Sustainability assessment: What does it mean and is it really happening?

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Outline

1. The conceptual basis of sustainability assessment
2. Sustainability assessment in practice
3. Conclusions, reflections and future directions
1. The conceptual basis of sustainability assessment

Some early definitions...

• Sustainability assessment is...a tool that can help decision-makers and policy-makers decide what actions they should take and should not take in an attempt to make society more sustainable

• The aim of sustainability assessment is to ensure that plans and activities make an optimal contribution to sustainable development
From EIA to ‘sustainability assessment’

Sustainability assessment can be considered a member of ‘family’ of impact assessment processes

• First generation: e.g. EIA
  – Usually applied to project proposals

• Second generation: SEA
  – Applied to ‘strategic proposals’ (policies, plans and programmes)

• Third generation: sustainability assessment
  – Extending both EIA and SEA to fully address sustainability
A simple definition of sustainability assessment

Sustainability assessment is:

A process that directs decision-making towards sustainability


The concept of sustainability is therefore central and fundamental
Minimization of negative effects is not enough; assessment requirements must encourage positive steps towards greater community and ecological sustainability, towards a future that is more viable, pleasant and secure.

- Gibson (2006)
Evolution in expectations of sustainability assessment – conceptualising sustainability

• Minimising negative impacts of projects (often environmental)

• Delivering positive social, environmental and economic outcomes

• Contributing to healthy and resilient socio-ecological systems
Is it time for a new mitigation hierarchy…?
Gibson's 6 sustainability imperatives

• reverse prevailing trends to deeper unsustainability (every project must make positive contribution)
• ensure integrated attention to all of the key intertwined factors
• seek mutually reinforcing gains
• minimize trade-offs
• respect the context
• be open and broadly engaging

Generic sustainability assessment criteria

- Socio-ecological system integrity
- Livelihood sufficiency and opportunity
- Intrigenerational equity
- Intergenerational equity
- Resource maintenance and efficiency
- Socio-ecological civility and democratic governance
- Precaution and adaptation
- Immediate and long term integration

Applications of sustainability assessment
External & internal forms of sustainability assessment

External sustainability assessment approval by regulators (reactive)

Internal sustainability assessment by developer (proactive)

2. Sustainability assessment in practice

- Sustainability appraisal in England
- Project sustainability assessment in Canada
- Sustainability assessment in Western Australia
Five key challenges for practice

(1) agreeing on meaning of sustainability
   (so all stakeholders share understanding)
(2) tailoring definition of sustainability for decision at hand
   (e.g. policy different to building retrofit)
(3) factoring in long-term time horizons
   (children’s children = 100 years or more?)
(4) maintaining a holistic approach
   (e.g. choosing indicators – not narrow/reductionist)
(5) delivering sustainable outcomes
   (manage trade-offs carefully and transparently)

A. Sustainability appraisal in England

• Legal requirement to conduct sustainability appraisal of development plans (Regional Spatial Strategies and Local Development Frameworks) by local authorities

• Compliant with the EU Strategic Environmental Assessment Directive

• Sustainability objectives established early in the assessment process

• Sustainability appraisal conducted in parallel to plan development
B. Project sustainability assessment in Canada

Canada EIA characteristics

• Important resource sector
• Experimentation with 'sustainability assessment' at project level at discretion of assessment Panels
  – *learning by doing*
  – Purpose of assessments: to determine whether or not these proposed projects can make a positive contribution to sustainability

*Challenge: Can mining be sustainable?*
Sustainability-based criteria: special factors for hydrocarbon project assessments

- induced development > cumulative socio-ecological effects
- dependence and boom/bust (esp. construction phase)
- bridging/legacy (livelihoods, culture, ecosystems, etc.)
- equity effects across scales (local, regional/national/global) and generations
- governance capacity

Slide courtesy of Robert Gibson
Case Study: Mackenzie gas project

• 1220 km natural gas and gas liquids pipelines plus gathering system from three fields
• estimated cost $16.3 billion, 2-3 years construction, 20-50 years operation
• significant induced development
• small population (45,000, 50%+ aboriginal)
• effects tied to pace and scale (throughput 8.3 Bcf/d to 1.8 Bcf/d +)
• long history of pipeline deliberations
• assessment by Joint Review Panel (JRP)
The Panel recognized that key sustainability objectives are to ensure net gains without significant adverse impacts during the life of the Project and effective use of the Project and associated opportunities as a bridge to a desirable and durable future, especially in the Project Review Area. ... the core question asked by the Panel was:

Can we be reasonably confident that the Project as Filed, if built and operated with full implementation of the Panel’s recommendations, would deliver valuable and lasting overall benefits, and avoid significant adverse environmental impacts?

