

## ***The Post Mine Economy of the Southern Gulf of Carpentaria***

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### ***Abstract***

The Zinifex Century Zinc mine, in the southern Gulf of northwest Queensland is expected to operate until 2017. The mine is a major regional economic driver and the closure will be significant for the Gulf communities. Accordingly it is now timely to consider the post mine economy for the region and to consider how best to lever off the existing and planned activity of the mine.

This study analyses the economic contribution of the Zinifex Mine to the southern Gulf, assesses the likely impacts and provides some suggested pathways forward to capitalise on the existing investment window the mine has to offer as well capturing any development opportunities the mine will have on the region.

While the primary goal is the post mine economy, underpinning the future economic development options identified for the southern Gulf are a range of social, cultural and attitudinal issues. These include cultural differences between indigenous and non indigenous Australians as well as the will, interest, skill and or capacity and business acumen of many non-indigenous and indigenous groups required to achieve self reliance.

An integrated model is proposed to provide a framework to foster the post mine economy. The model provided emphasises three areas (a) underpinning prerequisites, (b) development of specific business opportunities, and (c) fostering individual and community capacity. These need to be considered holistically. The dynamics of the area and the support systems required are discussed in terms of achieving “on the ground” change. This paper is a brief synopsis of a more comprehensive report that is published elsewhere.

## **Introduction**

The Century Zinc mine is located in the southern Gulf of northwest Queensland and is the focus of this case study. Mining zinc, lead and silver, Century is expected to operate until 2017. The economic and social impacts of the mine closing in 2017 are likely to be significant, particularly in north-west Queensland. Exploring these impacts and identifying development opportunities for the post mining economy in northwest Queensland is of interest to the communities within this region and the Queensland government.

The mine began production in 1999 and is a major economic driver in the southern Gulf, providing direct employment for over 600 people at the site. A further 1500 people are estimated to be indirectly employed as a result of the mine's activity in the region. Since 1999 the revenue to the state from Zinifex's activities has been of the order of \$155m. The potential benefit of the mine to the State and the region is approximated at \$520m of minimum guaranteed revenue.

At this juncture no known further viable ore bodies have been identified in the area. Accordingly, it is now timely to consider the post mine economy for the region and to consider how best to lever off the existing and planned activity of the mine during its period of operation. It is the purpose of this case study to examine the region's economy and identify pathways for the future vitality and economic sustainability of the region.

The areas of Doomadgee, Mt Isa, Mornington Island, Burke and sections of the Carpentaria shire region(s) are the focus of this study. However, while the surrounding centres such as Karumba and Normanton are placed in a different precinct and predominately focus on coastal industries, commercial and recreational fishing and have reasonably well established infrastructure and services, these areas have also been included in the study to develop a broader scope and opportunity for the region as a whole. Existing industries apart from mining are substantially connected to grazing and tourism.

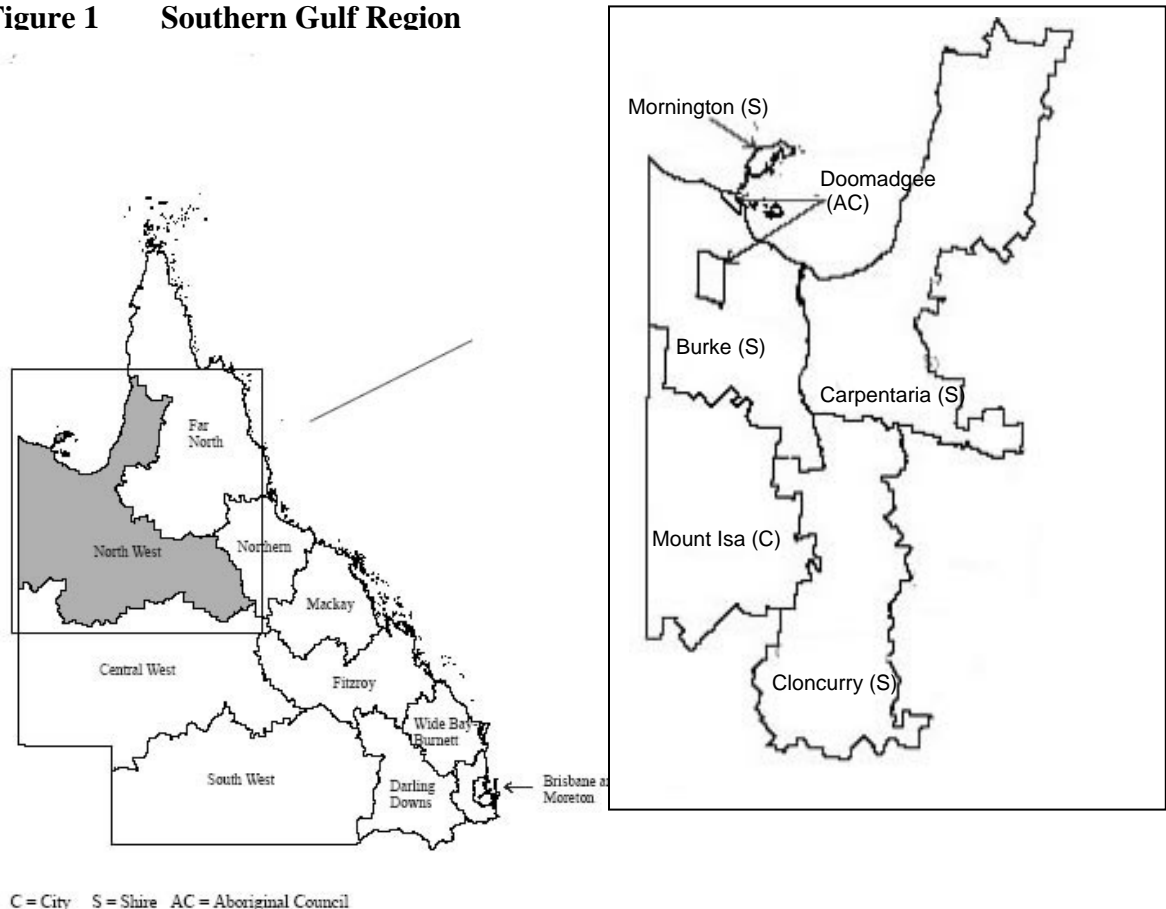
The study provides a quantitative understanding of the mine operations and contributions on and to the region's economy. This report firstly provides a general description of the region supported by a detailed assessment of the employment and economic contributions of the mine to the southern Gulf of Carpentaria. The next section then explores the natural and economic drivers and attributes of the region and considers a range of integrated strategies and options that may contribute to a post mine economy for the region. The final section presents for debate a framework for a post mine economy.

