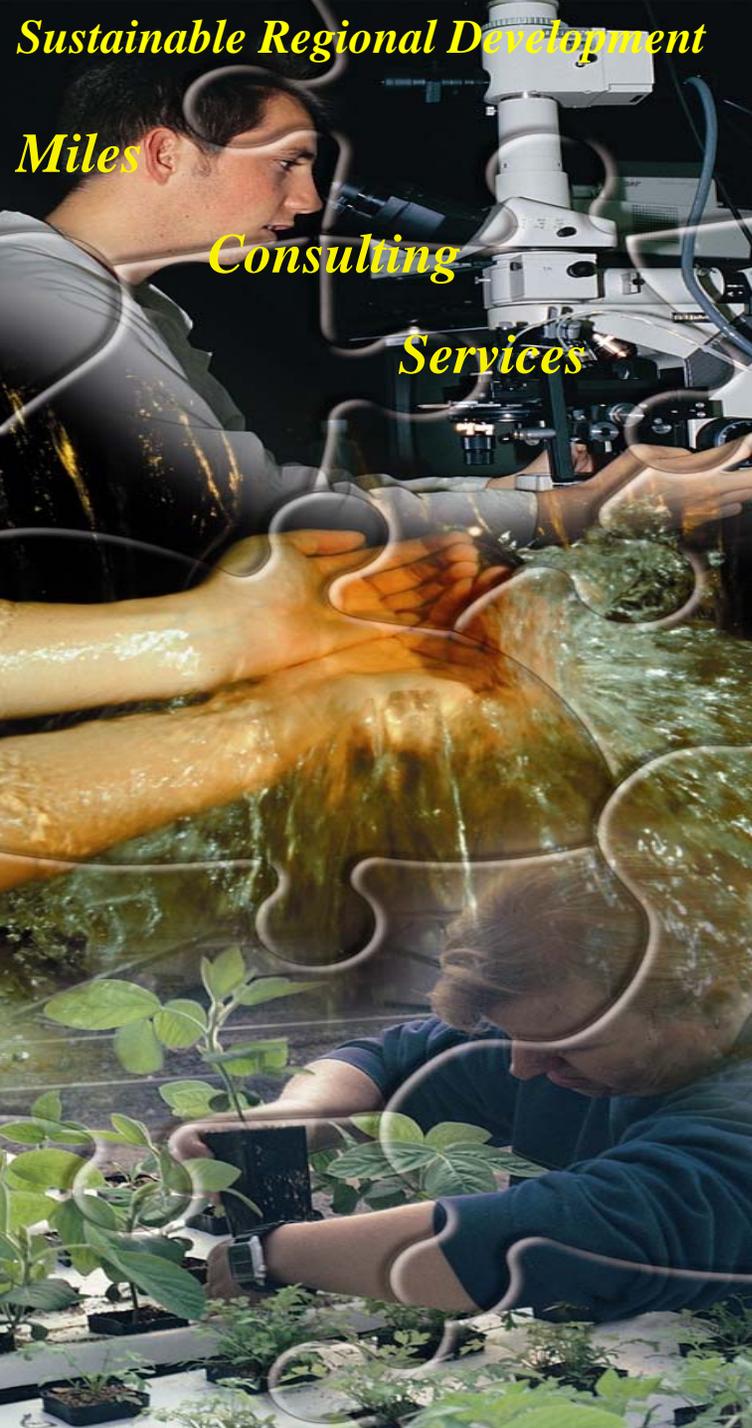


*Sustainable Regional Development*

*Miles*

*Consulting*

*Services*



# Managing Mining Communities and Sustainable Development

## *Central Queensland Case Study*

Dr Susan Kinnear & Prof Bob Miles

*Presentation by*  
**Prof R.L MILES**

*SEGRA Kalgoorlie Oct 2009*

*“We do not inherit the world from our ancestors  
- we borrow it from our children” 1900 anon*