(JRP 2009, Exec Summary p5-6)
Cumulative impacts on the biophysical environment
• project provides basis for managing CIs and maintaining renewable resources for future generations

Cumulative impacts on the human environment
• Panel recommendations ensure resource income spread equitably (govts, Aboriginal groups, local, regional)

Equity impacts
• no action alternative would worsen equity disparities

Legacy and bridging
• employment and diversification opportunities to transition to sustainable future

Cumulative impacts management & preparedness
• govt structures for monitoring, management, follow-up for all cumulative impacts arising from project

(JRP 2009, Exec Summary pp6-7)
Table 19-8 Equity Impacts

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Summary

- The null alternative would continue and perhaps deepen existing disparities between regional centres and small communities.
- Without Panel recommendations, the Project may have a mixed impact on the reduction of territorial, regional and community disparities based on Proponent commitments and certain established government measures. These disparities could be reduced depending on the future investment of Project-related revenues received by the GNWT and Aboriginal authorities.
- With Panel recommendations, positive equity impacts are likely to be enhanced in areas concerning federal–territorial resource revenue disparities, diversity plans, especially for gender equity, and transition planning and funding, especially for future generations.
- With Panel recommendations, risks are reduced and opportunities are enhanced for a positive Project contribution to sustainability.
The Joint Review Panel for the MGP has concluded that, subject to the full implementation of the Panel’s Recommendations, the adverse impacts of the MGP, and the associated Northwest Alberta Facilities, would not likely be significant and that the Project and those Facilities would likely make a positive contribution towards sustainability. In the Panel’s view, the MGP could provide the foundation for a sustainable northern future.
C. Sustainability assessment in Western Australia

• Government commitment to sustainability assessment of ‘complex and strategic projects’ in 2002-2005:
  – Two case studies

• Currently no legislative or policy drivers (biophysical definition of environment), however is occurring on voluntary basis

• Proponents increasingly apply sustainability assessment approaches to project planning and development (internal, proactive SA)
  – Options analysis (e.g. site selection)

• Major resource companies embracing social impact assessment

• Shift towards strategic environmental assessment
Examples of voluntary sustainability assessments
Options analysis SA

- Often applies multi-criteria assessment (MCA)

- Goal usually to balance environmental, social and economic performance and select optimal option

- Sometimes also to screen out unacceptable options

- Opportunities to involve community & other stakeholders

- Input to statutory EIA process (but not formally assessed by Government)
Proponent-led trend towards Social Impact Assessment (SIA)

- Major resource companies increasingly conducting voluntary SIA (incorporating economic) as well as statutory EIA
  - Social Licence to Operate
  - Some characteristics of SA

- Issues:
  - No body within Government to assess social impacts
  - Lack of integration with environmental considerations
The Browse LNG strategic assessment

• Proposal: Common user LNG processing precinct
• Proponent: Western Australian Department of State Development
• Several stages of assessment process, including site options analysis – strategic assessment
• Not called a ‘sustainability assessment’ but is all about sustainability
Sustainability implications of Browse strategic assessment process

- Covers socio-economic as well as environmental considerations

- Studies conducted:
  - Social Impact Assessment (SIA)
  - Aboriginal SIA
  - Fishing Industry Impact Assessment and Social Analysis
  - Tourism Impact Assessment

- Strong focus on Indigenous issues - agreements reached with Traditional Owners (Indigenous) outside EIA process
  - LNG Precinct Project Agreement (Native Title)
  - Regional Benefits Agreement
  - Browse (Land) Agreement
3. Conclusions, reflections and future directions

• Conclusions on the original questions:
  – What is sustainability assessment?
  – Is it really happening?

• Reflections
  – Drivers and barriers

• Opportunities for research and practice
The original questions

• What is ‘sustainability assessment’?
  – Any form of decision-making with a sustainability imperative (EIA, SEA or others)
  – Perhaps best considered as an ‘orientation of practice’ rather than a methodology/technique

• Is sustainability assessment really happening?
  – Yes - growing body of practice (often outside regulatory frameworks)
  – Increasing consensus on conceptual basis
  – However no case studies that incorporate all characteristics of good practice
Drivers and barriers

• Drivers:
  – Corporate social responsibility
  – Enlightened individuals (impact assessment practitioners and proponents)

• Barriers:
  – Pro-development policies and reform of impact assessment legislation
Opportunities for practice: Pushing the sustainability vectors…

It is about making the world better, one undertaking at a time.


Opportunities for further research

• Further development of concepts such as socio-ecological systems and resilience thinking in impact assessment
Socio-ecological System (SES): linked systems of people and nature


Resilience: capacity of a system to absorb disturbance & reorganize while undergoing change so as to still retain essentially same function, structure, identity & feedbacks

Resilience Alliance (www.resalliance.org)
Thank you!

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