## **Description of the region**

Australia's Gulf of Carpentaria region is a tropical savannah covering approximately 425,000 square kilometres of Queensland and the Northern Territory. The southern Gulf region, covering around 186,000 square kilometres, includes a large part of the southern waters of the Gulf of Carpentaria. The landscape consists of grasslands to the south, ranges in the southwest, including the southern Gulf-Lake Eyre Basin divide, stony hills and ranges to the northwest, and alluvial plains to the north and northeast.

The southern Gulf region (Figure 1) extends east from the Northern Territory-Queensland border to include the Local Government and Community Council areas of Burke, Mornington, Doomadgee, Carpentaria, Croydon, Etheridge and Kowanyama (Gulf Regional Planning Advisory Committee 2000). The most populated of these is Carpentaria Shire (4844 persons, ABS 2001) and the least populated Croydon (322 persons, ABS 2001).

**Figure 1 Southern Gulf Region**



Source: Australian Bureau of Statistics, *Regional Population Growth, Australia and New Zealand*, Cat. no. 3218.0, 2002-03.

### **Socio-Economic Characteristics of the Southern Gulf Region**

For the purposes of this study the southern Gulf region is defined as the local government areas of Burke, Carpentaria, Cloncurry and Mount Isa. The region has an estimated resident population of 30,654 persons and occupies 12% of the State's area. The annual average rate of change in population in the region between 31 December 1996 and 21 December 2001 was 0.2%, compared with 1.7% for the rest of Queensland. Population projections (OESR 2004) for the period 1996 – 2021 indicates static growth for the region on a whole with marginal declining populations for the local government authorities (LGAs) of Mt Isa (-0.1%), Carpentaria (-0.6%), and Burke (-0.2%). This trend is counter to Queensland's population growth rate of 1.6% per annum and illustrates ongoing trends of increased urbanisation, coastal migration and reduced rural employment. As a result, the region's share of Queensland's population is projected to be 0.6% in 2021 compared to 0.8% in 2001 (OESR 2004).

One of the major contributing factors impacting on the short and long term population dynamics of the region is Zinifex's Century Zinc Mine. From the period 1996 (pre mine) to 2001 (during mining) population increases were experienced in the LGA of Carpentaria (2%), Burke (8%), and Cloncurry (4%) suggesting that Zinifex's mining operation has contributed to the population growth of these LGAs. To assess the impact Century Zinc Mine has had on regional welfare in the southern Gulf a number of socio-economic indicators were reviewed from the 1991, 1996 and 2001 ABS household surveys data (ABS 2003, Census Time Series Profile).

A welfare assessment of the southern Gulf region undertaken using the ABS socio-economic indexes of areas suggests the southern Gulf region in general has a number of socio-economic characteristics that make the region less well off than the rest of Queensland in terms of its social and economic well being. The area is disadvantaged in comparison to other regions of Queensland by low income families, residents with little formal training and non-school qualifications, a large portion of the labour force employed as unskilled labour and significant unemployment. Not surprisingly with a project as large as the Century Zinc Mine, the economic contribution of the mine to the southern Gulf communities has been significant. When the Century Zinc Mine ceases operations, these same communities are likely to face economic hardship as they absorb the economic shock of the mine closure.

Century Zinc Mine contributes to the southern Gulf communities in three significant areas. These include:

1. Altering the population, industry employment, training and occupational characteristics of the southern Gulf communities;
2. Sponsoring programs attempting to improve the health, employment, education and social welfare of indigenous communities through the Gulf Communities Agreement (GCA); and
3. Through direct and indirect economic impacts flowing from mine employment and the purchase of mining goods and services from businesses operating within the southern Gulf.

Since Century Zinc Mine commenced operations the southern Gulf communities have experienced a substantial increase in residents' individual and household incomes, reductions in unemployment and a significant increase (by as much as 50% for Burke Shire) in the region's population.

Whilst the GCA sought to ensure the standard of health, employment rates and educational opportunities of indigenous communities in the southern Gulf were comparable to the rest of Australia, by 2001 indigenous communities in the southern Gulf still lagged behind the rest of the region in terms of their median age, income, employment and labour force participation rates. CDEP adjusted unemployment in 2001 ranged from 83% for the Mornington Indigenous Area to 18% for the Carpentaria Indigenous Area despite significant investments in GCA funded employment strategies and training programs run in the indigenous communities of the southern Gulf. Whilst these programs have contributed substantially to improvements in indigenous labour force participation rates and non-school qualifications, they have resulted in only marginal improvements in overall indigenous employment. This is in spite of Zinifex

and Century Zinc Mine being the largest private employer of Aboriginal and Torres Strait Islanders in Queensland.

