Beyond science and engineering: Tackling socio-environmental issues in the resources industry.


SDIMI 2013
OVERVIEW

• Background: developing energy resources in predominantly agricultural regions
• Perceptions of various stakeholder groups of the impacts
• Consequent challenges for resource companies in earning a social licence to operate
The study area: two local governments in SE Qld

Source: Surat Basin Future Directions Statement 2010, p. 11
Expanding coal mining and coal seam-gas production

Coal production from five operating coal mines, one expansion project and proposed ‘mega-mine’ to increase tenfold 2006-2031

CSG expanding also with extensive 2P Reserves:

Source: DNRM 2013 p. 5
A threat to other industries, communities and the environment?

Impacts on agriculture, communities & environment?
Methodology for Perceptions Scale

Based on the **Five Capitals**:

- 42 positive statements grouped into the above categories
- Five point **Likert scale** (strongly agree to strongly disagree)
- Asked to record perception of **current state and 5 years ago**.
**Stakeholders completing the scale**

Stakeholder groups that completed perception scales = 21
Total number of attitude scales = 26

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>1</td>
</tr>
<tr>
<td>Mining sector</td>
<td>3</td>
</tr>
<tr>
<td>CSG sector</td>
<td>6</td>
</tr>
<tr>
<td>Agriculture sector</td>
<td>4</td>
</tr>
<tr>
<td>Community organisation</td>
<td>2</td>
</tr>
<tr>
<td>Advocacy group</td>
<td>4</td>
</tr>
<tr>
<td>Business network</td>
<td>4</td>
</tr>
<tr>
<td>Environmental network</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>
Net change as a result of the resources boom neither positive nor negative overall

“The last few years, the amount of discussion amongst landholders and local government people and others around how big an impact - the assumption is - the coal seam gas and energy sector will have on the region [has increased]” ~Environmental Network 2.

0 = no change registered
> 0 = positive change registered
< 0 = negative change registered
(Line in the shaded area indicates that a negative change was registered)
RESULTS: CHANGES IN THE LAST FIVE YEARS – THE VIEWS OF DIFFERENT SECTORS
Different sectors’ perceptions of change in Natural Capital

Perceived deterioration in:
• fertile soils,
• adequate water
• quality of surface & ground water

![Bar chart showing perceptions of change in Natural Capital across different sectors. The chart indicates that there is a perceived deterioration in fertile soils, adequate water, and quality of surface and ground water. The sectors evaluated are Agriculture, CSG, Advocacy, Environment, Mining, Business, Community, and Government. The chart uses a scale from strongly agree (5) to strongly disagree (1).]
Different sectors’ perceptions of change in Financial Capital

**Positives for some residents:**
- Increases in income
- More varied sources of income

**Negatives:**
- Rising costs
- Limited benefits to non-resources sector

![Graph showing perceptions of change in Financial Capital across different sectors with agree, neutral, and disagree categories.](image)
Different sectors’ perceptions of change in Socio-cultural Capital

Areas of concern:
- crime and violence
- cohesiveness of the community

Social/Cultural Capital

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

5 years ago
Now
Different sectors’ perceptions of change in Physical/ Built Capital

A perceived negative trend
• Especially roads and housing
• Not keeping up with demand

Graph showing perceptions of change in Physical/Built Capital among different sectors, with a bar chart indicating strong agreement and neutral responses for various sectors like Agriculture, CSG, Advocacy, Environment, Mining, Business, Community, and Government, with a decrease in perception from 5 years ago to now.
Different sectors’ perceptions of change in Human Capital

Perceived mixed impacts:
- Skilled workforce depleted by resource companies
- Stress & mental health issues evident
Challenges for energy resources companies

- Disparate perceptions of different sectors
- Different assets valued to different extents by different groups
- Subjective views not readily resolved by ‘objective’ data
- Broad consensus on poor state of some regional assets suggests limited capacity or resources to maintain or enhance these assets

Solutions?

- Minimise distortion of the local economy
- Minimise negative off-site impacts on the regional asset base
- Seek broad and fair distribution of benefits
Thank you

QUESTIONS?

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