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Dear Committee Members.

Mackay Conservation Group welcomes the opportunity to provide information to the Senate Inquiry on the Great Barrier Reef. We have been actively concerned about the impacts of development, particularly coal port development, for some years now.

We have attached our submissions in relation to the Hay Point and the Abbot Point coal terminals

1. Submission in relation to Adani's Terminal 0 and dredging at Abbot Point
2. Submission in relation to GBRMPA permit for dumping at Abbot Point
3. Submission on GBR Strategic Assessment
4. Submission to the Qld Ports Strategy

All of these submissions were prepared by MCG Researcher Patricia Julien.

We look forward to the opportunity to address the Committee in person here in Mackay.

Yours sincerely,

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Draft EIS T0 Coal Port Terminal Abbot Point

3rd April 2013

MCG Comments are in blue text. MCG is a regional environment NGO covering the Mackay Whitsunday Region and west to Clermont, as well as working with other regional conservation NGOs to cover the coal and gas fields of northern Central Queensland.

MCG Comment: There was no subsequent application to the SEWPac Minister to request another variation after this to change the project from 35 million tonnes of export coal (mtpa) (Appendix I). Yet the following sections and table refer to the Project being designed for up to 70 Mtpa of coal exports.

Section E1.2

“The Project will provide new coal export facilities for the receiving, stockpiling and export of up to 70 million tonnes per annum (Mtpa) of export coal.

...

“The Project will be developed for operation over two phases – Phases 1 and 2. Development will occur over a five to six year period corresponding with production outputs at the Carmichael Coal Mine. The Project will allow for an initial throughput of up to 35 Mtpa and maximum throughput of 70 Mtpa, allowing for other sources of coal to be incorporated into the Project’s capacity.”

...

“Phase 2 of the project will increase the capacity by an additional 35 Mtpa with a maximum target capacity of 70 Mtpa

section E1.6.1.1

“It is anticipated that the construction stage of the Project will employ up to 500 workers, while peak operational employment would be in the order of 200 - 250 workers (at a full 70 Mtpa throughput).

Table 4.1

“New (Abbot Point T0) terminal to support up to 70 Mtpa of coal throughput. Includes expansion, offshore trestle jetty, two berths.”

section 4 page 4-2

“Adani proposes to construct new coal export facilities (The Project) for up to an additional 70 million tonnes of coal per annum (Mtpa) adjacent to the existing Abbot Point Coal terminal 1.”

...

“The proposed action was referred to SEWpac on 15 Nov 2011 (EPBC 2011/6194)”

SEWPac’s Guidelines for the EIS also refer only to an Adani proposal of coal exports of 35mtpa. The original Referral to SEWPac (EPBC 2011/6194) also only refers to 35mtpa not 70Mtpa as stated in the draft EIS.

FINAL GUIDELINES FOR AN ENVIRONMENTAL IMPACT STATEMENT FOR ABBOT POINT COAL TERMINAL 0, PORT OF ABBOT POINT, QUEENSLAND ADANI ABBOT POINT TERMINAL PTY LTD (EPBC 2011/6194)

1 PREAMBLE

Adani Abbot Point Terminal Pty Ltd (hereafter referred to as the proponent) proposes to construct new coal export facilities for an additional **35 million tonnes of coal per annum**, immediately adjacent to the existing Abbot Point Coal Terminal 1. The terminal expansion (referred to as “T0”) will comprise various onshore and offshore infrastructure components.

The draft EIS in the EPBC Referrals is for 35mtpa so why is a much greater export capacity of 70 Mtpa being discussed? A new EIS needs to be submitted so that the cumulative impacts of the actual Project size of 70 Mtpa can be assessed adequately.