A review of the southern Gulf's age and population mobility characteristics indicates an aging and relatively immobile population. Attracting and retaining professionals to the region as part of any post mining economic development initiative is likely to be challenging and will require careful planning. Of those already living in the southern Gulf, there is a general shortage of suitably qualified staff when compared to the rest of Queensland. The region in general has a lack of graduate and postgraduate qualified workers. The greatest shortage of qualified workers appears to be in the Burke and Carpentaria Shires where there is a general lack of non-school qualifications within both communities particularly in the areas of business management and commerce. Of those that do have qualifications, most are relevant to mining and engineering related fields, again highlighting the economic interconnectedness of both communities with the Century Zinc Mine.

The opening of the Century Zinc Mine also appears to have had a significant impact on regional employment in the southern Gulf. These changes were again most significant for Burke Shire where mining now employs twice as many people as agriculture.

In addition to investing in indigenous welfare and in altering the population, industry employment, training and occupational characteristics of the southern Gulf communities, the Century Zinc Mine also makes a significant direct economic contribution to the southern Gulf economy through the purchase of inputs from the regional economy. These inputs include wages and goods and services. The majority of the direct economic benefits generated from Zinifex's Century Zinc Mine occurred in the Shires of Townsville and Mt Isa. If the mine was to close, these communities would lose \$35.2m and \$21.4m, respectively from their local economies annually.

More significant however is the direct economic contribution the mine has made to the smaller Carpentaria (\$6.6m) and Burke (\$2.5m) Shires. Whilst substantially less than Mt Isa and Townsville in dollar value, both represent a significantly higher proportion of the total economic activity within each of the respective Shires. The direct economic contribution the mine makes to the Carpentaria and Burke Shires represent 21% and 40%, respectively of the gross value of agricultural production for each of these Shires. If the mine was to close in the short term, both the Burke and Carpentaria Shires would expect to experience a noticeable reduction in economic activity.

The indirect regional income and employment impacts associated with the mine's closure are also significant. Whilst the majority of these secondary impacts are expected to occur in Townsville, both Carpentaria and Burke Shires will suffer significant indirect income and job losses as a result of the Century Zinc Mine closing. Impacts of this magnitude are expected to impact negatively on the economies of both Shires.

Relying on new major developments within the southern Gulf to offset the direct and indirect impacts of the Century Zinc Mine closing in 2017 appears unrealistic. A review of emerging development opportunities within the southern Gulf failed to identify any major projects either committed or under construction that are likely to soften the blow of the mine closure. A more prudent response lies in the communities of the southern Gulf drawing on their community and social capacity to identify, initiate and drive economic

initiatives, infrastructure projects and development opportunities to offset the lost regional income, employment and output associated with the Century Zinc Mine. This needs to be an iterative process taking advantage of the region's natural capital and emerging industries. The following sections will explore this process further, case studying potential development opportunities identified during the community consultation stages of this project.

### **Issues and Options for Post Mine Economic Development**

The options for economic development that were identified from the field work (derived from extensive consultation with the three tiers of Government, the local industry (mining, grazing, tourism and fishing), the community (indigenous and non-indigenous) and the civic leaders and planners of the Gulf) fell into several general categories:

- Underpinning prerequisites – infrastructure, legal and institutional changes;
- Enhancing existing assets and industries including leveraging from economic “anchors”;
- Reducing economic leakage;
- Attracting new industry;
- Better capturing dollars brought in the Gulf community;
- Increasing the efficiency and capacity of existing firms;
- Improving community capacity for economic development;
- Utilising mine infrastructure;
- Targeting new business; and
- Managing particular issues and barriers to economic development.

These categories are used to aggregate the broad approaches considered necessary to achieve a sound post mine economy and economic development in the Gulf.

### **Underpinning Prerequisites**

The post mine economy of the Gulf requires several prerequisites to be in place. These include a base level of infrastructure to achieve growth and sustainability such as adequate transport and telecommunications infrastructure; water and energy, the maintenance of the condition of natural resources. Other prerequisites include basic services such as health, education, an acceptable level of food and consumable services, information and entertainment (e.g. TV, Arts); appropriate housing; access to tradespeople and professionals; venture capital, and institutional arrangements that allow appropriate access to resources and that support enterprise.

This section provides an overview of the issues identified regionally as the underpinning prerequisites for the post mine economy.

#### ***Natural attributes***

The development of any region is based on its natural resources and assets. For example, in the Gulf the pastoral industry is currently based on and limited to the nutritional value and quantity of native pastures of the region. The emerging tourism industry in the Gulf relies on the quality of fishing, wildlife, heritage and remoteness experiences that the region has to offer. Similarly, the mining industry is limited by the region's natural mineral deposits.

While the natural resources of the region provide a basis for the economy, their condition can limit economic activity. For example, the Gulf does not have a natural deepwater port. The long term use of the port at Karumba is limited by its natural shallowness. The port requires constant high cost dredging to maintain access for even relatively low draft vessels.

Conversely, there are a wide range of natural resources that offer potential for development including tourism, fishing, remote experiences and natural wonders such as the wetlands and migratory birds. Other opportunities could potentially include irrigation, aquaculture and cropping systems. However, all parties consulted considered that the future economic activity will need to draw on and utilise the nature and condition of the region's natural assets in a sustainable way.

### ***Infrastructure***

The community and industry felt that remote areas, such as the southern Gulf, miss out on basic infrastructure development because infrastructure investment is largely based on costs per head of population. For many, a limitation was that the major investments required of government in the Gulf will never be able to compete for public funds on this basis. Yet adequate roads and other infrastructure in the Gulf were considered a crucial prerequisite to any sustainable economic development and an adequate standard of living for Gulf residents.

This investment fundamentally comes down to the value Australian society and governments place on the economic viability and standard of living of remote communities. A more sophisticated model of investment in infrastructure is needed to stimulate the required development and to underpin further economic growth.

