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Executive Brief

Sustainable Regional Development in the Bowen Basin

A Strategic Issues Paper

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and the Queensland Resources Council

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Executive Brief

The primary aim of this document is to provide a high-level analysis of the socio-economic issues confronting the Bowen Basin region, as it experiences rapid industrial growth associated with the ongoing development of coal reserves, whilst striving toward sustainable development. The report has been commissioned by the Minerals Council of Australia (MCA) together with the Queensland Resources Council (QRC). The report was stimulated by MCA's and QRC's recognition of the emerging need to take a proactive, integrated and partnership approach to achieving sustainable development in resource communities. The Bowen Basin's rapidly expanding mining industry has been targeted as an optimal pilot area for further consideration.

This Executive Brief is structured to provide a succinct overview of:

- the contextual framework of the challenge of achieving sustainable development in the Bowen Basin;
- a high-level socioeconomic characterisation of the Bowen Basin with an emphasis on 'headline' issues pertinent to the future planning and sustainability of the region;
- a profile of the mining sector and industry within the Bowen Basin; and
- a targeted analysis of the key trends and issues facing the region and recommendations,

It should be noted that this executive brief is a summary of the detailed technical report. As such this report should be read as a companion document to the technical report. For ease of reading and completeness, topic-specific recommendations have been provided at the end of each of the relevant sections of this executive brief. In the technical report, a collated list of recommendations is provided in the conclusion.

An important note on study context

The research and writing of this executive brief, and its accompanying report, was undertaken in the second half of 2008, at the request of the MCA and QRC. At this time, the global economic downturn of late 2008 and early 2009 had been foreshadowed, but the effects of this were yet to be fully realised in Australia and, in particular, by the heavy industries located in the Bowen Basin.

Given the dramatic change in global economic circumstances since the time of writing, it should be noted that comments made in reference to rapid growth, high demand and 'boom' cycles may no longer apply to each and every mine and/or community in the Bowen Basin. Nevertheless, the data contained in this report provide useful information regarding the status of the Bowen Basin and its communities, and relates important messages regarding the ongoing development of communities in the Basin. This information is critical to regional development and community wellbeing, regardless of the current 'boom' or 'bust' cycle being experienced.

Data relating to the Bowen Basin

Two difficulties were faced in the preparation of this report – one, the rapidly changing nature of the region's statistics (due to the growth of the mining sector) and two, inconsistencies between the approach, coverage and style of figures used by different reporting bodies. These problems have been overcome in part by utilising the most recently available data and by reporting summary statistics on a scale that best suited the issue at hand (e.g., by local government area, regional planning area, Census statistical division, or coal statistical region).

Recommendation 1: That strategies and actions be developed to ensure currency and adequacy of statistics for planning purposes

Recommendation 2: That strategies and actions be developed to ensure consistency in the use of and the scale of data used for planning purposes and standardised reporting regimes

The Region

The Bowen Basin extends from Collinsville in the north to Moura in the south and occupies approximately 160,000 km^2. Coal is the dominant extractive resource in the Basin; more than 25 billion tonnes of measured and indicated coal resources have been located in the Bowen Basin and these typically provide over 85% of Queensland's annual coal product. The importance of this region to Queensland, and the nation, should not be underestimated: in 2006, more than 10% of Queensland gross state product was sourced from this mining sector, and in 2007, the mining and petroleum industries together contributed over $16 billion to Queensland's economy. The export value of Australian coal in 2007-08 was recorded at $24,129 million – and growing.

The study area for this report incorporated 23 local government areas (LGAs) (if pre-amalgamation boundaries are used), or 7 regional council areas (based on post-amalgamation boundaries) plus one Aboriginal Council (Woorabinda); these broadly align with the two regional planning areas of CQANM (Central Queensland A New Millennium) and WHAM (Whitsunday Hinterland and Mackay).

