

29 Bauxite mining operations at Weipa, Cape York: *a case study*

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Bauxite mining at Weipa, Cape York.
Photo: Courtesy of Rio Tinto Alcan

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1. KEY POINTS

- Bauxite has been mined at Weipa for the last 45 years, and operations are likely to continue for at least another 40. Demand projections for aluminium continue to be strong, and third party developments to both the North and South of current Rio Tinto Alcan (RTA) operations, coupled with RTA's own expansion plans, have the potential to significantly increase bauxite production from this region.
- The current RTA operation is the primary economic contributor to Weipa and the wider region, in terms of direct and indirect employment, infrastructure, housing and service provision. The majority of the bauxite produced is also refined within Queensland at Gladstone, providing further economic contributions to that area and the State in general.
- Weipa's population base is becoming more diversified. If expected population trends eventuate, an ageing population will increase pressure on health services and aged care facilities, adding to current pressure on housing and child care facilities. The Town Authority is not a recognised local government body, and is therefore not eligible to receive government funding to support an increasingly expanding portfolio of social infrastructure.
- Rio Tinto Alcan (RTA) has made a concerted effort to improve relations with Indigenous people since the passage of the *Native Title Act 1993*. The Western Cape Communities Co-existence Agreement represents formal recognition of Indigenous land rights and cultural ties, and underpins the company's focus on providing increased employment and business development opportunities.
- Greater collaboration between the company and Indigenous communities has seen improvements in the rate of Indigenous employment onsite. RTA has positioned itself as a facilitator of small businesses, providing support to fledgling enterprises rather than through direct contribution/investment. As part of a broader Minerals Council of Australia initiative, RTA has also signed a Regional Partnership Agreement to address underlying socio-economic impediments to economic engagement.

2. CONTEXT

2.1 Historical background

The 'reddish cliffs' of the Cape York Peninsula coastline were noted by Matthew Flinders as early as 1802. The first geological reconnaissance of the area a century later confirmed the presence of 'brown pisolitic ironstone' outcrops (1, p. 190). However, it was not until Harry Evans, accompanied by two local Aboriginal men (2, p. 11), was prospecting for oil on the peninsula in 1955 that the existence and true extent of the Weipa Bauxite Province were "rediscovered" (1, p. 189).

The discovery came in an era of post-war industrialisation and restructuring. Increasing consumer demand and the relatively high prices of competing metals such as copper and tin resulted in significant growth in aluminium use (1, p. 189) in the post-war years. The swift transition from discovery to development was driven by the strategic imperative for Australia to set up an independent aluminium industry (3, p. 209). In 1957 the Commonwealth Aluminium Corporation (Comalco) was formed and a Special Agreement Act enacted by the Queensland Government for the large-scale development of the bauxite deposit. Under the terms of the *Commonwealth Aluminium Corporation Pty Ltd Agreement Act 1957 (Qld)*, Comalco was granted an 84-year lease with an option to extend for a further 21 years. The initial lease area covered 6162 square kilometres, but subject to the terms of the Agreement was reduced to 2590 square kilometres in 1977 (1, p. 190).

The operation passed under the management of Rio Tinto Aluminium in 2006 after Rio Tinto bought out the remaining minority shareholders in Comalco in 2000. More recently, it became a Rio Tinto Alcan operation after Alcan and Rio Tinto Aluminium joined forces in late 2007 (4).

2.2 Current operations

Operations at Weipa include the mining, crushing and washing of bauxite, and ore handling through port facilities for transport to alumina refineries. Since the first year of commercial production in 1964 when 453,365 tonnes of bauxite were mined and shipped, annual production has increased to 19.42 million dry product tonnes in 2008 (5). The operation has become one of the largest bauxite mining sites in the world and is 'a jewel in Rio Tinto's crown' (6, p. 9). Development of the South of the Embley Project, which will replace production from the depleted East Weipa reserves, is expected to extend the life of the operation by 40 years and lift annual production to 35 million tonnes (7). In 2007, the company's combined mining lease extended over a 3,860 square kilometre area (8, p. i). Weipa bauxite is sent to a number of locations globally, though predominantly to RTA's Yarwun and Queensland Alumina Ltd refineries in Gladstone.