### ***Roads***

All parties consulted indicated without exception that the economic development of the Gulf will be dependent on all weather road access. Two major road corridors exist in the region - the bitumen road from Cairns to Karumba and from Cloncurry to Karumba. All other roads in the region are limited to dry weather access and many are restricted to four wheel drive access. Many parts of the region are cut off for extended periods of time during the wet season. In some areas, it was reported that this may be up to five months of the year.

This restricted access was considered to constrain the business activity and the potential establishment of businesses in the area. Businesses cannot sustain limited transport access for supplies and products, nor the prospect of extended seasonal isolation by road. Without all weather access, development will be slow and piecemeal and restricted to a few boutique activities that can be sustained on fly-in activity, such as the fishing lodge at Escot Station.

Councils recognised the need for the development of suitable infrastructure but are limited in how much they can do, due to the scale of their rate base and the amount of financial assistance provided by the Government. At present they invest large sums each year just in maintaining the road surfaces.

### ***Telecommunications***

Telecommunications in the southern Gulf are fixed line with limited CDMA coverage near the major centres of Karumba, Burketown and Normanton. A CDMA reception cell is also linked to the Zinifex Century Mine site. Public phones are available at most fuel stops but are up to several hundred kilometres apart. There is very limited service for travellers and tourists.

Telecommunications are also seen regionally as important for tourism. The adequacy of the service is regarded as underpinning people's comfort and security while travelling in remote areas of the Gulf. Currently public internet access is limited to the council libraries, with no internet cafes. Adequate telephony services (perhaps a digital service) and internet access on major transport corridors and key tourism overnight stays, such as along the Savannah Way, were seen as important elements underpinning future development.

### ***Airports***

Adequate air transport infrastructure was also seen as an important element of the Gulf's future economic development. All weather airstrips are located at Normanton and Burketown. A dirt strip is located at Karumba with a number of other private dry weather light aircraft strips on most occupied pastoral holdings. A larger all weather strip located at the Zinifex Century Mine allows up to 100 seat jet aircraft to service the mine. At present the use of this strip is largely limited to fly staff in and out. Zinfex have expressed interest in exploring the wider commercial potential use of this airfield.

There are several issues surrounding air services for the future economic development of the southern Gulf:

#### **1. Airstrip at Karumba**

The strip at Karumba is adjacent to the coastal residential area of the town. The local Council and business community are pursuing the relocation of the strip to facilitate further urban development. Native title is held over most of the area immediately surrounding the town and the relocation of the airstrip depends on resolving these native title issues. Without resolution, this will continue to be the major blockage to further development of Karumba. At present the town of Kurumba is land locked by native title and the movement of the airfield is needed to address this issue and allow for further growth.

#### **2. Century Infrastructure**

The Century Zinc Mine air facility represents a potentially large scale opportunity for use in tourism and transport of supplies and produce. However, when the mine closes, the maintenance of the air strip and other associated facilities will be crucial. These costs will be significant and public funds through councils are limited. The throughput required for private enterprise to maintain facilities such as this may be insufficient to maintain commercial viability.

#### **3. Linkage with other Tourism Infrastructure**

Due to extended distances associated with the southern Gulf, air travel is seen by many of the industry leaders as a key way for the Gulf to expand tourism potential. As indicated earlier, there is also the potential to benefit from tourism hubs such as Cairns and Far North Queensland, as well as tapping into the "high end" of the international tourism



market. However, the development of tourism based air services would depend on not just the quality of air infrastructure, but also on the quality of accommodation, food outlets, and the organisation of tours.

### ***Housing and other services***

Access to comfortable and affordable housing and accommodation was reported as a major issue in the area affecting the attraction and retention of potential employees for business development, access to skilled workers and professionals, and is restricting the development of tourism. Local people cited many examples of difficulty in attracting appropriately skilled personnel such as shire officers, engineers, veterinarians, medical practitioners, dentists, school teachers and trades people. Apart from isolation, for many government workers and other professionals, the standard of accommodation available is a major disincentive to work in the region.

If the region is unable to attract base service professionals, such as in health and education, economic and social development will be severely restricted. Additional businesses and other service providers will not establish due to the lack of access to professional support services. All towns reported shortages in housing. A graphic example was at Doomadgee where the community was up to 90 houses short of their current population needs (Troy Frazer, CEO, Doomadgee pers comm.). Some families had over 20 people residing in a single three bedroom dwelling. Basic community infrastructure was also an issue.

### ***Legal and Institutional***

Resolving or managing several legal and institutional issues will be important to underpin the post mine economy of the Gulf.

All unallocated crown land in the area is either under native title or native title claim. Businesses and local government felt that land rights, native title and restricted access to land severely affected the growth of the economy and the development of the southern Gulf. Indigenous groups saw native title as a crucial way for indigenous people to preserve their culture, share title with the broader community and better engage indigenous people in economic development.

Some specific issues were raised such as the movement of the airport and the shortage of land for housing at Karumba. Some people felt that the Zinifex Century Mine paid a relatively high amount of money to access land subject to native title for the mine pipeline. This created a benchmark in pricing that general business and local councils cannot afford.

The Deed of Grant in Trust (DOGIT) communities of Doomadgee and Mornington Island are making the transition from DOGIT to full Local Government status. This new legal status will position these communities for enhanced economic and community development. Yet they also have many challenges in making the transition and making the most of its potential.

### ***Venture Capital/Business Case***

Improved access to venture capital is another prerequisite for business development. Local industries reported difficulty in securing commercial sources of finance as there is a general lack of confidence in the economy of the area. The establishment of a semi-

commercial revolving fund or community foundation would provide an alternative venture capital model that would allow strategic investment to stimulate businesses in the Gulf.