A contextual framework for sustainable development

The rapid growth that is currently being experienced in the Bowen Basin has significant implications for regional sustainability and development. Much of the growth hinges upon the mining industry, a sector often characterised by boom-and-bust cycles. This represents a challenge for planning bodies in terms of ensuring socioeconomic stability for those communities that are associated with the industry – either directly or indirectly. The need for an integrated and 'triple bottom line' approach is now becoming obvious in terms of addressing sustainability issues. In addition, given the extensive and cumulative impacts of mining (the social, environmental and economic consequences of existing and developing sites), there is also an increasing expectation that the mining industry will partner with Government (all tiers) to address the complex and interdependent issues affecting the liveability and socio-economic sustainability of the region as a whole. The economic contribution of the mining industry to regional communities, the state and the nation is also coming into sharper focus. This particularly relates to issues of returns to the crown and how central government funds are allocated back to the regions.

A critique of impact assessment process (particularly the EIA) in this study, have suggested that there is strong need to look toward an integrated and holistic approach to regional development. Significant ground has been made in the EIS processes since their inception, but gaps still remain. For example, assessments are generally constrained to project level without recognition of cumulative impacts (although this appears to be changing). There is a tendency for the EIS to focus on the impacts of a particular project and not consider the cumulative impacts from multiple projects within a region.

Recommendation 3(a): That the policy and institutional settings that govern assessment process be redesigned to take in to consideration whole-of-mine-life, post-mine and cumulative effects of development.

Recommendation 3(b): That the EIS, SIA and other assessment processes be integrated into regional planning mechanisms

In economic terms, the overall benefits Australia has been able to reap from its resources sector are not in question; however, these benefits are not always reflected in the fortunes of the community that host resource sector activity and this is now a well documented concern within the Bowen Basin. While in previous times, economic gains overran other considerations, the public expectation is that mining operations will contribute to the sustainability of the regions within which they are active.

Recommendation 4: That the effects of mining on regional communities be more fully evaluated to determine developmental pathways that avoid or manage or mitigate these impacts.

Coal is expected to remain one of Queensland's most important export commodities. The State receives strong benefits through financial returns, increased employment opportunities and regional development from this sector of the economy. A major concern of the local government and the region's communities is that the proportion of the royalties that are reinvested in the region for its future are insignificant relative to the volume being received by the Crown. There are also feelings of inequity in relation to the imbalance between value taken out of the region, that paid to the government and compensating value being put into the social, economic and environmental infrastructure of the region.

Recommendation 5: That the collection and redistribution of revenue from mining be undertaken in a transparent, accountable and equitable manner and provide some reasonable return and compensation for the future of the affected areas with particular thought given to the post industry economy.

The sense of *community* and *wellbeing* of communities that host mining operations could be improved through better planning and greater resourcing of targeted services to these communities. There is a need for everything from child care places to a greater emphasis on community and family, including the provision of aged care, affordable housing, better management and use of contractors and single person camps and the need to secure the right balance and model to accommodate fly in-fly out staffing.

Recommendation 6: Government and Industry need to develop effective indices to monitor and evaluate community health and wellbeing and to use this data for effective planning and the delivery of targeted support and services to these communities.

Summary socioeconomic characterisation of the Bowen Basin

Population

At the time of the 2006 Census, the Bowen Basin was home to a resident population of 360,815 people (approximately 9% of the State's total), and just under 200,000 of these resided in the key regional centres of Rockhampton, Mackay, Emerald and Gladstone. There has been a surge in the number of males in the region in the past half-decade, particularly for areas that directly host mining activity. Two age trends evident in the population of the Basin are that a significant loss of youth and young adults is being experienced, and that there has been strong growth in the aged population. Both these are expected to continue. Almost 40% of families in the Bowen

Basin are represented by childless couples, although many LGAs in the region have a larger proportion of families with children than do others elsewhere in the State: this has important implications for service provision with respect to health and educational facilities.

The non-resident population of the Bowen Basin is considerable: approximately 12,000 people who work in the Basin are not considered resident, but instead are housed temporarily in work camps or elsewhere whilst they perform duties on a fly-in/fly-out or drive-in/drive-out (FIFO or DIDO) basis. This is of critical concern for planning authorities given that this workforce places strain on existing infrastructure and services whilst not necessarily contributing to the rate base or other revenue streams which are used to fund them.