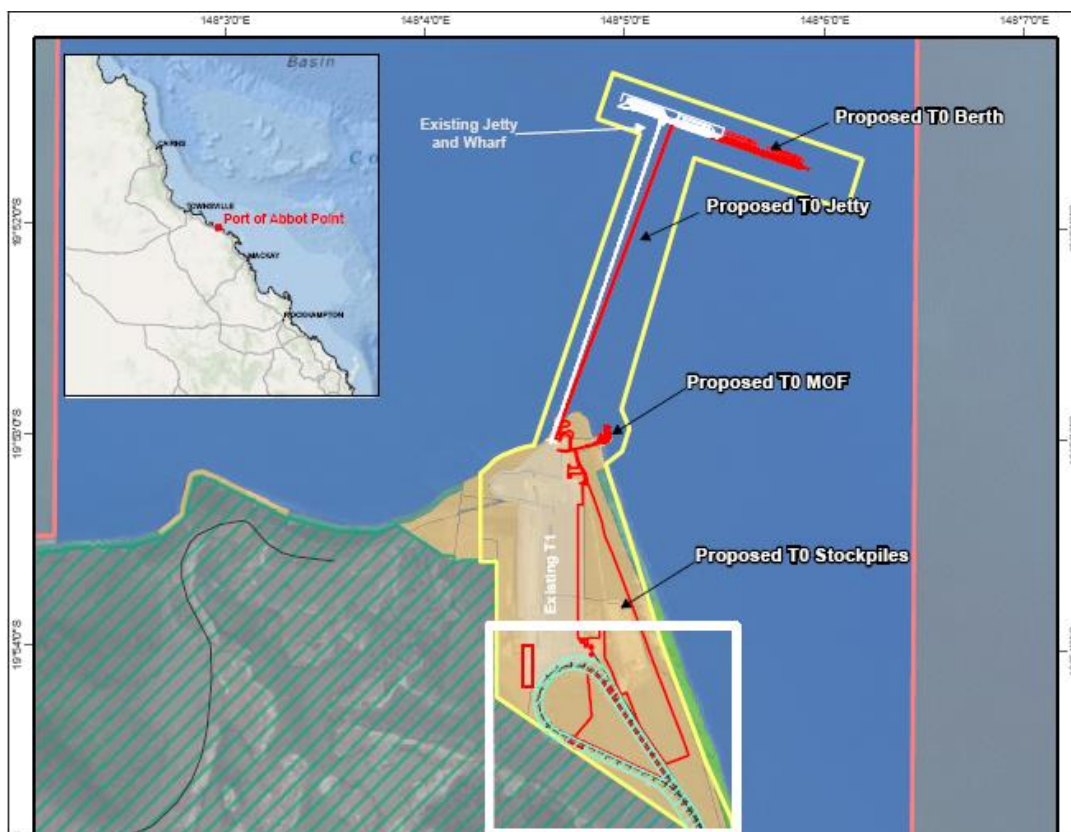
FROM NQBP [website](#) Adani's proposal: "Expansion of existing Terminal T1 (which has a capacity of 50mtpa) by 35mtpa, **plus an additional two offshore berths.**"

So where are the two additional berths? They are not shown in the draft EIS map (Fig.1).

The T4 to T7 proposed terminals that Adani was interested in, which would have affected the Caley Wetlands, were scrapped by the Queensland government. Waratah Coal is now proposing they go into the west side of Abbot Bay as "Palmer's Wharf" from One Tree Hill northwest of Abbot Point, where some reclamation similar to the formerly proposed Multi-purpose Cargo facility would have been. As Waratah plans a 6-8 berth facility to ship 240 Mtpa, that would mean significant impacts on MNES along the foreshore, Caley wetlands, near-shore coastal waters.

The Adani T0 proposal appears to be a part of a much larger action by Adani and the EIS should cover the 35mtpa plus the additional two terminals which apparently would include the 70mtpa throughput.

Fig. 1 Map of 35mtpa proposal in the Executive Summary of the draft EIS.



E1.1 Background and Need

The ongoing global growth and demand for coal coupled with the development of coal mines in the Bowen and Galilee Basins has necessitated planning for additional coal export infrastructure from Abbot Point to accommodate production and supply rates.

While Adani needs the project there is some question as to whether Queensland and Australia do. BHP's terminal 2 proposal at Abbot Point is on hold indefinitely. The Queensland and Australian governments face considerable economic and environmental risks by committing to more coal export development.

Adani itself is having difficulty raising needed capital for the project where investment interest in coal projects has fallen.

Ross Garnaut, Professorial fellow in Economics at the University of Melbourne discussed the report from Nomura investment bank this week that China is on the brink of a debt crisis and showing symptoms similar to those that triggered the Global Financial Crisis.¹

China's debt is now between 150 and 200 per cent of GDP.

.....

I think that with the end of the virulent China resources boom that we've had over the last dozen years, there's a very big adjustment coming for Australia.

...

I think we've got some big adjustments coming and that's going to be quite difficult for us. China's growth being a couple of percentage points below the average of the few decades past does take the edge of things, but more important for Australia is the big structural change occurring in China. That's all written into the 12th five-year plan from 2011 to 2015, a deliberate policy of trying to increase the consumption share of total expenditure, trying to increase the wage share of total income, trying to increase expenditure on services, especially rural services. All of that policy-directed change is away from heavy intensity of use of metals and energy and Australia's strong export boom in the first decade of this century was about metals and energy.

In addition, China's going through a very interesting labour market adjustment. The total size of the labour force, people in work-age years has actually started to decline and when you

¹ <http://www.abc.net.au/lateline/content/2013/s3725364.htm>

get a combination of continued strong growth, not quite as strong as in early decades, but still very strong growth and a labour force that's no longer increasing, then you get very rapid increases in wages. That's happening; that's been happening for a number of years. It's now happening in both urban and rural areas. That's increasing the wage share of total incomes; it's reducing the investment share of total expenditure. So all of those things have the effect over time of reducing growth in demand for energy and metals. And in addition, you've had in the current five-year plan, but really coming powerfully into focus through 2012 and now into 2013, much higher priority for environmental amenity, both China's contribution to global environmental goals like reductions in growth in greenhouse gas emissions and also cleaning up the local environment.

...