The problem is compounded for indigenous people as they are often unable to demonstrate business experience and acumen. Many business ideas have been generated by the Doomadgee community including caravan parks, irrigation, tourism accommodation and cultural activity, arts and crafts, hairdressing and fuel stations. All of these have either failed or were unable to secure capital. A more successful alternative would to involve a business mentoring arrangement where business ideas are progressed under the guidance of a person with professional experience in the relevant business area.

### ***Skilled Labour***

Access to skilled labour is a key prerequisite for economic development. The southern Gulf region has particular disadvantages above and beyond the strong tendency for professionals to reside on the coast due to remoteness and the lack of infrastructure.

Professional people are increasingly choosing to reside in city and or coastal regions. They are decreasing in regional, rural and remote areas. In 2001, 20% of the metropolitan Australia's labour force comprised of professionals compared to 11% in regional Australia. Within the southern Gulf, the proportion of professionals is 12%, however this figure needs to be explained. At this juncture the mine employs a large number of graduates particularly in the engineer and mining fields. Beyond the mine operations the region has an acute shortage of the normally community range of graduate and postgraduate qualified people and other skilled workers. This demographic shift is ongoing and will be compounded when the mine closes. All professional sectors in the Gulf are affected by the shortage and are struggling to attract and retain professional services.

In general the key reasons why gaps in professional skill shortages might be expected in remote regions are:

- Limited accommodation and housing (see housing earlier);
- Very high cost of living;
- Limited infrastructure or services;
- Less diverse culture, activities or lifestyle;
- Limited professional development;
- Variable or seasonal demand for skills; and
- Low supply of trained staff.

(Mckenzie 2003)

For many, the advantages of working in Queensland's metropolitan areas are perceived as outweighing those afforded professionals in more remote regions. Education and lifestyle are emerging as major driving factors for the location of skilled workers. Many professionals are moving to major centres as their children reach secondary school age.

The Gulf does not have an environment or social situation that competes with other regions in attracting skilled labour. Professionals largely trade off remoteness, limited housing, high costs of living and isolation from friends and urban opportunities with pay and conditions, experience and a genuine desire to assist communities.

### ***Economic Ownership***

The opportunity to own a house and other assets stimulates business activity and post mine economic development. In DOGIT communities such as Doomadgee, land is vested with the State and community members do not have the opportunity to buy or own land, a business or a house. This contributes to a lack of motivation and opportunity limiting new business development. It also leads to economic leakage where people employed by Zinifex often relocate to Townsville and other coastal centres choosing to operate on a fly in and out basis.

### **Enhancing Existing Assets and Industries**

A second strategy for developing a post mine economy is enhancing existing industries and assets in the Gulf.

### ***Pastoral Industry***

The pastoral industry has been the mainstay of the economy but turnover is often low and properties are reducing full time employment and relying largely on contractors. The grazing industry was a major employer, particularly of indigenous people. However, technology such as two way communication, motor bikes and helicopters for mustering, has reduced employment markedly.

A number of cattle properties are run down or abandoned. Yet the industry will continue to remain a large part of a post mine economy. There is potential for growth with improved pastures and some opportunity cropping. There are also opportunities to develop irrigation in the region but access to water and the economic feasibility of irrigation schemes remain unclear.

### ***Tourism***

At present, tourism is largely based on recreational fishing, caravanning retirees and some backpackers. Tourism has emerged as a major potential component of a post mine economy. Tourism development in the Gulf has been due to a sequence of developments working together. For example, at Karumba the reduction in the prawn fishery stimulated the search for alternatives. Initially, recreational fishers would camp along the coast. The closure of the beach to camping and access to grid electricity stimulated the development of commercial accommodation and provided a wider suite of services, increasing tourist numbers. Less self reliant tourist and recreational fishers were then able to access the area due to the increased standard of services and accommodation. This recreational fishing based revenue stream stimulated further growth in Karumba leading to a modern hotel complex and numerous self contained apartments.

There is considerable potential for eco and adventure tourism and cultural heritage interests to add to the existing base of recreational fishing and caravanning. The southern Gulf is full of ecotourism assets that could be value-added. For example, the birdlife is comparable to that of Kakadu. The region also has extensive wetlands, unique vegetation and wildflowers, and pristine coastal and marine environments.

Opportunities exist to showcase the region's indigenous culture in a manner similar to the Dreamtime Centre in Rockhampton where aboriginal culture, arts and crafts are packaged to an increasing tourist market. Doomadgee and Mornington Island have considerable capacity to develop a tourism experience of indigenous culture in a living community.

The Savannah Way offers a significant opportunity to promote and package a total experience in the Gulf of not just fishing but bird watching in a unique set of wetlands, aboriginal and early settler cultural experience, aboriginal arts and crafts, ecotourism and adventure holidays. Clustering is now occurring with businesses along the Savannah Way. This potential could be considerably enhanced by providing some professional development in business acumen, training using the business retention and expansion program (BRE) and some exposure to venture capital initiatives. It is of note that the current offered BRE program is highly dependent on existing networks and social capital, due to its 'self-driven' approach and would require some preliminary work and considerable support for this to be a successful tool.

The growth of tourism will depend on having adequate accommodation, fuel and supplies, improved basic stopping points and camping, improved roads, and a high level of personal service, the development of an integrated network of transport and package tours. The Gulf still has a way to go to meet these requirements and this needs to be professionally packaged and marketed.

Tourism is a highly competitive business and requires a high standard of facilities and service. However in the region, the level of services and accommodation for tourists is poor. Numerous examples were experienced first hand by the authors and many cases were provided by people interviewed in the region. The business acumen of many of the tourism and service areas was poor and in many instances the owners/providers had little interest in providing a quality service. In many potential tourist stopovers facilities were either non existent or had fallen into disrepair. This included poor accommodation facilities, cold showers, no provision for breakfasts, limited credit card acceptance and poor presentation and hygiene.