The Bowen Basin is an area experiencing strong population growth. Of note is that population projections for the Fitzroy and Mackay statistical divisions have been shown to be too conservative, thus potentially underestimating current growth. The overall population of the Bowen Basin is expected to exceed 450,000 persons by 2026, and this translates to the region actually leading population growth for Queensland.

While the ABS has improved population data collection in recent years, and now collects data for both the place of enumeration on the Census date, and the place of usual residence, problems are still evident with regard to the 'real' population in mining communities. This is because of the style of shifts being worked, and the living arrangements of workers. The issue of the non-resident population is a serious issue for the region as the demand for services and planning/supply of community services and soft infrastructure is set by the resident population statistics. In such cases, many of the services are grossly inadequate to meet the demand and local Government, not for profit welfare service providers and NGO's, as well as companies, attempt to bridge the gap.

Recommendation 7: That mechanisms be put in place to better measure the non-resident population of the region and that all funding and resource allocation processes take this population into consideration.

As indicated many of the Bowen Basin's LGAs (pre-amalgamation) have higher proportions of families comprised of a couple with children, when compared with the State average. This is particularly true for those LGAs that are categorised as hosting mining or servicing the mining industry such as Emerald (PIFU 2008). This trend is important from a planning perspective since a community having a higher proportion of families with children will require proportionally more services to support families: this has implications for the provision rates of soft infrastructure such as education, child care and health services.

Recommendation 8: That mechanisms be put in place to better consider the soft infrastructure needs of mining communities with a disproportionate number of families.

At the local government level, data from the ABS show that the majority of LGAs in the Bowen Basin region have a higher population of male residents and proportionally lower population of female residents, compared with elsewhere in Queensland. These differences are more pronounced in the mining and servicing mining communities and are the major contribution to the region's gender imbalance.

Recommendation 9: That mechanisms be put in place to better consider the social infrastructure and support service needs of mining communities with a disproportionate number of males.

Employment and income

Over 40% of employed males in the Bowen Basin (more than 38,000 people) work in the mining, construction and/or manufacturing industries. For women, the top three sectors that account for nearly 45% of the workforce (approximately 30,400 people) are retail trade, health care /social assistance and education/training. The Basin's full-time labour force participation rate for males is higher than the state average, and unemployment rates across the Bowen Basin are generally low (3.15% on average), particularly for townships servicing mining sites. Non-resident workers play a significant role in Queensland's coal mining boom, with around a quarter of all jobs in the Bowen Basin being performed by FIFO and/or DIDO workers. The mining workforce of the Bowen Basin is expected to increase nearly 22% over 2007 to 2016.

Compared with the State, the Bowen Basin has a disproportionately high number of individuals on incomes exceeding $2,000 per week, although approximately 37% of people gross less than $399/week. Some communities exist where there are pockets of wealth and comparative poverty, with an increasing divide between the 'haves' and 'have-nots': typically, it is those in the mining sector who are enjoying the benefits. For example, the residents of (former) Nebo Shire have individual incomes of $809 gross/week – approaching double the Queensland median of $476/week. Meanwhile, the income distribution for families in the Bowen Basin is quite variable: during 2006, about one third of families in the region earned between $1,000 to $1,999 per week; whilst 10% earned $500 or less and just 5% obtained more than $3,000. In general, Bowen Basin communities that directly host mining activities have a significantly smaller proportion of community and personal service workers (approximately 4-5% of the total) compared with the Queensland average (approximately 9%) (CQRDPP report 2008). This shortfall in community and personal services is a commonly reported impediment in the attraction and retention of professionals and skilled workers (SCORD 2004).

Recommendation 10: That consideration be given to addressing the short fall in community and personal services in an attempt to redress the issue of declining livability and the attraction and retention professionals and skilled workers in the region.