# The Bowen Basin Region

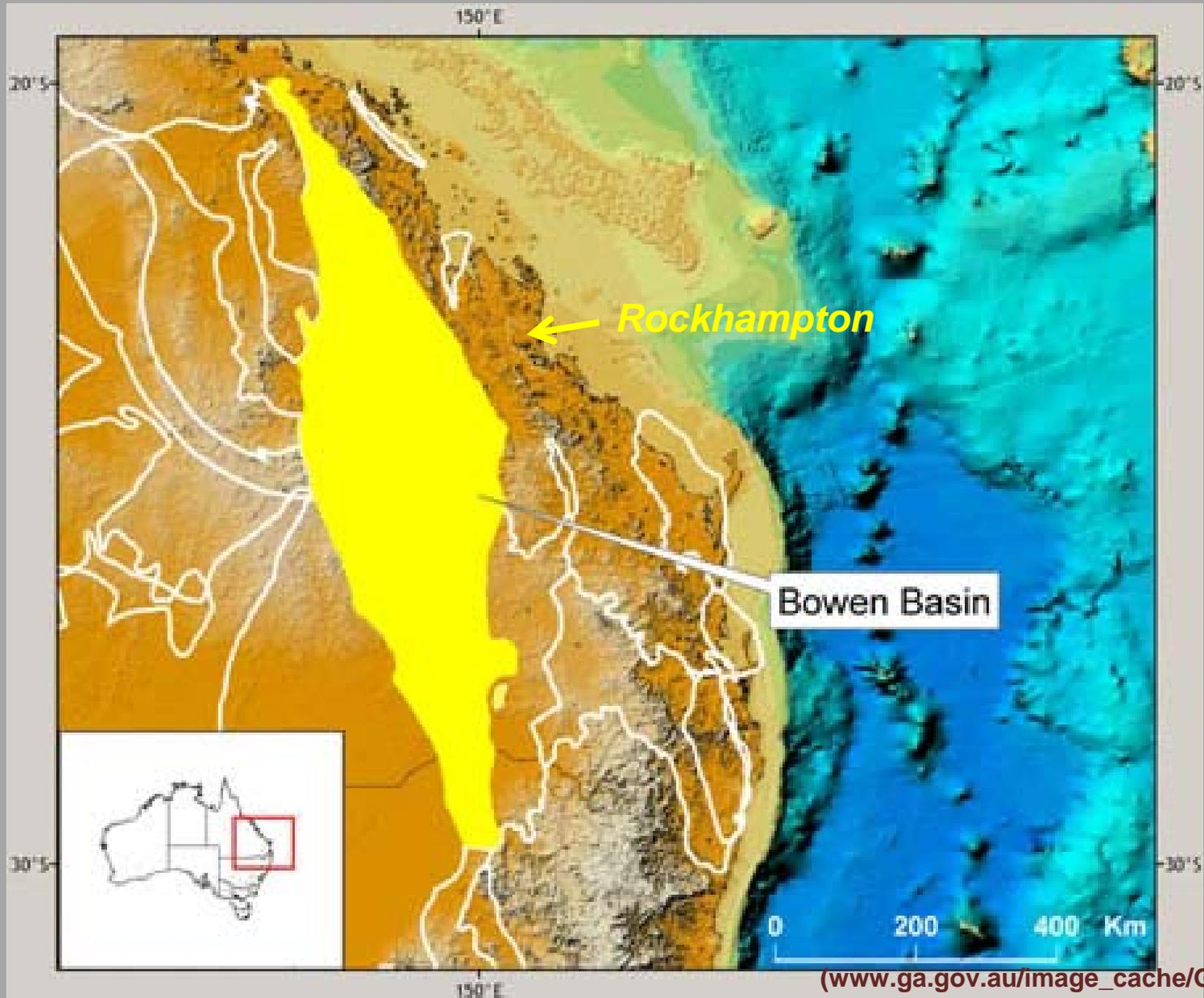
- **160,000 km<sup>2</sup> - from Collinsville to Moura (400km)**
- **Coal the dominant extractive resource**
- **Coal resource measured at >25 bil tonnes**
- **Provides >85% of Queensland's coal product.**
- **>10% of Queensland gross state product and \$16bil to state economy (2006)**
- **Export valued 2007-08 \$24 bil**