2.3 Indigenous relations

The establishment of the mining operation at Weipa occurred with little consultative involvement of local Aboriginal people and included the forced relocation of the community of Mapoon in 1963. It was not until 30 years later, after the introduction of the *Native Title Act* 1993 (Cth), that Comalco sought to recognise Aboriginal interests and rights in the land, formally acknowledged in the Ely Bauxite Mining Project Agreement (EBMPA) signed in 1997 and the Western Cape Communities Co-existence Agreement (WCCCA) signed in 2001¹.

In its submission to a House of Representatives Inquiry in 1998, Rio Tinto admitted that although the company had an established corporate accountability policy developed under the banners of 'corporate citizenship' and 'good neighbours', these practices "were not universally applied in Australia where the near community was Aboriginal"². To address this history the company developed an Aboriginal and Torres Strait Islands Peoples' policy in 1995 the main tenet of which is commitment to assist Indigenous people attain economic independence through direct employment and the development of small businesses that can contract to the company's operations (9)³.

In 1996, Comalco sought to 'modernise' (10, p. 241) its relationship with the Traditional Owners surrounding its Weipa operations. The resulting multi-lateral agreement, the Western Cape Communities Co-existence Agreement (WCCCA), was signed in 2001. At the signing ceremony the company apologised for taking 40 years to formally recognise Aboriginal land connections (10, p. 244). The WCCCA provides for a range of benefits to the Traditions Owners in return for land access. Under the terms of the Indigenous Land Use Agreement, sixty (60) percent of an annual \$2.5 million payment is placed in long-term investments. Additionally, RTA agreed to fund and run employment and training programs, set up a cultural awareness fund, transfer to the Traditional Owners ownership of a pastoral property and relinquish to the government parts of mining leases no longer in use for return to Aboriginal ownership (11). The document is prefaced by the parties' commitment to mutual respect and recognition as a function of the Traditional Owners' support for RTA's future mining operations. It also emphasises the company's support and encouragement of community economic development, increased Indigenous participation in decision-making processes and increased levels of cultural awareness among the workforce.

In 2003, an independent review of the WCCCA commissioned by Comalco revealed that "good progress" had been made in the implementation of terms relating to employment, internal support for local Indigenous businesses, cultural heritage protection, and governance and administration, but that more effort was needed to increase community and employee knowledge of the Agreement and its intent (12, p. 104). Further aspects of the current state of Indigenous engagement with RTA Weipa operations are discussed in Section 4.

¹ The operation currently functions under two Aboriginal land access agreements – the Ely Bauxite Mining Project Agreement (EBMPA) signed in 1997 and amended in 1999, and the WCCCA; as well as the 1957 Special Agreement Act.

² Ibid.

³ For more details, see Rio Tinto's *Aboriginal policy and programmes in Australia* 2009.

3. ECONOMICS AND DEMOGRAPHICS

3.1 Economic contribution of the operation to Weipa and the surrounding region

In 2006, RTA's direct contribution to the Weipa economy amounted to \$316 million. The indirect or 'flow-on' impact of its operations, the result of purchases made by RTA and its employees in the local economy, was estimated at \$48 million in the same year; adding to a total contribution of \$364 million. Putting this figure into perspective, according to economic modelling undertaken as part of a Community Baseline Study commissioned by RTA, the mining industry accounted for over three-quarters (77%) of Weipa's total economic output in 2006 (2, p. iv).

Employment statistics provide another indicator of RTA's economic contribution to Weipa. RTA provided 734 jobs in 2006, out of a total of 2,837 jobs across all industries in the local economy, or just over 25%. Taking into account the estimated 1,711 indirectly generated jobs, in 2006 RTA provided for employment equivalent to 86% percent of all jobs in Weipa. Local industries such as retailing, manufacturing, construction and business services are particularly reliant on mining. These figures indicate that any withdrawal or decline of the mining industry would have fundamental repercussions for the Weipa economy and community (2, p. iv). For example, the Global Financial Crisis of late 2008 saw a 60% drop in the price of aluminium and a similar dive in alumina prices. In April 2009 RTA announced a 4 million tonne cut in production from its Weipa operation to be accompanied by the loss of 100 permanent jobs (13). Whilst it is not possible to identify how many indirect jobs were affected, a month later a local news report quoted a member of the Town Authority as indicating that "recent job losses are causing an exodus from the town" (14).