... we've been through an extraordinary boom, a resources boom the like of which we've never seen in our history, given scale and longevity of the boom. That's been driven especially by high prices for iron ore, thermal coal, metallurgical coal and high investment in those industries and also in LNG. The outlook's not exactly the same for all of these commodities. It's probably most problematic for thermal coal, where the focus on environmental issues is combining with the structural factors that I've mentioned and a slightly diminished rate of growth to undermine **what were always unrealistic hopes in Australia of ever-increasing large growth in imports of thermal coal.**

...

we can look forward to - the current lower prices for iron ore, thermal coal and coking coal, all of which are much lower than a year or two ago, we can look forward to them going lower in the future. We can look forward to resources investment peaking and then going into decline. And overwhelmingly, the growth in business investment in Australia in recent years has been in the resources sector, so it's going to take quite some effort to gear up the rest of the economy to take up that slack. So, that's going to come out in much lower revenues. We've already seen that lower government revenues, state and federal, over the past couple of years. The pressure is going to intensify. It's going to be very difficult to maintain the level of demand that's necessary to maintain high employment, and to keep high employment going forward, to maintain the good record of the past decade, including through the financial crisis, so we're going to have to be pretty clever. There's going to have to be downward adjustment in Australia's average cost level, probably by a large amount."

If demand from China drops, coal prices will drop and so will revenues to both levels of government. This will affect India, where Adani plans to sell much of its thermal coal from the Galilee Basin, because global investment in major projects will also drop and Adani is already having difficulties raising sufficient funding for its mine/rail and port project. Yet it states in this section of the draft EIS its intent is:

"to meet coal demands on a global scale."

The Chinese government is also planning to create a carbon tax on industry and raise air quality standards largely because emissions from coal-fired power plants are causing widespread harm to human health in urban and industrial areas of China. This will push a move to more sources of lower emissions energy and renewable sources of energy.

In India 100,000 deaths last year were attributed to hazardous emissions from coal-fired power plants.² A World Health Organization study in 2011 of publicly available air quality data listed 27 cities in India among the top 100 cities with the worst air quality in the world. This is a considerable health cost to India not figured into cost/benefit analyses of EISs by coal companies. To address this in part, the Indian government is also introducing a ban on the import of poorer quality coal, and our information is that the thermal coal Adani plans to export through Abbot Point from the Galilee Basin will be below the quality standard the Indian government will accept. As most of the Adani coal will be for industrial development to customers who can afford it, it makes sense that the Indian government will only want coal that is of higher quality.

Environmental risks to all levels of government in Australia from more coal exports include the World Heritage Commission designating the “Reef in Danger” because of climate change impacts on the Reef and Australia from increased burning of fossil fuels. Adani plans up to 70mtpa of coal exports for at least 90 years. That is a considerable contribution to greenhouse gases. It also means that India will build more coal-fired power plants and this will slow down India’s switch to more renewable energy sources.

Increased coal shipping through the Reef also presents an increased risk of environmental damage and increased costs. The rise in shipping trips from Adani’s coal exports will be considerable from up to 70mtpa for ninety years. Aside from shipping strikes on Great Barrier Reef marine life, anchor damage, dredging damage and ships going aground or crowding out other types of shipping, there is pollution risk e.g. TBT used in paint for pest control in ships, and now banned in many countries is turning up in Gladstone sediment samples. One source is said to be from shipping from overseas countries where this toxic pollutant has not yet been banned.

² http://www.upi.com/Business_News/Energy-Resources/2013/03/14/Report-Indias-coal-power-a-killer/UPI-23591363284025/

At the local level there was a draft Environmental Management Plan for the protection of the Caley Valley Abbot Point wetlands, produced by ecological consultants for the previous Queensland Department of Infrastructure and Planning. It concluded that the biggest threat to the wetlands was encroachment and air and water pollution by port developments. The Adani proposal would contribute significantly to that as well as being the source of 3 million cubic metres of dredge spoil disposal into the marine waters of the Great Barrier Reef World Heritage Area. The costs of these environmental losses have also not been figured into a cost/benefit analysis of the proposal.

This draft EIS has grossly underestimated sea level rise from climate change impacts and not addressed the economic impacts of large cyclone events on delays in coal exports from Abbot Point. Such events are usually accompanied by severe flooding and most of Abbot Point is near sea level. We are informed that delays could be up to three months. The current downturn in coal export demand significantly impacted the Australian and Queensland economies through reduced royalties and other tax income. It is the nation's public interest not to become too dependent on fossil fuel exports, as a large cyclone could affect the entire coastline from Townsville to Gladstone.

We have yet to see an adequate independent cost/benefit analysis and economic risks analysis of further coal terminals' development at Abbot Point to clearly demonstrate a justified need for this type of development, especially as Adani already has 50mtpa of export capacity through its 99 year lease of the T1 coal terminal at Abbot Point, and it will take years to get coal exports amounts up to 70mtpa capacity from its proposed Carmichael Mine and rail operation in the Galilee Basin.

Competition from Cheaper Shale Gas

The U.S. shale gas boom has increased the threat to Australian coal mining by freeing up production and infrastructure in North America to be used for exports, warns the chairman of Anglo American Australia Graham Bradley.³

³ Andrew White. Us Shale Gas Boom Rocks Coal Market. Weekend Australian, p.1 Business Section, Mar 30-31st. 2013

“That will be at the expense of... if not current (coal) mines, then certainly at the expense of the next crop of new mines.” This will include Adani’s Carmichael Coal Mine for which the Project would provide export capacity.