# Location of the Bowen Basin

(Geoscience Australia 2008)



# Issues and Challenges

- **Sector characterised by boom-and-bust cycles.**
- **Rapid growth presents significant implications for regional sustainability**
- **Number of mines and companies growing exponentially**
- **EIS etc focus only on single mine**
- **Extensive and cumulative impacts of mining**
- **Need integrated and 'triple bottom line' approach to address sustainability issues.**



***Mining Companies with interests (operational or future development)  
in the Bowen Basin. Source: ABARE (April 2007) and DM&E (May 2007).***

<p>AMCI Australia Ltd (CVRD) Xstrata/Itochu/Sumitomo Anglo Coal Australia Ltd Macarthur Coal Anglo Coal Australia/Mitsui Ensham Resources Aquila Resources Ltd Cockatoo Coal Aquila/CVRD BHP Billiton Mitsubishi Alliance BHP Billiton Mitsubishi Alliance Macarthur Coal BHP Mitsui Coal Ltd Anglo Coal Australia Caledon Resources PLC Anglo Coal Australia/Kumba Australia Dyno Nobel Aquila Resources/AMCI Holdings/CVRD Ensham Resources Ltd Arrow Energy/Alcan Felix Resources Ltd BHP Billiton Mitsubishi Alliance (BMA) Foxleigh Mining Ltd Bowen Basin Coal Burnett Coal/Macarthur Coal/China Huaneng Group</p>	<p>Macarthur Coal Ltd CHALCO Peabody Energy Australia Coal Ltd Custom Mining Ltd Qcoal Eastern Corporation Ltd Qcoal/Cleveland Cliffs Enertrade Rio Tinto Coal Australia Ltd Ensham Resources Wesfarmers Curragh Gladstone Pacific Nickel Xstrata Coal Queensland Ltd Macarthur Coal Macarthur Coal/Burnett Coal Queensland Alumina Queensland Coke &amp; Energy (Macarthur Coal) Rio Tinto Rio Tinto Aluminium Xstrata Coal Many mines Jellinbah Mining Ltd</p>
--	--

# Issues and Challenges

- **Rapid growth represents a challenge for planning bodies**
- **Increasing community expectation that the mining industry will partner with Government (all tiers) to address the complex and interdependent issues**
- **Concern over returns to the crown and how central government funds are allocated back to the regions (\$4 bil in royalties and govt charges).**
- **The big sleeper - climate change and mining. (cf USA attitudes to mining)**



# The Challenges



- Overall economic benefits Australia not in question but not reflected in fortunes of host community
- Historically economic gains overrun other considerations,
- Public expectation that mining will contribute to regions sustainability.
- Poor data for planning – inconsistency in collection boundaries, scale and age and time series between accountable agencies.

# *Characterisation of the Bowen Basin*

## *Demographics and workforce Statistics:*

- **360,815 people (approximately 9% of the State's total)**
- **Significant loss of youth and young adults**
- **Regionally childless couples 40% of families –**  
However some LGAs have larger proportion of families with children than ave for State: - Use of ABS for planning and implications for service provision (health and educational).



# *Characterisation of the Bowen Basin*

## *Demographics and workforce Statistics:*

- **12,000 non-resident people work in the Basin (25% of all mine jobs)**
- **High proportion of males – particularly areas that host mining.**
- **Housed temporarily in work camps and fly-in/fly-out or drive-in/drive-out (FIFO or DIDO) basis.**
- **Non resident workforce places strain on existing infrastructure and services whilst contributing to the rate base**



# *Characterisation of the Bowen Basin*

## *Demographics and workforce Statistics:*

- 40% of the male workforce (38,000 people) employed in the mining, construction and/or manufacturing industries
- 45% of the female workforce employed in trade, health care/social assistance and education/training
- low unemployment rates across the region (average 3.15%)
- workforce predicted to increase by 22% over the 2007-2016 period, in response to ongoing expansion and new project commissioning plans.