3.2 The operation's contribution to Weipa's physical infrastructure, service provision and housing

Under the *Commonwealth Aluminium Corporation Pty Ltd Agreement Act 1957* (Qld), the establishment and management of the township of Weipa was vested in Comalco, RTA's predecessor, a situation that remains largely unchanged to this day. The Weipa Town Authority, represented by a Chair, three elected members of the community, two RTA-appointed members and one Traditional Owner, has managed the town on RTA's behalf since 1994 (2, p. 20). However, the Authority is not recognised as a local government area, an issue that became particularly prominent during the recent financial crisis, as Weipa's status made the Town Authority ineligible to receive state and federal stimulus packages (14). RTA is the Authority's largest rate payer, contributing \$1.5 million in rates in 2007. In addition to rates, the operation spent more than \$3 million on town running costs, including office administration, wages, town maintenance and repairs (8, p. 19).

Comalco funded the vast majority of Weipa's infrastructure (15, p. 4) and the town continues to be heavily reliant on the extensive mining infrastructure such as the airport, road networks, a port, power, water and sewerage facilities, and housing (15, p. 4). In 2007 RTA approved over \$30 million in infrastructure projects (8, p. 19) and in 2008 spent \$19.8 million on infrastructure upgrades of the power and sewerage facilities and land development (5). The company is also a major sponsor of community services and manages an annual community investment fund. It operates a child care facility (2, p. 60), funds General Practitioners under the Far North Queensland Rural Division of General Practice scheme (2, p. 65), as well as supporting the local medical practice with a bulk billing subsidy.

Prior to the introduction of the Weipa Accommodation Benefit scheme, RTA owned the majority of Weipa's dwellings, which numbered 1200 in 2007 (2, p. 74). Since the scheme's introduction, the proportion of RTA-owned properties has declined from 75% in 2004 to 29% in 2008 (5). The Weipa Community Survey undertaken as part of the Community Baseline Study revealed that lack of available and affordable housing is a major issue affecting Weipa's future sustainability (2, p. 80). Private housing and rental prices are "extremely high" (2, p. 93), with non-RTA employees being the most affected. The Study concluded that unless the town boundary is expanded, future development for residential and industrial purposes will be limited (2, p. 93).

3.3 Demographic profile of Weipa and surrounding area

According to 2006 Census data, the population of Weipa numbered 3029 people. It is a younger, faster growing population, and one that earns considerably more than the State average (16), factors reflective of the high proportion of working age mining professionals. In mid-2007 Weipa was reported as Queensland's fastest-growing Local Government Area, up by 6.4% (17). Projections indicate that by 2016 the population of Weipa will increase to between 3,610 and 4,080 people (18). Whilst the proportion of those aged 25-44 is expected to remain the highest, an important trend is the projected increase in the proportion of residents aged 65+. The change in home ownership provisions will potentially see more RTA employees retire in Weipa (2, p. 78). The ageing trend carries implications for future service provision, such as health and aged care facilities, and is an indicator of Weipa's evolution from a purely working mining town into a more diversified community.

The proportion of Weipa's population who identify as Indigenous was 18.5% in 2006, up from 15.2% in the 2001 Census. This is in contrast to the predominantly Indigenous populations of the communities of Aurukun, Napranum, Mapoon and New Mapoon, located within close proximity to Weipa, as shown in **Table 1** below.

Table 1 Population of Weipa, Aurukun, Napranum, Mapoon and New Mapoon, 2006

	Weipa	Aurukun	Napranum	Mapoon	New Mapoon
Total	3029	1138	921	262	381
Indigenous (%)	18.5	93.7	93.9	91.3	94.4

Source: Australian Bureau of Statistics, 2006 Census

The standard of living conditions in these Western Cape communities can be characterised as one of economic and social disadvantage, as shown by comparison of weekly income and median household size in **Table 2** and **Table 3** below. Performance across health, life expectancy and education attainment indicators is likewise well below State and national averages.