The need for further expansion of coal terminals at Abbot Point is therefore questionable for the foreseeable future.

E1.2 The Project

E1.3 Alternatives

The Project at the proposed scale would be ecologically unsustainable.

It is obvious that there are significant environmental and indigenous cultural constraints to more coal export capacity at Dudgeon Point, and that the scale of development proposed is too large for the available space. Expansion seaward is also unacceptable because NQBP has concluded that dredge spoil dumping in the Great Barrier Reef Marine Park waters is the only option. Yet that option will impact significantly on commercial fisheries (\$40 million loss to the Bowen region) and other Outstanding Universal Values of the Great Barrier Reef World Heritage Area as outlined in submissions on the Public Environmental Report for the Dredge Spoil Dumping for this Project.

E1.4 Existing environment

E1.4.1.2 Economic and Social Matters

Impacts on Indigenous Traditional Burial Grounds are not addressed.

The proposed coal stockpiles for the project (T0 in red Fig.2) would only be separated from adjacent aboriginal traditional burial grounds of the Juru people by an access road to the stockpiles. These burial grounds are in the dunes on the east side of the stockpiles but graves have also been found farther in from the coast approximately in the T1 area. The burial grounds date back for centuries. They could be considered an Outstanding Universal Value of cultural heritage for the Great Barrier Reef.

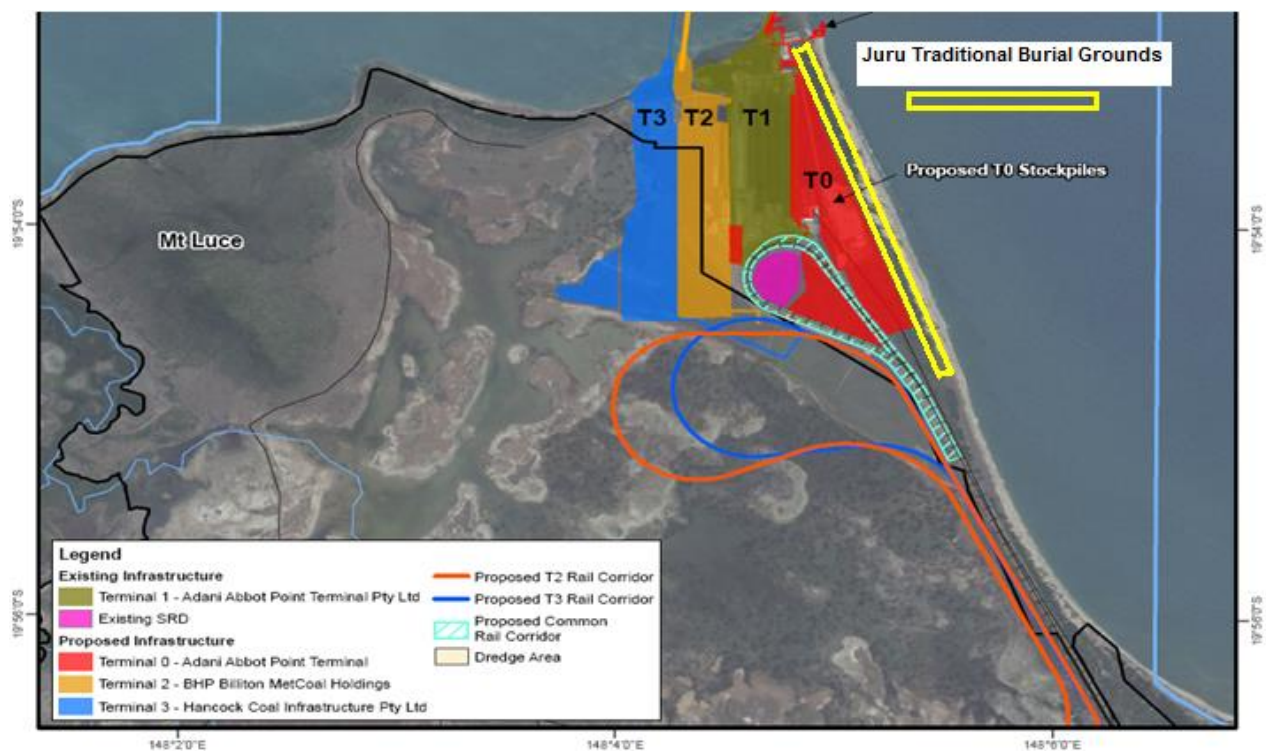
The Juru elders asked that there be at least a 500m buffer zone between the burial ground and the coal stockpiles. There is none.

Adani does not have the best reputation on consideration of indigenous rights in projects it has done in India. The Queensland and Australian government also have international legal obligations to ensure protection of indigenous cultural areas.⁴

United Nations Declaration on the rights of indigenous people

Recognizing that respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment.