The future workforce of the Bowen Basin will be influenced by shortages of skilled workers and professionals, a shrinking pool of part-time workers, and the looming impact of retiring baby-boomers. These issues are compounded by the pre-existing difficulties in attracting and retaining professionals and their families. Increases in skilled migration may offer one solution to this problem, however it appears that the Bowen Basin is currently unable to provide adequate resources to cater to this group, thus constraining (skilled) migratory growth.

Recommendation 11: That consideration be given to addressing the resources shortages to support skilled migrants and their families to assist in addressing the skills shortages

Housing

Housing is a critical issue across the Bowen Basin. Whilst the whole-of-region housing tenure patterns are broadly similar to those recorded at the state level, there are some LGAs (e.g., Nebo) where abnormally high rental rates are evident. In the Isaac, Central Highlands and Whitsundays areas, over half the coal-mining workforce are already housed in accommodation provided by mining companies (e.g., single persons quarters, camps, houses), but demand for more beds in accommodation villages continues to grow as the FIFO/DIDO employee base grows. Short term accommodation options are also under extreme pressure with ‘hot-bedding’ between day/night shift workers used to relieve the strain.

Despite the strong demand for accommodation options, residential dwelling activity is not particularly high across the Bowen Basin, with the exception of Emerald. In some areas of the Basin, this may be a byproduct of several consecutive years of high growth in median house prices, which has made new housing simply unaffordable. For example, in the regional centres of Mackay, Gladstone and Rockhampton, over 12% of the population report housing costs exceeding 30% of the gross family income; and over half of the families in the Bowen Basin have mortgage repayments of between $650 - $1,599 per month. Housing affordability appears particularly poor in Mackay, the key regional hub servicing the mining industry. Rental costs have also escalated across the Bowen Basin, with anecdotal reports of some communities experiencing costs exceeding $1,000/week for a basic dwelling.

Housing and planning issues are being examined by the State government, with a focus on shortages of available land (for several different reasons). Nevertheless, in the short term, resolving issues of housing in the Bowen Basin will not be easy. The lack of reliable, available data on housing demand may represent a barrier the new housing approvals in the Bowen Basin. However, even if this were readily available, many contractors are likely to remain reluctant to invest in the market given its historically fluctuating nature (and particularly given recent global economic concerns). Similarly, much of the mining workforce is represented by relatively short-term FIFO/DIDO employees who are reluctant to purchase a family home if they do not expect to remain in the community permanently. Whilst an obvious solution would be construct further single-persons quarters to relieve pressure on existing facilities, this is not being strongly pursued due to the social concerns surrounding such villages (e.g., the lack of contribution of FIFO/DIDO workers to the social and economic fabric of the community, amongst others).

The lack of available information on housing demand is a barrier to approving new housing developments in the Bowen Basin. A number of issues are evident: contractors are reluctant to invest; short term residents such as mine workers express a reluctance to invest in areas where they do not expect to live permanently; the demand for rental premises is high; the demand for residential properties as homes are now rising rapidly; accommodation villages in the Bowen Basin are operating at close to capacity and land availability for residential development is at a premium across many parts of the Bowen Basin.

Recommendation 12: There is an urgent need for Industry and Government (all tiers) to consider new ways to address the housing issues in the Bowen Basin including gathering sound data on housing demand, housing affordability, rental cost and availability, choice in housing style and type as well as land availability.

Education, health and allied services

The Bowen Basin enjoys a range of educational facilities, however many of these are concentrated in the coastal hubs of Rockhampton and Mackay, with those towns experiencing comparatively higher private school attendance rates. Elsewhere in the region, primary and secondary State schools are present in most towns and educational standards are regarded as adequate. However, teacher shortages are evident across the Bowen Basin, particularly in specialist and support areas.