The quality of roads is also a major limitation for tourism. At present, most tourists (including the large number of "grey nomads") travel no further than the bitumen road and stop at Karumba. Tourist surveys have shown that many people would like to experience other southern Gulf attractions and communities if road access and services were improved. An increasing number of backpackers are now filtering into Karumba but have no ability to travel to the other attractions in the area. The uniqueness of the wet season affords another opportunity that is impeded by the lack of suitable access to the region.

### ***Retirees***

The large numbers of retirees that visit the region offer a considerable opportunity to redress some of the skills shortages in the area and to provide mentorship and professional leadership to some of the less developed communities. These retirees are an untapped resource of skills and passion. Retirees have the skills to help build the capacity of Gulf communities but they are not being engaged. There is the opportunity to use the social groups "eg Lions, Rotary" to provide skills while they are holidaying at the centres such as Karumba.

### ***Feeding off Economic "Anchors"***

Economic anchors are key industries or businesses that attract economic activity to a region and stimulate activity in smaller or more specialised sectors. The economic anchors for the southern Gulf region are:

- the pastoral industry;
- recreational fishing;
- emerging tourism based on natural and heritage assets and the Gulf “experience”;
- government services and investment;
- individual enterprises and assets such as the Mt Isa Mine, Lawn Hill Gorge, the Savannah Way, the Gulflander, the Mining Experience Centre in Mt Isa, and the Karumba Hotel Motel; and
- currently the Century Zinc Mine and the Karumba ore processing plant.

A range of economic anchors exist outside the region and these are potential broader economic anchors that the region can better link with. Key external anchors are:

- Tourism based in Cairns and Kakadu; and
- Population centres of Townsville, Cairns and further south.

The post mine economy needs to enhance the development and activity of anchors and maximise the linkage between these and smaller businesses based in southern Gulf communities. It also involves opportunities for the southern Gulf to derive greater economic benefit from the broader economic anchors outside the region.

Additional strategies to foster local economic anchors as economic drivers are the same as those already being discussed for broader economic development. These are:

- Investment in transport infrastructure and all weather road access;
- Improving community services;
- Improved customer service and attitudes;
- Increasing the quality of facilities; and
- Packaging services around anchors such as better linking other tourism experiences into icon activities such as the Gulflander.

### ***Increasing the Efficiency and Competitiveness of Existing Businesses***

The efficiency and competitiveness of existing businesses is severely constrained by freight costs, lack of skilled staff and limited markets. The cost of freight was a particular problem. For example, freight charges alone for the general store and bakery in Doomadgee were \$70,000 and \$30,000 a year, respectively. This limited the range of goods and services and restricted business development.

### **Reducing Leakage**

There is considerable economic leakage from the economy of the southern Gulf diminishing the multiplier benefit to the region. This occurs in several forms:

- Some businesses that service the area are located or are owned outside the area. While stimulating local economic activity, corporations such as Zinifex, Xstrata and pastoral companies return a proportion of profits to shareholders. Non local contractors and freight providers, increasingly employed by mines and the pastoral industry, send a proportion of economic return out of the region. While there is considerable local ownership, some retail, tourism and other businesses earn income for owners outside the region.

- Another example of economic leakage from the community is provided by the Doomadgee store. This store is owned and operated by the State Government agency DATSIP and has a locally reported \$2m turnover. While DATSIP is strongly encouraging local ownership of businesses in Doomadgee, managing this economic leakage depends on DATSIP's reinvestment in community projects.
- A large proportion of wages and salaries earned by employees leave the region. A major form of this economic leakage is fly in/fly out arrangements for mine workers who take their relatively high remuneration to coastal centres, such as Cairns and Townsville, where they are based. The high turnover of public sector workers such as teachers and health workers means that the accumulation of their skilled wages is transferred out of the region. External contractors also move wages and salaries out of the region.
- Local indigenous workers employed on the mine often move to Townsville or Cairns and fly in to the mine. This is due to the lack of suitable infrastructure, the opportunity to buy housing and to avoid social problems in Doomadgee. Only 7 people are employed on the mine from the local Doomadgee community.
- A considerable proportion of supplies and consumer goods are sourced from outside the region. This is expected in a remote region with limited local suppliers.
- While a proportion of government mining royalties are reinvested as government expenditure in the region, a major proportion of royalties leaves the region. Public revenue generated from the mine is used to establish other priority infrastructure, such as freeways in the southeast corner of the state. This is part of the national contribution of the region, and mining companies have also provided some infrastructure and services otherwise provided by government. However, recapturing a greater proportion of government revenue from the assets of the region is another option in reducing leakage. There is a need to consider how royalty dollars are allocated and how communities related to the mine could benefit from this royalty stream in the future.
- There is a tendency for people in the region to invest outside the region. For example, miners and others who earn relatively high wages often invest in real estate in coastal centres.
- Unemployment and underemployment, particularly of indigenous people, is a form of leakage from the economy. Other forms of leakage exacerbate unemployment.

Options to reduce leakage include changes in ownership such as alternative business models to allow community ownership of businesses and encouragement of local business development to replace imports and to diversify the economy.

An economic development strategy is also needed to better capture the revenue brought into the region and improve its circulation through the local economy. This is similar to reducing leakage but focuses on the linkage between export industries and businesses

(those that bring money into the region) and the non-export sector (businesses that circulate money locally). The main sources of income brought into the region are:

- Tourism;
- Government expenditure; and
- The sales of export produce, such as cattle and minerals.

### **Community Capacity for Economic Development**

The economic options in a post mine economy depend on having underpinning prerequisites, enhancing existing industries, new business starts and reducing economic leakage. Field work has made it very clear that the cornerstone of pursuing these options and developing a post mine economy lies in the capacity of individuals and communities living in the southern Gulf. This includes governance and decision making, attitudes and motivation, organisation and leadership.