Fig. 2 Location of proposed Adani T0 Coal Stockpiles in relation to the Juru traditional burial grounds



Under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* Section 3 burial sites are listed as cultural objects and must be protected from desecration and harm.⁵ As the burial grounds are a significant area Aboriginal area with significant objects near the coal stockpiles this section of the Act applies.

⁴ <http://www.fahcsia.gov.au/our-responsibilities/indigenous-australians/programs-services/recognition-respect/united-nations-declaration-on-the-rights-of-indigenous-peoples>

⁵ www.austlii.edu.au/au/legis/cth/consol_act/aatsihpa1984549/

"significant Aboriginal object" means an object (including [Aboriginal remains](#)) of particular significance to [Aboriginals](#) in accordance with [Aboriginal tradition](#)

2) For the purposes of this Act, an [area](#) or object shall be taken to be injured or desecrated if:

(a) in the **case of an area:**

(i) it is **used or treated in a manner inconsistent with [Aboriginal tradition](#)**;

(ii) by reason of anything done in, on **or near the area**, the use or **significance of the area in accordance with Aboriginal tradition is adversely affected**; or

(iii) passage through or over, or entry upon, the [area](#) by any person occurs in a manner inconsistent with Aboriginal tradition or

(b) in the **case of an object--it is used or treated in a manner inconsistent with Aboriginal tradition**;

references in this Act to **injury or desecration** shall be construed accordingly.

(3) For the purposes of this Act, an [area](#) or object shall be taken to be under threat of injury or desecration if it **is, or is likely to be, injured or desecrated**.

Potential Impacts on the Traditional Juru Burial grounds

The mere presence of the access road between the coal stockpiles and the burial grounds will allow much easier access to the burial grounds and increase the risk of trespass and damage.

Injury/desecration from the Adani coal stockpiles could constitute damage from toxic coal dust and burned diesel particulates pollution, affecting the integrity of the burial grounds e.g. reducing or stopping photosynthesis of protective vegetative cover over the burial grounds and making the area thus more susceptible to erosion, thus exposing the grave sites. Coal dust would come from transportation along the access road between the stockpiles and the burial grounds as well as the coal stockpiles.^{6,7,8}

⁶ <http://www.sciencedirect.com/science/article/pii/S0269749103003178> Naidoo, G; Chirkoot, D *Follow Environmental Pollution*, Volume 127 (3) Elsevier – Feb 1, 2004. The effects of coal dust on photosynthetic performance of the mangrove, *Avicennia marina* in Richards Bay, South Africa.

Site excavation, along with construction of access roads and support facilities, could reduce, fragment, or dramatically alter existing habitat in the disturbed portions of the project area.

During construction, ecological resources would be most affected by the disturbance of habitat in areas near the project site, support facilities, and access roads. Wildlife in surrounding habitats might also be affected if the activity (and associated noise) disturbs normal behaviours, such as feeding and reproduction.

Acid mine drainage affects water quality and would therefore affect aquatic and wildlife species dependent on that water supply and their habitats. Stormwater runoff from the coal stockpiles could reasonably be expected to be more acidic than the surroundings. As the project site is subject to cyclones (10 to 15 a decade) and flooding (every 2 to 3 years), berm barriers around the coal stockpiles can be expected to fail, as they have in the past at Abbot Point, with subsequent contaminated water releases into the surrounding wetlands

⁷ <http://www.sciencedirect.com/science/article/pii/026974919390179R> Andrew M. Farmer, *Environmental Pollution*, Volume 79, Issue 1, 1993, Pages 63–75. An increase in quarrying, open-cast mining and road traffic suggest that dust deposition onto vegetation may be increasing. This review describes the physical and chemical characters of a range of dust types. The effects of dust on crops, grasslands, heathlands, trees and woodlands, arctic bryophyte and lichen communities are identified. Dust may affect photosynthesis, respiration, transpiration and allow the penetration of phytotoxic gaseous pollutants. Visible injury symptoms may occur and generally there is decreased productivity. Most of the plant communities are affected by dust deposition so that community structure is altered. Epiphytic lichen and *Sphagnum* dominated communities are the most sensitive of those studied.

⁸ <http://teeic.anl.gov/er/coal/impact/construct/index>. Direct impacts to cultural resources could occur from construction and mining activities, and indirect impacts might be caused by soil erosion and increased accessibility to possible site locations. Potential impacts include:

- Degradation or destruction of near-surface cultural resources on- and off-site resulting from topographic or hydrological pattern changes, or from soil movement (removal, erosion, sedimentation).
- Unauthorized removal of artefacts or vandalism to the site could occur as a result of increases in human access to previously inaccessible areas, if significant cultural resources are present; and
- Visual impacts to cultural resources resulting from vegetation clearing, large excavations, increases in dust, and the presence of large-scale equipment, machinery, and vehicles, if the resources have an associated landscape component that contributes to their significance, such as a sacred landscape or historic trail

and potentially into the burial grounds and remaining regional ecosystems. A berm built to withstand a 1/500 year event is not much use if it fails in a high risk environment.