Recommendation 13: There is a need for Industry and Government (all tiers) to consider new ways to address the paraprofessional and specialist teacher shortages in the region

For health infrastructure and services, a similar set of circumstances is evident, with the regional hubs representing access points for any requirements over and above basic level healthcare. In particular, paediatric, gynaecology and obstetric services are extremely limited in regional centres, meaning expectant mothers must travel to the coastal cities for care, thus placing undue pressure on the family unit. The Bowen Basin has a mix of public and private hospitals, but all private beds are restricted to the coastal centres. Over 2,000 patients on waiting lists for elective surgery in Queensland are residents of the Bowen Basin, with a further 6,881 residents awaiting outpatient surgery. However, based on Queensland Health data for 2006/07, the hospitals are performing well. Even so, this cannot negate the lack of infrastructure availability: there are currently 1,132 available hospital beds in the Bowen Basin, equivalent to 3.14 beds per 1,000 head of population: this lags well behind both the State and National averages.

The Bowen Basin has a high number of solo general practitioners (GPs), and reasonably low rates of female practicing GPs. Workloads for GPs are relatively high, with an average of 1,351 people sharing a (full-time equivalent) GP, compared with rates of around 1,170 people per GP for both Queensland and Australia. In addition to catering for a large number of patients (often with little or no relief staff), medical professionals in the Bowen Basin are isolated and often expected to manage their own practices with little business support, thus adding to overall workplace strain. The health profile of the population in the Bowen Basin also represents a change for health care providers: large numbers of young families, pockets of disadvantaged residents, an ageing population, seasonal tourist influxes and a high number of Indigenous residents must all be catered to, and with consideration of the fact that often, GPs are the only point of contact for medical care in small communities.

In 2005, the Australian average supply of medical practitioners (all fields) was 287 full-time equivalents (FTEs) per 100,000 population, with 34% of these represented by primary care providers (i.e., general practitioners (GPs)(AIHW 2008). If the Bowen Basin can be considered as a mix of 'inner regional (provincial hubs' and 'outer regional communities (surrounding towns), a figure of approximately 86 FTE GPs should apply per 100,000 people in the Basin. Therefore, based on the 2006 estimated resident population of the Bowen Basin (i.e., approximately 360,000 people), nearly 310 GPs would be necessary if the population of the Basin was to be as well serviced as the rest of Australia. Given population projections to 2026 of 450,000 people, an additional 78 GPs will be needed in the area over the coming two decades.

Recommendation 14: There is an urgent need for Industry and Government (all tiers) to consider new ways to address the shortages of hospital beds and the acute shortages in medical practitioners and allied health professionals in the region.

Families and community wellbeing

Many of the LGAs in the Bowen Basin that host or service the mining industry have higher proportions of families comprising of a couples with children. This is significant in that a community with a higher proportion of families with children will require proportionally more of the services required to support such families. This has implications for planning of soft infrastructure such as education, child care and health services. The Bowen Basin already experiences a lack of (long-day) childcare options for infants and toddlers, and this is of concern given that there are some regional areas (e.g., Emerald) where over 50% of families have a female parent in the labour force, along with children aged 0-4 years. Mining townships also have high rates of unpaid (voluntary) childcare approaching 40%: this indicates that women may be experiencing difficulties re-entering the workforce due to a lack of available care options.

Key issues for community wellbeing in the Bowen Basin include domestic violence, child care, family breakdown, drug and alcohol abuse and suicide. There are also increasing concerns about the nature of the community dynamic as predominantly single men move into the region in pursuit of work. Fatigue continues to be a key issue across the Basin: long hours are worked by males who dominate the mining, construction, manufacturing and agricultural industries, with additional time often spent on drive in/drive out access to worksites. This contributes not only fatigue, but also social and family breakdowns and other problems such as traffic safety. Mental health and domestic violence issues in the Bowen Basin also revolve largely around the mining and associated heavy industries, with women living in Mackay and partnered by a mining employee reportedly being three and half times more likely to experience abuse than their State counterparts. However, contrary to widespread belief, mining cultures appear to have little demonstrable association with women's abuse.

Crime rates in the Bowen Basin appear broadly comparable to state figures, with the exception of sexual offences, arson attempts and liquor offences, which are recorded at higher rates than elsewhere in Queensland.

The long hours worked by many people in the Bowen Basin (particularly males who dominate the mining, construction and manufacturing industries) combined with the need for additional time spent on drive in/drive out for access to the worksite, is thought to be contributing to fatigue, social and family breakdowns.