Table 2 Median Household Size, Weipa, Aurukun, Napranum, Mapoon and New Mapoon

	Weipa	Aurukun	Napranum	Mapoon	New Mapoon
Average Household Size	2.8	5.7	3.9	3.4	4.3
Average number of persons per bedroom	1.1	1.9	1.6	1.4	1.7

Source: Australian Bureau of Statistics, 2006 Census Community Profiles

Table 3 Weekly income, Weipa, Aurukun, Napranum, Mapoon and New Mapoon, 3

	Weipa	Aurukun	Napranum	Mapoon	New Mapoon
Median Weekly individual income (\$/week)	1,013	219	226	230	207
Median Weekly household income (\$/week)	1,857	946	633	769	604

Source: Australian Bureau of Statistics, 2006 Census Community Profiles

Compared to the population of Weipa, Indigenous population in the region is younger, projected to grow at a faster rate, with the highest proportion of residents concentrated in the 0-15 years age group (19)⁴. This is in line with Indigenous population trends across Australia (20, p. 65) and carries significant policy and service provision implications.

4. INDIGENOUS ENGAGEMENT

4.1 Indigenous employment

Whilst RTA has continued to increase representation of local Indigenous and other Indigenous persons in its workforce, it is recognised that a number of significant social barriers continue to affect the work readiness levels of people living in Western Cape communities. This has required RTA to take a long term approach to employment and training and implement strategies targeting specific communities, rather than adopt a one-size-fits-all approach.

In recent years, RTA has worked collaboratively with stakeholders across the region to develop and implement a range of employment and training programs aimed at local Indigenous employment, leadership development, increased representation of female local employees and training programs that provide work exposure and increase levels of job readiness. These include the Local Aboriginal Traineeship Program, scholarships, employee support and mentoring programs, work readiness initiatives, and school-to-work pathways.

Fostering a collaborative approach with the aim of creating employment opportunities has been an effective strategy for creating a locally-based skilled Indigenous workforce. A partnership approach with government agencies and other key regional stakeholders is required to successfully address the social and educational barriers to entering the mainstream workforce. At RTA's Weipa operations, this partnership approach is demonstrated through participation and engagement with the Western Cape College Forum, Regional Partnership Agreement (RPA), Western Cape Chamber of Commerce, Western Cape Communities and Ely Coordinating Committees.

As part of a commitment to increase the level of local Indigenous people employed at the operation, RTA developed the *Destinations Program* in 2007. The program is a two year pilot designed after extensive consultation with Traditional Owners, current and previous employees from Aurukun, government departments and employment agencies, to specifically

⁴ 32.6% in Aurukun in 2006

address recruitment and retention issues of Aurukun people (21). The program is divided into three stages: a 13 week pre-vocational training programme placement conducted by the Indigenous owned and run organisation Myuma Pty Ltd at Camooweal in Queensland's North West; a 16-week work sampling programme; followed by a 16-week fixed term contract. The program supports the Western Cape Regional Partnership Agreement under which all stakeholders such as RTA and the State and Federal Governments have committed to achieving a local Indigenous employment target of 50 new jobs a year for the next five years commencing in 2008 (22). While the program is still in its early stages, it has started to show positive results. The target is for up to 60 people to participate in the program (8, p. 13)..

As part of this overall focus, RTA operates a Workplace Mentoring Program which aims to improve not only recruitment rates, but also training and retention rates for Indigenous staff. This has supported a significant increase in retention rates for staff recruited through the local Aboriginal traineeship program. In 2008 the site was named Host Employer of the Year in the field of diversity at the Cairns Regional Group Training Awards in recognition of its efforts and success in training local Indigenous trainees and apprentices (5).

Though below the annual target of 17.4% Indigenous employment of the total workforce, at 109 (13%), the number of local Indigenous people (that is people with cultural connection to the land on which RTA operates) working at the operation in 2007 was an increase upon the previous year. In 2008 that figure rose to 128, although still short of the target of 140 (5). Meanwhile, total Indigenous employment in 2007 increased to 156 (18.9%), up from 136 (18%) in 2006 (8, p. 9). In 2008 the numbers increased to 181 in total, or 19.8% of the workforce.