International Obligations

Despite stating that it is not subject to any legal proceedings regarding environmental law in Australia, this is not yet likely as this is the first coal terminal they are proposing in Australia. What is more relevant to **section 1.9 Adani's Environmental Record** is their port record in India and impacts on environment and local communities. Adani does not have the best reputation on consideration of indigenous rights in projects it has done in India.⁹ The Queensland and Australian government also have international legal obligations to ensure protection of significant indigenous cultural areas.¹⁰

United Nations Declaration on the rights of indigenous people

Recognizing that respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment.

Applicable Court Case

The Mirrar People¹¹

2.10 The Mirrar people are the traditional owners of land in the Kakadu region of the Northern Territory, encompassing the Ranger and Jabiluka Mineral leases, the mining town of Jabiru and parts of Kakadu National Park. The Mirrar speak approximately three Aboriginal languages. Cultural and religious beliefs require protection of sites of significance and sacred sites in Mirrar country. The language, culture and religious practices of the Mirrar are typical of those protected by article 27.

2.11 Places regarded as sacred by the Mirrar are sites where ancestral creation beings journeyed and rested. **Cultural and spiritual practices of the Mirrar require that these sites and Mirrar burial sites are protected.**

7 These practices fall within the types of protections of privacy and family offered by articles 17 and 23 , as they are understood in *Hopu's* case.

...

The Committee therefore concludes that the construction of a hotel complex on the authors' ancestral burial grounds did interfere with their right to family and privacy.

⁹Kanchi Kohli et al. Ripping off the Mundra Coast. A Case Study. See Appenix II.

¹⁰<http://www.fahcsia.gov.au/our-responsibilities/indigenous-australians/programs-services/recognition-respect/united-nations-declaration-on-the-rights-of-indigenous-peoples>

¹¹http://humanrights.gov.au/pdf/social_justice/submissions_un_hr_committee/2_heritage.pdf

The State party has not shown that this interference was reasonable in the circumstances, and nothing in the information before the Committee shows that the State party duly took into account the importance of the burial grounds for the authors, when it decided to lease the site for the building of a hotel complex. The Committee concludes that there has been an arbitrary interference with the authors' right to family and privacy, in violation of articles 17, paragraph 1, and 23, paragraph 1.

2.26 Aboriginal culture and religious beliefs link ancestry and lineage of descent to particular geographical sites, the structures of culture and religious belief extend to the meaning of family and privacy recognised in the *Hopu* case.

E1.4.2 Listed Threatened Species and Communities and Threatened Species

What the draft EIS misses is that the CIA report recognised that the Caley Valley Abbot Point wetland aggregation qualifies for RAMSAR status of international significance. The wetlands are so significant because they provide habitats for 40,000+ birds, over 200 bird species, and threatened and migratory birds. So anything ecologically connected to those wetlands such as inflowing streams and nearby regional ecosystems need to be protected as well to conserve the significant ecological values of those wetlands. For example the Black Swan nests in Saltwater Creek which brings in freshwater summer flows into the wetlands. The white-bellied sea eagle nests in the regional ecosystems that will be affected by clearing for the T0 coal stockpiles. As the sea eagle is a predator of bird species in the wetlands, if its habitat is removed, that affects the ecology of the wetlands. The draft EIS does not address the impacts of such losses in ecological connectivity.

The other indirect impact of T0 on MNES so close to the wetlands is water and air pollution from coal dust, PAHs and VOCs. Over a proposed terminal life of 90 years that pollution will have significant cumulative impacts on wetland and wildlife health yet this is not addressed in the draft EIS in any depth.

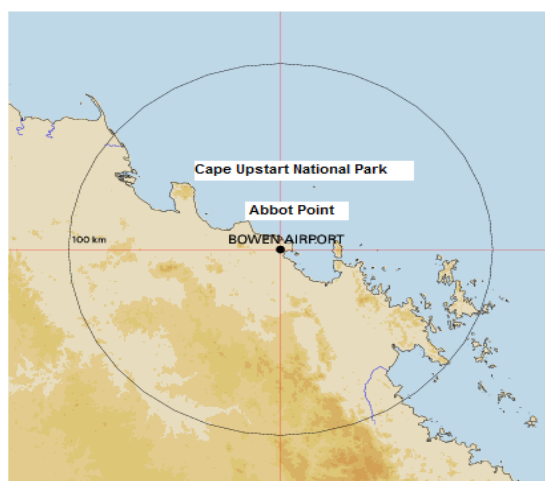
There will be failure at times of berms containing wastewaters because of floods or cyclones. Fine particulates coal dust pollution will have cumulative health impacts because it cannot be expelled from the lungs. Heavy metals will leach into the groundwater and move through the food chain. Polycyclic Aromatic Hydrocarbons (PAHs) from incompletely burned industrial processes are persistent in the environment and are associated with cancer and other health problems. Volatile Organic Compounds (VOCs) combine with oxygen in the air to form ozone which can damage lungs and vegetation.

Dr Kathy Burns at James Cook University showed that coal particulates in marine waters can travel 40 km to the outer Great Barrier Reef within 100 days from coastal coal ports at Abbot and Hay Point.¹² The direction of flow was to the south so other areas of nationally significant wetlands such as at Edgumbe Bay to the south east are also likely to be impacted. Her rebuttal to the Cumulative Impacts Assessment on coal dust impacts is in Appendix III.