Recommendation 15: There is a need for Industry to consider new ways to address issues of shift and drive in-drive out fatigue in the region and to evaluate the impact of the various options

Youth and leadership

In the Bowen Basin, youth accounts for over twenty percent of the local population. However, many of the youth in the 15 to 25 year age bracket leave the community and do not return. The loss of youth from the community represents a major challenge for many rural communities of the Bowen Basin. There is a need to evaluate the needs of youth and the level of services, employment prospects, housing, entertainment and recreation. Many of the social issues with the community youth stem from a lack of organised activity and events which leads to boredom. This boredom is reportedly leading to drug and alcohol abuse, property damage, theft and promiscuity.

Recommendation 16: There is a need for Industry and Government to evaluate the needs of youth and the level of services, provided

The growth and development of leadership in the Bowen Basin is pivotal to long term community sustainability, as, by encouraging leadership, community networking and effective regional partnerships follow. This leads to a stronger sense of community which has been shown to assist in building entrepreneurship, interdependence and self-reliance. The Bowen Basin has a need to diversify its economy, engage and empower the youth and other sectors of the community. There is a need to capitalise on the strong sense of community that exists and build future leadership capability.

Indigenous issues

In 2006, approximately 14,400 people resident in the Bowen Basin (4.25% of the total population) identified themselves as being of Indigenous heritage. Many of these reside in Rockhampton and/or townships inside the Woorabinda Aboriginal Council area, where drug and alcohol abuse represent major problems. Less than 10% of the Indigenous people in the Bowen Basin are aged 55 years or older, and this differs dramatically from the general population. Over 15% of employed Indigenous males in the Bowen Basin work in the construction sector, with females often employed in health care and social assistance roles. Most of the Indigenous workforce of the Bowen Basin receives lower weekly gross incomes than do the remainder of the population, particularly young adults aged 15-24 years. Schooling completion rates for the Indigenous population are lower than for the general Bowen Basin population. Some leadership in the Indigenous community of the Bowen Basin is provided by the Fitzroy Basin Elders Committee. There is a need to develop strategies that will more directly engage the Indigenous community into the mainstream economy and the mining sector.

The mining industry accounts for the employment of just 318 (7.4%) indigenous people (ABS 2008c). Based on the 2006 census data, it is evident that most of the Indigenous workforce of the Bowen Basin receives lower weekly gross incomes than do the remainder of the population. In the young adult workforce (those aged 15-24 years and of whom represent over a third of all working Indigenous persons), nearly one-fifth obtain $399/week or less.

Recommendation 17: There is a need for Industry and Government and the Indigenous Leaders to work together to more effectively engage indigenous people in the mainstream economy and the resource sector.

Soft infrastructure

Social services and infrastructure in the Bowen Basin region comprise health, education, public housing, public safety, sport, leisure and recreation, and culture and heritage facilities, a majority of which are provided by government providers and/or community organizations. However, availability of, and accessibility to, services and infrastructure varies considerably across the region, with the regional coastal hubs housing a large proportion of these facilities and services, whilst regional areas are serviced through outreach programs.

Information Technology and Communications (ITC) is a key enabler for the effective operation of any community or business. The Bowen Basin experiences variability in the ITC services and infrastructure available: basic provisions are available to many communities but higher-standard mobile phone coverage and optic fibre cabling is often restricted to the coastal communities. Thus, whilst general internet connection rates for family households in the Bowen Basin are comparable to state and national averages, broadband rates are much lower.

Public transport is also an important issue in the Bowen Basin: the tyranny of distance, combined with an ageing population and the need to visit the provincial service hubs for health care means that an easily accessible public transport system is critical. Despite this, there are ongoing community concerns about the lack of public transport, with many mines choosing to establish their own plane and bus services. The lack of integration of the transport services between existing providers is a commonly expressed concern and limits the regions accessibility potential.

Recommendation 18: There is a need for Industry and Government to work with transport companies to develop integrated and viable transport services for the region.

