring of change. Assessment of significance covers both positive and negative impacts. It incorporates extent, duration and scale of potential change. Consequence ratings should capture community sensitivity to disruption, based on values, beliefs, ability to absorb change, level of community cohesion and vulnerability. Significance assessment draws on expert knowledge and community perceptions.
Social area of influence	The social area of influence covers social groupings and individuals in communities affected by a project. It may change with different phases of a project, such as moving from the construction to operational phases.
Social impact	A felt, experienced or perceived impact on our lives, lifestyles and livelihoods that results from social change processes invoked by development, projects or policies. A social change process of itself is not an impact but a potential impact pathway, eg a small number of workers and their families might be absorbed without fuss while an influx of workers can create life-changing disturbance. Social impacts can start with rumours, announcements or consultation activities that fuel fears, anxieties, conflicts and expectations (Vanclay et al. 2015).
Social impact assessment	Social impact assessment (SIA) is "...the process of analysing monitoring and managing the intended or unintended social consequences, both positive and negative, of planned interventions (policies, plans, projects) and any social change processes invoked by those interventions".

Stakeholders	'Stakeholders' refers to groups or individuals with an interest or stake in the outcome of decisions and can be categorised as those who: i. are directly impacted ii. have influence on decisions iii. have an interest in the outcome of development or represent impacted groups (business, industry associations, non-government organisations, government departments, Aboriginal organisations) iv. will be indirectly affected (eg service providers).
Strategic assessments	Strategic assessments are landscape scale or regional assessments. They act as a planning tool by considering scenarios of potential development, the aspirations of people already living in an area, likely multi-sectoral development and potential positive or negative cumulative impacts. Strategic assessments inform land use planning and decisions on the pace, scale and type of development (see Noble & Gunn 2016; Noble & Harriman 2009).
Sustainable development	Sustainable development considers how we contribute to a sustainable world, or the social, cultural, economic and ecological legacy are we leaving to our children, grandchildren and future generations. The concept suggests we find a balance between immediate benefits and future harms (not running down the stock of one asset to boost another) or how we use development to diversify and strengthen our social, natural, cultural and economic assets. The United Nation's Sustainable Development Goals (2015) focus on the transformative potential of sustainable development to reduce poverty, improve educational outcomes and improve the quality of our environment.

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