4.2 Business development

Under the WCCCA, sub-trusts have the discretion to allocate funds towards establishing or supporting local Indigenous businesses. In 2007 RTA supported the transition of the Weipa Multi Purpose Facility to ownership by the WCCCA Main Trust. More recently, under an alliance arrangement with RTA, the Facility passed into the ownership of Mapoon, Aurukun and Napranum communities on behalf of eleven Traditional Owner groups in the region, becoming the Western Cape Centre Ltd. The Centre is an accommodation, training and conference facility located in Weipa and provides cultural awareness training for all employees and contractors in the region, including RTA's workforce. In 2009 it was the winner of the Premier's Reconciliation Award in the Emerging Business category (23). Since RTA began its cultural awareness program, the number of employees who have received training numbered in excess of 1,100 by the end of 2007 (8). The Centre's success evidences not only RTA's commitment to a culturally attuned working environment underpinning efforts to lift rates of Indigenous employment, but also the potential for economies of scale in combining employment and business development initiatives that benefit the community at large.

The above example evidences Rio Tinto's change in practice adopted in the late 1990s to enter into joint venture developments with newly formed Aboriginal enterprises (9). Nanum Tawap Ltd is an Indigenous business incorporated in 2003 under a Joint Venture Agreement with the Queensland Government. It operates a sand quarry leased under a Memorandum of Understanding from RTA and is also involved in sawmilling under an arrangement with RTA and the State Government which permits the business to selectively harvest trees on leases prior to clearing for mining. Prior to 2004, the cleared timber was burned. RTA's support for the burgeoning Indigenous forestry industry (24) (see also 25) is inline with the company's focus on "activities that are sustainable after Rio Tinto has left the area" (9). As well as providing an opportunity to yield commercial value from a resource that was previously wasted (26), the development has created training and employment opportunities for

Napranum residents outside the mining industry. Providing a vehicle for on-the-job training for Indigenous people in Western Cape was also the intent behind the establishment of Western Cape Earthmoving in 2005. A companion to Nanum Tawap Ltd in the joint venture scheme, the business provides general earthmoving, haulage and plant hire services. A long term contract with RTA to haul bauxite rejects provides its core income stream (27). In 2006 Western Cape Earthmoving was the Emerging Business category winner in the Premier's Reconciliation Awards for Business.

Another aspect of Rio Tinto's engagement policy is finding "mutually advantageous outcomes", as in the case of RTA enlisting Traditional Owners to collect native seeds for its rehabilitation program. Rehabilitation of land disturbed by mining activities is a crucial part of RTA's environmental management strategy. There are a number of methods of collecting providence seeds, for which the skills and experience of local indigenous people are actively sought. As the large volume of seed required for the progressive rehabilitation cannot all be gathered locally, some is gathered further afield for the specific species required. ..In 2008, 150 Traditional Owners from Mapoon, Aurukun, Napranum and Weipa collected 2 tonnes of seeds. A step towards contributing to the region's biodiversity, the collection was a sample of over 40 tree and shrub species of cultural significance for local Indigenous people (5).

The Weipa bauxite mine is located in a region known for its natural beauty and one recognised for its tourism potential (28, p. 2). It is a region that particularly lends itself to the cultivation of Indigenous tourism. Whilst RTA management supports activities that go to regional long-term sustainability after mining operations cease, the company sees itself as a facilitator of business development, rather than a direct contributor through the provision of training and/or funding of Indigenous enterprises (15).

4.3 Education

RTA has also engaged in the sphere of education and has worked closely with the State Government to establish the Western Cape College to improve educational outcomes for Indigenous students. In 2007 this collaboration won the Business Partnership category of the Prime Minister's Queensland Community Awards. The partnership focuses on fostering school-to-work transition and has been credited with making a significant contribution towards lifting rates of Indigenous school attendance and performance. Since the program's inception in 2000 Indigenous numbers at Western Cape College increased from 160 to 450 (29).

4.4 Multi-stakeholder collaboration

As well as pursue initiative internally, drawing on the principles of the 2005 Memorandum of Understanding between the Minerals Council of Australia and the Commonwealth Government, RTA has sought to engage with other key stakeholders in the region. The Western Cape Regional Partnership Heads of Agreement was signed in 2008.