Hard infrastructure

The capacity and appropriateness of hard infrastructure (road, rail/port, air, water, power and gas) is of the utmost important to the development of the Bowen Basin. The mining industry relies on modern and efficient transport infrastructure in order to move its product from mine to market, and a dedicated coal transport has been developed in Queensland to meet this need, with current capacity being 188 and 213 mtpa for the rail and port systems, respectively. However, both these figures could exceed 400 mtpa capacity with around $12 billion in planned and anticipated expansion projects. This should easily match projected needs under a high coal export growth scenario.

In contrast, despite the Bowen Basin being a major provider of power to Queensland through four generation plants, unacceptable levels of delay are being experienced by both residential and industrial customers for connection to the state energy grid. Transmission line upgrades are being funded across central Queensland in order to keep pace with increased energy demands flowing from industrial development and associated population growth.

The road network servicing the Bowen Basin comprises sections of State highway and key regional highways (the Capricorn, Dawson, Peak Downs and Gregory). Inland townships are linked by the Fitzroy, Gregory, Bowen and Suttor Developmental Roads. High rates of serious accidents accompanied by fatalities and/or hospitalisations are recorded on road sections that are frequented by the mining workforce whilst commuting between the coastal centres and the inland mining sites. There are also disproportionately large numbers of heavy commercial vehicles travelling these routes, and the volume of traffic of this nature is steadily increasing. Under the Roads Implementation Program, spending for areas of the Bowen Basin will reach nearly $1.3billion from 2008-2013. Common themes for future planning across all three roads divisions in the Bowen Basin include road safety, community support (through economic development and employment opportunities) and improved access, particularly for outlying and/or isolated communities.

Air services in the Bowen Basin are provided from two key regional airports and a number of smaller facilities. Few regional towns support regular services, but some 228 flights are available per week from various locations in the Bowen Basin to the state capital. There is also anecdotal evidence that mining companies are increasingly looking to offer their employees daily flights to complement shift work rosters.

Water resources

The Bowen Basin's population centres and agricultural lands are serviced by seven major water supply schemes, with an additional 16 schemes providing for the mining industry needs. A number of key storages supply the region, but the availability and cost of water infrastructure has been identified as a key priority issue facing the ongoing development of the Bowen Basin. Competing demands amongst the mining, urban, agricultural and industrial sectors in central Queensland are of particular concern. With climate change projections, a critical issue is the long term supply of water to the resources sector. This represents a constraint for future industrial development. Based on projections of water demands to meet urban, industrial, coal mining and agriculture requirements from 2005–20, supply shortfalls are predicted throughout much of the region. However, the development of the Nathan and Connors River Dams, and the Fitzroy River to Awoonga Dam pipeline may allay some of this pressure, should those projects be progressed.

During extended dry conditions regional water supply sources and water quality drops to a level that threatens supply. The longer term issues of demand, supply and reliability need to be evaluated – particularly given the emergence of climate change as a key factor affecting supplies

Recommendation 19: There is a need for Industry and Government to work to address the longer term issues of water demand, supply and reliability – particularly given the emergence of climate change as a key factor affecting supplies

Profiling the Bowen Basin mining industry

Sector overview

The Bowen Basin is a world-class mining region, with extensive coal deposits, an emerging coal seam gas industry and considerable reserves of high-quality magnesite, oil shale and limestone. During 2007, 47 coal mines operated in the Bowen Basin, with some 55 new mines being proposed due to the high demand for quality coking coal throughout the world. However, recent global economic concerns may see a reasonable proportion of new developments being placed on hold. Nevertheless, existing mines have life expectancies generally exceeding 20 years: this indicates that coal mining will continue to play a critical role in the social and economic functioning of the Bowen Basin into the future. In 2006/07, Queensland mines produced over 416 Mt of coal (raw and saleable quantities combined); year-to-date figures for 2008 has showed some decline in coal output, mostly due to flooding that occurred in various sections of the Bowen Basin early in the year.

