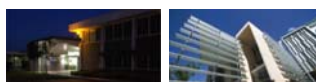


Cumulative Impacts and the Resources Sector

Presentation to EIANZ – SEQ Forum on Cumulative Impacts, Brisbane November 2014

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Cumulative impacts in the resources sector

In the resources sector context, the term 'cumulative impacts' is generally used to refer to the:

- the direct and indirect impacts across space and time of multiple activities, projects and operations on different receiving environments (i.e. receptors).



Examples of receptors

Different impacts have different receptors

Impact domain	Receptor
Visual amenity	Specific localities; 'viewshed'
Housing prices & affordability	Local housing market
Water quality	Waterways; catchments
Air quality	Airsheds
Groundwater	Aquifers





<https://www.csr.m.uq.edu.au/publications/cumulative-impacts-guide>

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Recommendations from Muswellbrook Study

1. *Create a local association to facilitate coordination amongst mines and with external agencies and other stakeholders.*
2. *Local mines to engage with Council about establishing a Muswellbrook-wide consultative forum to focus on issues of broader concern and interest to the community.*
3. *Local mines to consider producing, on a periodic basis, a collective report to the community on the economic, social and environmental performance of the local industry.*
4. *Local mines to collaborate with council and relevant government agencies on improving the collective capacity to monitor and manage cumulative impacts. (Need for system level indicators).*

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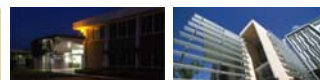
Governance and cumulative impacts: key points

- More and bigger projects in relative close proximity to each other leads to more pressure on receiving environments
- Traditional regulatory approaches are ill-suited to dealing with these challenges
- A more effective response requires:
 - a shift of focus from individual projects to receiving environments
 - more collaboration and cooperation between actors (state and non-state)
 - greater utilisation of adaptive management strategies
- Getting there will be hard, but there is already quite a bit of innovation occurring in this space



Traditional regulatory model

- Project-by-project approach
- Heavy reliance on front-end licence conditions
- Limited monitoring
- Very limited adaptability
- Disadvantages new entrants



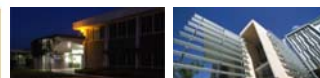
First level responses to addressing cumulative impacts

- Proponents required to consider cumulative impacts
- But
 - largely compliance focused
 - no coordinated effort to understand and manage the receiving environment
 - continued heavy reliance on front-end licence conditions
 - very limited monitoring



Second level responses

- Government takes the lead in seeking to model and understand the receiving environment (e.g. strategic impact assessments under EPCB Act)
- Efforts made to use this information in setting licence conditions
- Commitment to ongoing monitoring
- Potential to modify responses in response to monitoring findings
- But
 - effectiveness dependent on quality of information about the receiving environment
 - resource intensive
 - limited capacity to retro-fit conditions



CSG and underground water in the Surat Basin

- Cumulative Management area declared
- Groundwater flow model constructed and used to predict the impact of CSG extraction activities
- Identification of immediately and longer term affected areas
- Ongoing monitoring framework put in place
- Companies required to have water management plans in place
- Requirements on companies to 'make good' where bores have been adversely impacted
- Additional corrective action to be required if thresholds in aquifer draw-downs exceeded, although vagueness as to what these might be.



A new paradigm?

- primary focus is on maintaining the 'health' of the receiving environment rather than on regulatory compliance
- less reliance on setting prescriptive conditions at the front end of projects and more emphasis on adaptive regulatory and management processes
- use of multiple instruments to achieve objectives
- high value placed on cooperation and collaboration
- willingness to change existing licence conditions in response to changes in the receiving environment/new information (i.e. spread the burden)



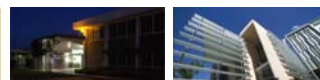
Traditional approaches to regulating dust

- Regulators set dust limits for individual sites, based on data provided by proponents, modelling (wind direction, ambient dust, etc.) and submissions from potentially impacted parties.
- Mines establish point source and perimeter dust monitoring and implement measures to ensure compliance with licence conditions (e.g. watering, timing of blasting, location of plant).
- Mines and regulators receive and respond to complaints.
- Regulators monitor for exceedances at individual mine sites and take corrective and enforcement action where deemed necessary.



Dust: an alternative governance paradigm

- Industry and regulators collaborate to:
 - investigate dust sources
 - analyse trends and patterns
 - establish a regional dust monitoring system
 - fund research on health and amenity impacts.
- Mechanisms are created (or existing forums utilised) to engage with regional and local stakeholders to address community concerns about dust and its impacts.
- Companies agree to voluntarily implement measures to control and reduce dust, notwithstanding that their mines may be in compliance with licence conditions.
- Mines in the region seek to influence and assist other industries that may be contributing to dust levels (e.g. quarries, power stations).



EXAMPLES

UPPER HUNTER AIR QUALITY NETWORK

- multi-sector
- managed & auspiced by NSW government
- MOU, ToR, and advisory committee
- funded by industry (aportioned)
- integrated air monitoring network

FITZROY PARTNERSHIP FOR RIVER HEALTH

- multi-sector
- auspiced by Fitzroy Basin Association
- integrated water monitoring & reporting
- MOU, management committee, secretariat & science advisory panel
- funded by members (tiered)

GLADSTONE INDUSTRY LEADERSHIP GROUP

- intra-industry
- advocated industry response to air quality
- board of company GMs
- code of conduct, CEO & secretariat
- now sub-committees of professional areas

CLERMONT PREFERRED FUTURES

- multi-sector
- development of future economic strategy
- planning and program implementation
- steering committee
- hosted by IRC with a paid project officer

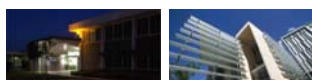
MORANBAH CUMULATIVE IMPACTS GROUP

- multi-sector
- auspiced by Isaac Regional Council
- dust and amenity cumulative impacts
- ToR, program officer, Independent chair
- funded by local council and industry



Effective governance of cumulative Impacts will require innovative responses

- regional vs. project-specific focus
- more cross-industry and cross-government collaboration
- greater information sharing and collective data management
- better monitoring processes; 'real time' if possible
- collective reporting and issue management
- adaptive, risk-based approaches
- more space for local solutions
- different, more flexible, license conditions



The big question

Can we get there?