5. BIOPHYSICAL IMPACTS

5.1 Land disturbance and rehabilitation

Bauxite mining is characterised by a relatively large physical footprint compared with metalliferous hard rock operations. However, it also presents more opportunities for progressive rehabilitation of mined land. At the end of 2006, RTA reported a total disturbance of almost 10,000 hectares since mining commenced, with approximately 9,000 hectares under rehabilitation (30). However, this represents a relatively small proportion of the total land holding of 264,667 hectares. The rehabilitation process aims to return “the mined land back to near pre-mining conditions (or to a condition suitable for alternative land use as agreed under the conditions of the WCCCA)” (30). The stated long term target for rehabilitation is a ratio of disturbed to rehabilitated area of as close to 1:1 as possible.

The recent transfer of the Alcan Gove operation to Rio Tinto Alcan ownership has created opportunities for collaboration, and enabled the two bauxite mines to exploit synergies in the area of environmental management and rehabilitation. For example, the Weipa Environmental Team has drawn upon Gove’s reputation for quality regeneration and repopulation of rehabilitated mine areas with native plants to resolve some seeding problems experienced in the last few years (31, p. 11-12). Increased efforts to engage local Aboriginal people in seed collection is also having a positive impact on the operation’s rehabilitation program as well as generating business opportunities pursuant to its Indigenous engagement strategy and commitments under WCCCA.

5.2 Water usage

The primary uses of water at Weipa are for bauxite washing operations, haulroad dust suppression (particularly in the dry season) and water supply to workforce and communities. In 2008, 19,553 megalitres (ML) of water was used compared with 17,451ML in 2007. However, in 2008 RTA recycled 14,902ML of water in 2008, a significant improvement on 2007 when 10,633ML of water was recycled (5).

The operations at Weipa are located in a region of water excess, due to the tropical and monsoonal climate. The mine has multiple sources of water to draw from, each of which has its own costs and additional values associated with it. The four main sources which the mine can draw from are decant water from the tailings dam; site rainfall run-off captured in ‘slots’ and other small storages across the mining lease; shallow aquifers underlying the area; and the deeper aquifers of the Great Artesian Basin. Availability of the different sources can vary during the year, particularly the first two. The sensitivity of the shallow aquifers and the Great Artesian Basin has previously been identified during normal environmental risk management processes. This has been reinforced by engagement of RTA with key stakeholders, including the Great Artesian Basin Coordinating Committee and the Wilderness Society. The latter have focussed particularly on the connectivity that can occur between the shallow aquifers and local rivers.

Consideration of these factors by RTA have resulted in the establishment of a formal hierarchy of sources, which directs the operation to source first from tailings dams, then ‘slots’, then the shallow aquifers, and finally the Great Artesian Basin aquifers. In general, the costs associated with sourcing from tailings dams and slots are less than those arising from operating borefields fed by underground aquifers. However, due to the large area of the mining lease, there are

situations where it could be both cheaper and more convenient to source from one of the latter. The establishment of the sourcing hierarchy effectively places an implicit value on the natural sources of water. In the case of the Great Artesian basin, the focus is on the long term sustainability of the resource as it has a slower recharge. The shallow aquifers recharge more quickly due to the climate, but can be linked more closely to the river ecosystems.

6. FUTURE REGIONAL GROWTH

6.1 Project developments

In June 2008, RTA announced a major feasibility study to develop a new bauxite operation, South of the Embley, to be located south of the existing Weipa operation. Once approved, the new mine will enable total annual production to increase to 35 million tonnes, expanding the current operation's mine life by 40 years (32). It is planned that the new mine will eventually replace the existing east Weipa mine. The feasibility study and Environmental Impact Statement process is expected to take 2 years and construction of the expansion another 2-3 years. The new infrastructure required includes a beneficiation plant, power station, warehouse, workshops, barge, ferry facilities, port and ship loading facilities. It will be located approximately 50 km to the south of the Weipa township (32).