#### ***Attitudes, Motivation and Life Skills***

Post mine economic development requires improved business attitudes, customer focus and entrepreneurship. Compared with other regions, the southern Gulf appears to have relatively poor skills in the service sector, limited entrepreneurial spirit and attitudes that don't fully value tourism.

A major issue will be engaging enthusiastic and motivated local residents and businesses in progressing a post mine economy. A proportion of residents and businesses do not necessarily want economic growth. Several business operators interviewed during field work wanted things to stay the same and did not necessarily welcome economic development. People want to maintain the "Gulf lifestyle" but they also want a high level of services. Engaging community members outside local and state government to acknowledge and participate in discussion about the post mine economy will be difficult but crucial.

#### ***Indigenous Communities***

Attitudes, motivation and life skills are particularly important for economic opportunities in indigenous communities. Communities such as Doomadgee have largely lost cultural connection, social fabric and community function. Individual and community capacity has eroded to the point where aboriginal people are in a cycle of unemployment, poor housing and infrastructure, welfare dependency, depression and self abuse. This situation perpetuates itself, limiting opportunities for people to gain life skills, employment and to participate in a functional community.

Generational unemployment at Doomadgee had reduced the self worth of community members. Several generations have now grown up in an environment of alcoholism, abuse and welfare. The lower the self esteem of local people, the lower their interest in getting out of the downward spiral. Welfare has become a way of life and many, through strong peer pressure and family ties, shun those that try to break out of this system. Many individuals no longer have a will to work and see no future.

For indigenous people to engage and benefit in a post mine economy, there needs to be gradual long term changes in the fundamental capacity of individuals and the community. This involves basic personal improvements in self worth, motivation and life skills.

Poor education and literacy are also major impediments to employment. For indigenous people employed at Zinifex, many did not know of any other existence and were unable to understand what was required of them. Many indigenous employees were also unable to read safety signs, leading to potentially unsafe situations.

### ***Leadership***

Another aspect of capacity building is leadership. Many people saw this as a key aspect of developing new business opportunities and in making positive economic transitions. Leadership was seen as being able to focus on the future, integrate and coordinate resources and infrastructure, and being able to develop a business approach. People also saw the need for shared leadership supporting innovation and entrepreneurship rather than what they saw as personal “grandstanding” leadership.

Key issues in leadership are:

- encouraging young and emerging leaders and increasing their access to support and training;
- developing mentoring relationships such as in the pastoral industry; and
- particular individual leaders can act as role models and work to support emerging leaders.

### **A Framework for a Post Mine Economy**

The development of a post mine economy for the southern Gulf involves a transition from the economic input of the Zinfex Century Zinc Mine (despite relatively high leakage) to a more integrated and diverse economy. This transition has two aspects. Firstly, some broad agreement on the goals of the economic development is needed - what changes are needed and what are the best changes to make. Secondly, some achievable strategies need to be progressed to make this transition.

In relation to this need, the Gulf Savannah Development, the ADBT, local government and a range of other organisations and groups have been involved with Gulf residents in developing and progressing detailed economic development goals and strategies for the area. These relate to the broader economic development of the Gulf. Any opportunities however to specifically manage a transition from the Zinifex Century Mine to a post mine economy should support and add value to these existing economic development activities.

There are a wide range of approaches that could be used to set goals and strategies that relate to a post mine economic transition. The Issues and Options section above describes the post mine economic development in the Gulf under broad development strategies such as improving the efficiency of existing firms and reducing leakage. This is one well researched and tested approach that is largely based on the work of Pulver (1979); Shaffer and Pulver (1995); and Shaffer et al (2004).

Additional work such as Beer et al. (2003) outlines a typical strategic planning approach to regional development which includes establishment of an organisation to conduct development activities, priority setting and action planning. Mueller and Schwartz



(1998) and Nightingale and Holcomb (1997) add further insight and describe strategies for economic development in disadvantaged communities including job creation, direct employment assistance, training and education, wage subsidies and public employment strategies. Luther and Wall (1998) outlined 20 “clues” to rural community development such as transition of power to younger generations, willingness to seek help from “outside”, and conviction for local people to have control. These relate closely to the strategies of Shaffer et al. (2004) which include:

- developing a group of committed local people;
- having decision making address symptoms as well as problems;
- broad citizen participation;
- incorporating local values;
- access to local and external resources; and
- a commitment to action.

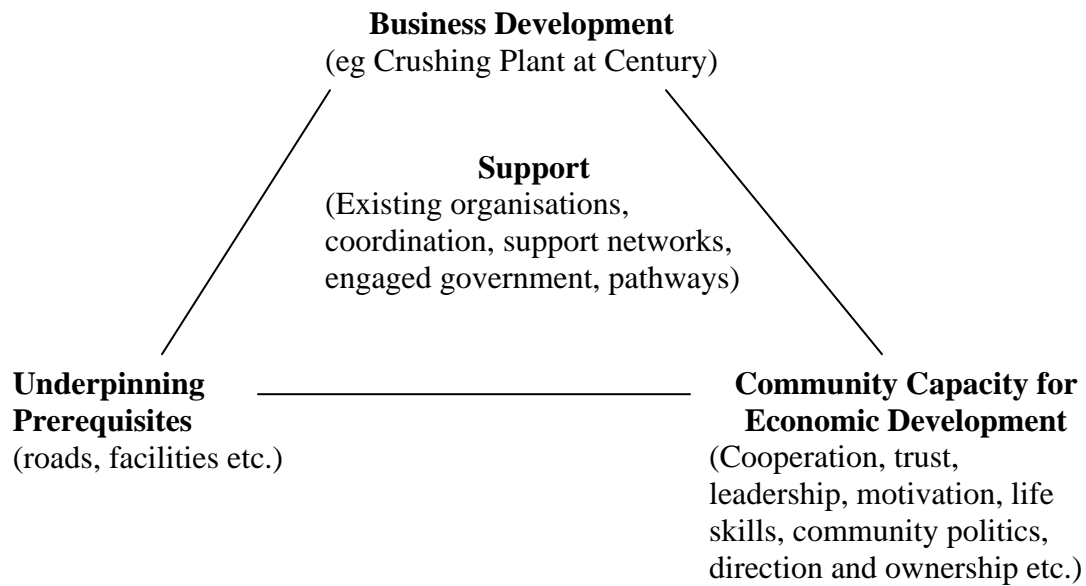
Another approach has been to develop a view of a functional post mine economy involving tourism, local small business etc. and to “backward map” the necessary strategies and actions to achieve it.