Employment

The Queensland Coal Industry reported a total of 18,243 employees as at 30 June 2007, however, the addition of the indirect workforce figures increases this employment numbers considerably (e.g., nearly 55,000 jobs in 2004-05). Employment numbers have grown in past years but levelled out during 2007, however, the construction phases of several major new projects are expected to prompt renewed growth in mining jobs, to bring the total to 24,000 workers by 2010.

Economic contribution and regional investment

The contribution of the Bowen Basin's coal mining industry to the local central Queensland region, and to the state and nation, is substantial. In 2007, the Queensland Resources Council estimated that $1.01 billion was contributed to the Queensland economy through coal royalties alone. Royalty revenue is expected to remain high during 2007-08 due to strong overseas demand for coal exports, although it should be noted that contracts are highly sensitive to movements in the Australian-US dollar exchange rate, commodity prices and overall coal volumes. Queensland Rail freight charges also represent a sizeable figure, with one mine reporting charges exceeding $290 million annually (for a production output around 50 mtpa). State land rents and local government rates represent further sources of government revenue from the mining sector, along with permit and licencing fees, State stamp duties, WorkCover costs and payroll and company taxes. Given this list – and the considerable quantities of moneys being transferred – it is not surprising that the major concern of both local governments and the community is that the proportion of revenue reinvested in the Bowen Basin region is insignificant relative to the volume being received.

At the level of the individual mine, there is very little published data available on the location of operating expenditure by company. Economic leakage (where mine and other industry contracts for goods and services are procured through businesses outside of the local communities) may significantly impact the social and economic fabric of the Bowen Basin. Potential actions to stem the leakage of funds from the region include targeting programs to engage SME's and to improve local suppliers' capacity, business acumen, quality assurance as well as access to venture capital, and the development of business networks, clusters and alliances. There is a need for the mining, industry to work in partnership with the local business and Councils to explore what goods and services could be procured from within the region and what is required for this to happen.

A detailed economic study of one of the Basin's regional mines by SGS (2007) showed that for the mine under study, 95% of total output and 99% of total mine operating expenditure was undertaken outside of the local community economy, with 89% occurring outside of the Bowen Basin region. As indicated there is very little published data available on the location of operating expenditure by mine or company. From the data available however, it is evident that the leakage of mine operating expenditure from the region has the potential to have a significant effect on local communities and long term economic prosperity.

Recommendation 20: There is a need for Government and Industry to develop targeted programs and expenditure processes that work toward stemming economic leakage from the Bowen Basin communities

The contribution of the mining industry to the Bowen Basin can also be measured through funding for community programs: this exceeded some $25 million during 2007, as reported by the mines themselves. Most mining companies have community development/support funds and for the larger companies this can be several millions of dollars per year to meet community service obligations. Mining companies however are increasingly looking for strategic partnerships with Government and the Community to guide this investment and leave a positive legacy for the community.

Outlook

Since 1960, known coal reserves in the Bowen Basin have risen from 550 million tonnes to more than 25,000 million tonnes currently. At the same time, production from the Bowen Basin has grown, with coal exports expected to exceed 200 Mt in 2009-10, and projections estimating that production will exceed 350 million tonnes over the next two decades.   The Bowen Basin mining sector has expanded rapidly over the past ten years and is now characterized by a high number of mining companies including subsidiaries and associated contracting companies. This rapid growth has increased the need for more effective planning and communication between the mining sector in the region and local and state government, other industry and non-government organisations, and the community. The strong global drivers for increased coal consumption are critical when considering the future outlook for the Queensland coal industry. World black coal consumption continues to escalate, with growth driven largely by consumption for electricity generation in the developing Asian regions.

The ability of Australian coal producers to maintain Australia's position as a leading coal exporter and respond to the growth in global coal consumption is contingent on a number of factors. These include the timely and responsive development of new mines and supporting rail and port infrastructure, access to water resources and the availability of skilled human resources. However, the future competitiveness of Australia's coal exports may be compromised by not addressing the regional development and governance needs that are required to successfully underpin the rapid growth in the resource sector. The will require an integrated and collaborative partnership approach between the Industry the Government and the Community.