What impacts will they have on marine life? For example they contain heavy metals such as arsenic which can be taken up by seagrasses and ingested by marine animals such dugongs, snub-nosed dolphins and sea turtles both of which are EPBC-listed species. Turtles nest along Abbot Point Beach just east of the sand dunes containing the Juru burial grounds which themselves would adjoin the T0 coal stock piles. So the turtles will ingest pollution from the stock piles reaching near shore marine waters via consumption of the local sea grasses. What is the heavy metals content of marine life around Abbot Point?

Depending on winds fine coal dust can travel hundreds to thousands of kilometres. The Bowen region is a significant centre for growing horticultural crops, so what will be the economic and environmental impacts of air pollution from T0 over 90 years? (Fig.4)

Fig. 4 Prevailing wind directions and influence of coastal mountains and hills in the Bowen Abbot Point region.



Topography along the Bowen coast.

The prevailing winds in the summer are from east to northeast and from the east to the southeast in winter.

These winds will also be deflected northwest by coastal mountains and hills to agricultural areas as well as Cape Upstart National Park.

¹² Kathryn Burns and Diane Brinkman. Organic biomarkers to describe the major carbon inputs and cycling of organic matter in the central Great Barrier Reef Region. Australian Institute of Marine Science. Estuarine, Coastal and Shelf Science, 93, pp 132-141, 20 April 2011.

The Caley Wetlands would be impacted by easterly and north easterly winds crossing the T0 coal stockpiles, rail loop and loading facilities mostly in summer when wind speeds are highest. On 24th Jan 2013 a day long storm had an average wind speed from the north east of 44 km/hr in the morning and from the north north east of 54 km/hr in the afternoon, with rainfall of 130.8 mm.

SECTION 4: Cumulative and Consequential Impacts

(Sections 5.10.6 Cumulative Impacts and 5.10.7 Consequential Impacts of the SEWPac Guidelines for this draft EIS).

4.1 The Environment in the Project area.

It is the entire Abbot Point – Caley Valley Wetland Aggregation that is listed as a Wetland of National Importance in SEWPac's national Directory of Important Wetlands. That also includes a need for protection of the surround areas that are ecologically connected to it (Fig.5).

Water is already fully allocated for current port uses so what will be the cumulative impacts of getting water for further port and Abbot Point State Development Area development from outside the Port area? This has not been addressed in this draft EIS as far as we have seen.

Fig.5 Abbot Point – Caley (Kaili) Valley Wetlands¹³



Abbot Point - Caley Valley - QLD001¹⁴

Level of importance: National - Directory

Location: The site extends about 18 kilometres from Mt Curlewis in the west to Euri Creek in the east and about 6 kilometres from Bald Hill in the north to Caley Valley homestead in the south. Its centre is at 19 degrees 55' 22" S, 148 degrees 02' 25" E and is about 21 kilometres north northwest of Bowen.

Biogeographic region: Brigalow Belt North.

¹³ <http://www.dlg.qld.gov.au/resources/plan/cg/abbot/baseline-profile-for-the-kail-valley-wetlands.pdf>

¹⁴ <http://www.environment.gov.au/cgi-bin/wetlands/report.pl>

Shire: Bowen.

Area: 5150 ha.

Elevation: Less than 20m AHD. Most of the area is less than 5m AHD.

Other listed wetlands in same aggregation: None.

Wetland type: A1, A5, A6, C1, A9, A10, A11, A8

Criteria for inclusion: 1, 2, 3, 5,

Criteria for Inclusion:

A wetland may be considered nationally important if it meets at least one of the following criteria:

- 1. It is a good example of a wetland type occurring within a biogeographic region in Australia.**
- 2. It is a wetland which plays an important ecological or hydrological role in the natural functioning of a major wetland system/complex.**
- 3. It is a wetland which is important as the habitat for animal taxa at a vulnerable stage in their life cycles, or provides a refuge when adverse conditions such as drought prevail.**
4. The wetland supports 1% or more of the national populations of any native plant or animal taxa.
- 5. The wetland supports native plant or animal taxa or communities which are considered endangered or vulnerable at the national level.**
6. The wetland is of outstanding historical or cultural significance.

This wetland aggregation meets four of the six criteria listed above in bold text.

Wetland Types: A1, A5, A6, C1, A9, A10, A11, A8

A. Marine and coastal zone wetlands

1. Marine waters - permanent shallow waters less than six metres deep at low tide; includes sea bays, straits.
5. Sand, shingle or pebble beaches; includes sand bars, spits, sandy islets.
6. Estuarine waters; permanent waters of estuaries and estuarine systems of deltas.
8. Intertidal marshes; includes salt-marshes, salt meadows, saltings, raised salt marshes, tidal brackish and freshwater marshes.

9. Intertidal forested wetlands; includes mangrove swamps, nipa swamps, tidal freshwater swamp forests.
10. Brackish to saline lagoons and marshes with one or more relatively narrow connections with the sea.
11. Freshwater lagoons and marshes in the coastal zone.