These “generic” approaches have been considered in the development of an integrated and tailored framework for the southern Gulf. Many of the strategies identified for the economic transition for the southern Gulf are interrelated, that is, the progress on particular activities needs to go hand in hand with other efforts. For example, housing infrastructure is needed to better attract skilled workers who are then in a position to mentor others. Improved housing and roads are also needed to foster new industries such as tourism and improve the efficiency of existing industries.

The integrated framework proposed in this section incorporates some of these interactions between the specific strategies and suggestions discussed in earlier sections to give an integrated overview of approaches that can foster a post mine economy (Figure 2). The model emphasises that three interrelated areas need to be addressed together – underpinning prerequisites, development of specific business opportunities, and fostering individual and community capacity (Figure 2). The triangular nature of the model is underpinned by the fact that appropriate support is required at all stages to ensure that these areas lead to “on the ground” change.

There are a range of post-mine economic opportunities such as tourism, pastoral development, and small business. These options depend on the “hard” infrastructure of roads and services, and the “soft” social infrastructure that includes personal motivation, cooperation and ownership. All three aspects of economic development require the support of organisations and networks in the region.

**Figure 2. A framework for progressing a post mine economy in the Gulf.**



This framework corresponds broadly with the strategies outlined by Blair and Reed (1995). These included:

- Infrastructure;
- Quality of Life;
- Organisational;
- Local support;
- Industrial/Community Promotion; and
- Business Development.

This proposed framework builds on the strategies outlined by Blair and Reed (1995) and attempts to take into account the particular circumstances of the Gulf. Most economic development processes assume functional organisations, effective power, motivation and capacity. They rarely consider issues of remoteness, lack of basic infrastructure, small local markets and the possible need for alternative business models. The emphasis on infrastructure, support and capacity in Figure 2 is aimed at addressing these issues. In effect, it combines the entrepreneurial model, program model and government planning model of Beer et al. (2003) and the “community centred” and “program centred” approaches of Sears and Reid (1995).

Each component of the framework is a “cluster” of specific strategies derived from those highlighted in community feedback. They also appear to be the approaches that:

- would add most value to the transition to a post mine economy;
- build on existing economic development activities; and
- are most likely to be achievable.

The clusters for each segment of the framework include consideration of the underpinning prerequisites, the community capacity for economic development and business development and need for integrated support systems.

Each of these strategies involves activities in several stages:

1. Pre-economic: activities that are required to provide a necessary situation for economic development (i.e. background work needed to be undertaken before specific action);
2. Activities: broad activities required to progress each strategy; and
3. Specific action to be conducted.

Progressing these actions depends on a number of key principles of community action. Gulf communities will need to have ownership of these actions and be “ready” for local development. This involves having local enthusiasm and motivation for change, and the confidence and capacity to pursue opportunities. One way this can be fostered is by working with often a small number of local leaders and “drivers”, seeing what other communities have done, and everyday challenging and encouraging people.

The best people to facilitate local development and action will be those with established relationships and trust within each community. It may take a long time for people to trust and respect government agencies and “outside” organisations but investing in these relationships must precede “on the ground” action. This requires long term continuity of contact, follow up on commitments and frequent communication.

Support for local *drivers* is important without compromising their social standing. This may include training and skilling, but also encouragement and mentoring.

Progressing actions, engaging communities and building trust all largely depend on achieving small visible successes. A sustainable post mine economy will largely be achieved by small incremental achievements that are recognised and celebrated.

The engagement of people themselves in identifying and progressing post mine strategies and actions will be crucial. While extensive community feedback has identified ways to build a post mine economy, they cannot be implemented prescriptively. Community members and stakeholders need to be engaged in the planning, development and implementation of any post mine strategy.

Finally, expectations need to be realistic. There may only be passion and enthusiasm for a small number of initiatives and progress may be slow. It will be difficult and even inappropriate to attempt to engage all community members and stakeholders but it is important to have key drivers and stakeholders involved.

## **Conclusion**

This case study has shown that the economic and social impacts of the Zinifex Century Zinc Mine are likely to be significant. Exploring these impacts and identifying development opportunities for the post mining economy have uncovered a high degree of complexity and interrelatedness. While the primary goal is the post mine economy, underpinning the future economic development options identified for the southern Gulf are a range of social, cultural and attitudinal issues. These include cultural differences

between indigenous and non-indigenous Australians as well as the will, interest, skill and or capacity and business acumen of many non-indigenous and indigenous groups required to achieve self reliance.

Furthermore, many of the strategies identified for the economic transition for the southern Gulf are interrelated. The successful progress on a particular activity will depend on the progress of other activity. Using the examples provided, housing infrastructure is needed to better attract skilled workers who are then in a position to mentor others. Improved housing and roads are also needed to foster new industries such as tourism and improve the efficiency of existing industries.

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