# *Characterisation of the Bowen Basin*

## *Demographics and workforce Statistics:*

- **ABS population projections for the Fitzroy and Mackay too conservative, underestimate growth.**
- **Many services inadequate to meet the demand**
- **Local Government, not for profit welfare service providers and NGO's, as well as companies, attempt to bridge the gap.**



# *Characterisation of the Bowen Basin*

## *Income:*

- **Pockets of wealth contrasted with poverty**
- **Disproportionately high number of individuals receive incomes exceeding \$2,000/week (Qld median (\$476/week))**
- **37% of people gross less than \$399/week.**



# *Characterisation of the Bowen Basin*

## *Community Wellbeing:*

- **Communities that host mining have a smaller proportion of community and personal service workers** (approximately 4-5% compared with the Queensland average (approximately 9%))
- **Shortfall impediment in the attraction and retention of professionals and skilled workers (SCORD 2004).**
- **Future projections of skills shortages compounded by aging**



# *Characterisation of the Bowen Basin*



## *Community Wellbeing:*

- Short term accommodation under extreme pressure
- “hot-bedding” between day/night shift workers used to relieve the strain.
- demand for residential dwelling not high
  - ✓ by-product of years of high growth in house prices, made new housing unaffordable.
- Rental costs exceeding \$1,000/week for a basic dwelling.
- FIFO/DIDO employees reluctant to purchase a family homes

# *Characterisation of the Bowen Basin*

## *Health*

- Paediatric, gynaecology and obstetric services etc are extremely limited
- Expectant mothers and specialist patients must travel to the coastal cities for care,
- Over 2,000 patients on waiting lists for elective with a further 6,881 residents awaiting outpatient surgery (2006/7).
- Within Basin 1.61 beds/1,000 persons
  - 40% State Average of 4



# *Characterisation of the Bowen Basin*



## *Health*

- **Medical professionals in the Bowen Basin are isolated professionally**
  - **deskilling due to risk of litigation**
- **High GP workloads, few female GP's.**
  - **(Aust 287GP's/1000 BB 87/1000 shortfall of 310)**
- **Large numbers of young families, pockets of disadvantaged residents, an ageing population, seasonal tourist influxes and a high number of Indigenous residents**

# *Characterisation of the Bowen Basin*



## *Community wellbeing*

- Domestic violence, child care, family breakdown, drug and alcohol abuse and suicide
- Concerns about community dynamic as predominantly single men move into the region in pursuit of work.
- Fatigue due to long hours, high rate of traffic accidents from time often spent on drive in/drive, social and family breakdowns, mental health and domestic violence.
- Women living in Mackay and partnered by a mining employee 3.5 times more abuse than State Ave (Nancarrow et al. in prep) - note not linked to mining culture

# *Characterisation of the Bowen Basin*

## *Transport*

- **Transport system poor and fragmented**
  - **Tyranny of distance, ageing population the need to visit the provincial service hubs for health care - public transport critical.**
- **Many mines choosing to establish their own plane and bus services.**
- **Lack of integration of the transport services between existing providers**



# *Characterisation of the Bowen Basin*

## *Economic leakage*

- Mine and other industry contracts for goods and services are procured through businesses outside of the local communities
- Significantly impact the social and economic fabric of the Bowen Basin.
- Case study showed 95% of total output and 99% of total mine operating expenditure outside of the local community economy, with 89% occurring outside of the Bowen Basin region (SGS 2007) - considerable mine-to-mine variation. (Miles & Kinnear 2008)



# Conclusion

1. The future competitiveness of Australia's coal exports may be compromised by not addressing the regional development and governance needs
2. A new cumulative whole of mine life, as well as post mine planning and investment strategy is required
3. An integrated and collaborative partnership approach between the Industry the Government and the Community is urgently needed.



*Climate change as the big sleeper*