In addition to this project, Chalco are currently undertaking a Feasibility Study for the development of the Aurukun project, to the South of Weipa. At the same time, Cape Alumina is developing a proposal to mine bauxite at the Pisolite Hills project. If both of these projects go ahead, then there will be a significant level of development occurring in the Western Cape York region over the next few years. While this will inevitably place additional pressure on infrastructure and services in the region, it will also generate some potential opportunities for synergies in terms of infrastructure, and the management of environmental and social impacts. It will also offer opportunities for further direct Indigenous employment as well as enterprise development in associated community service areas.

6.2 Regulatory aspects

Future mining growth in the region is governed by a wide range of existing legislation. Of particular note is the potential impact of Queensland's Wild Rivers legislation, as well as the emerging focus in approval processes and Native Title negotiations on the formalisation of sustainable development plans for regions and communities.

Since the introduction of the *Wild Rivers Act* 2005 (Qld), nine Wild River Declarations have been made in the State and another is proposed. Of these, the Archer Basin Declaration made on 3 April 2009 and, in particular, the proposed Wenlock Basin declaration stand to have the greatest impact on the future expansion of mining activity (and other development) on Western Cape York. The purpose of the Act is "to provide a high level of protection from new development activities that have the potential to degrade the wild rivers' natural values" (33) and is the most recent addition in a list of legislation enacted to protect Queensland's natural environment. A declared area usually covers the whole river or drainage basin⁵ and is split into a number of management areas – high preservation, preservation, flood plain management and subartesian management areas. These areas dictate whether or not a proposed mining activity is prohibited or subject to the requirements of the declaration. For example, surface

⁵ For example, the proposed Wenlock Basin Wild River Area covers approximately 7435 km² - <http://www.derm.qld.gov.au/wildrivers/wenlock.html>

mining, categorised as a 'high impact activity', is prohibited in high preservation areas. A 'high preservation area' includes the river itself, major tributaries, and any special features in the wild river area, as stated in the Declaration, up to 1 km either side of those features (34).

Although mining activities in existence at the time of the Declaration are not affected, a lease renewal or amendment under the *Mineral Resources Act 1989* (Qld) will attract Wild River requirements. Similarly, any modification or expansion of existing associated mining infrastructure (e.g. roads, dams) will bring the requirements into effect. It should be noted that the *Wild Rivers Act* explicitly states that the Act does not apply to the Aurukun Bauxite project (34, sections 45, 46). Also, Wild River Declarations do not affect existing authorisations, such as the *Commonwealth Aluminium Corporation Pty Ltd Agreement Act 1957* (Qld) (34, section 17). A detailed analysis of the impact of the legislation is outside the scope of this Report. Nevertheless, the Act has far-reaching implications for the future development of projects in the region, and has generated a considerable degree of public controversy and debate.

Another relevant aspect of the regulatory context is the focus on sustainable development objectives during project establishment processes. One outcome of the multi-party negotiations to establish the Aurukun project ILUA was a commitment by all parties involved to the development and implementation of a sustainable development plan for the Aurukun community, strongly driven by the Queensland State government. The aim is to ensure that "the Project contributes to the maximum extent possible to the Aurukun community's and the native title holders' sustainable economic, cultural and social development." (35)

7. SUMMARY

The bauxite mining operations at Weipa have been a major contributor to the socio-economic development of the Western Cape York region, both through the provision of infrastructure and the generation of economic activity. The longevity of the operation, coupled with the development of additional projects in the region as a result of increased global demand for aluminium, suggest that bauxite mining will continue to be the main economic activity in the region for the foreseeable future.

Relationships between RTA and Indigenous communities in the Weipa region have undergone a significant improvement, in line with the mining industry's shift in approach over the previous two decades. The EBMPA and WCCCA agreements represent a comprehensive attempt to harness the benefits of mining activity to improve the socio-economic conditions for the Indigenous population of the area, both through direct involvement in activities supporting the mining operation, as well as fostering the development of independent enterprises.

The projected expansion of bauxite mining operations in the region by several companies will increase the need for effective management of resources, infrastructure and services as a result of increasing demand. A continued focus on the regional aspects of mining development, with the involvement of all stakeholders, will allow the exploitation of synergies and ensure that the benefits of mining are maximised, while negative impacts are minimised.

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