C. Human-made wetlands

1. Water storage areas; reservoirs, barrages, hydro-electric dams, impoundments (generally >8 ha).

Environmental Values¹⁵

On the basis of a review of existing information and the DIWA nomination criteria that the Wetlands currently meets, the following Environmental Values (EVs) are considered to be supported by the portion of the Wetlands within the APSDA:

The Wetlands supports the following EVs:

- EV1. Diverse estuarine, brackish and freshwater wetland types that are representative of a major coastal wetland aggregation and in many areas show a high degree of connectivity
- EV2. Important foraging and roost habitat for resident and migratory shorebird species, including the threatened Little Tern
- EV3. Important dry season refugia for aquatic fauna, resident shorebirds and terrestrial fauna
- EV4. Important nesting areas for shorebirds, most notably Black Swan
- EV5. Important habitat for fish and other aquatic species, including species of fisheries significance

The Wetlands project area and Wetlands together support the following additional EVs:

- EV6. The Wetlands project area and the Wetlands is part of a significant fauna movement corridor for aquatic and terrestrial species, including the threatened species.

The Cumulative Impacts Assessment of these wetlands concluded that they met enough criteria to qualify as internationally significant RAMSAR status. The wetlands support at least 211 native and migratory species and 40,000+ birds. The largest population of the Australian Painted Snipe, listed as vulnerable under state, national and international levels, is recorded in these wetlands.

¹⁵ <http://www.dlg.qld.gov.au/resources/plan/cg/abbot/baseline-profile-for-the-kail-valley-wetlands.pdf>

Fisheries Values¹⁶

A large swamp environment exists to the south of Abbot Point. The salinity of this swamp area varies seasonally depending on the amount of freshwater input to the system. During the wet season the areas become brackish or mostly fresh. In the dry season, however, an absence of freshwater input and the occurrence of king tides create a saltpan environment. No freshwater wetlands exist within the Bowen Region south of this large Abbot Point wetland.

These freshwater wetland environments may contribute to the productivity of fisheries habitats in this Region (particularly as juvenile habitat for Barramundi) and are an important environment to consider for increased protection under Fisheries legislation.

Wetland Great Barrier Reef Connections

The health of these wetlands contributes to the ecological health of the offshore area of the Great Barrier Reef World Heritage Area as well, so it needs to be well protected from adverse impacts. Wastewater ponds from the Abbot Point projects can and have overflowed in the past, either from flooding or breaches in holding berm walls, so they should be considered as a part of the wetland complex.

Section 4.1 The Environment at the Project Area

- The Project is in proximity to the Caley Valley Wetland (a largely ephemeral wetland system) which is important for a number of bird species (including listed threatened and migratory species) but does not impinge on the area of the Wetland;

It cannot be argued that the Project will not impact the Abbot Point- Caley (Kaili) Valley wetlands if it does not impinge upon them, as hazardous fine coal dust particulates will blow from this Project and others (existing and planned) into this wetland aggregation. Fine coal dust monitoring is only advisory, not mandated, in Australia. The World Health Organisation and the Australian National Pollutant Inventory both report that no safe level of exposure has yet been found for human health.

No standards exist at all for wildlife health so if the Precautionary Principle is followed no fine particulates dust should be blowing into these wetlands. Yet all that is required is that dust particulates pollution be “mitigated”. This is not ecologically sustainable given the longevity of the Project and hazardous nature of the pollutants (in coal dust and partially burned diesel particulates), and the fact that other projects at Abbot Point will produce the same pollution so that identifying individual polluters will not be possible.

¹⁶ http://era.deedi.qld.gov.au/1667/1/CWR_IBR_CapeU2GL_bowen%5B1%5D-sec.pdf

Any contaminated water leakage from the Project site and other projects (current or future) will also reach these wetlands. Both air and water contaminated emissions will have affect, especially where contaminants such as heavy metals which do not biodegrade, move up the wildlife food chain.

This is not addressed in the draft EIS nor the CIA study, yet will require addressing as the Project life will be 90 years and fine dust particulates accumulate in the lungs.

Native vegetation clearing.

- The Project area supports a variety of vegetation types in different conditions including:
 - Endangered Semi-evergreen Vine Thicket
 - Remnant woodland, and coastal vegetation
 - Evidence of areas previously used for farming

“Both the Project and broader area includes cleared areas that support existing industrial uses. The current state of the environmental values reflects its proximity to some ecologically important areas, as well as adjacent uses to an existing industrial port. Largely the areas within the Project that will be modified are already disturbed because of the existing port and industrial facilities.”

There have never been areas previously used for farming in the Project area. There was a coastal grassland system now gone which gave the appearance of a cleared area on old aerial photos, but locals assure us there was never farming there.

Prior to the existence of the Port the EPBC-listed Endangered Semi-evergreen Vine Thicket Ecological Community and coastal woodlands were in good condition at Abbot Point. According to the EPBC website SPRAT:

Threats affecting SEVT EC include:

- clearing;
- fire;
- weeds;
- grazing;
- vertebrate pests; and
- coastal development.

Overall recovery objective

The overall objective of this plan is to maintain and conserve the environmental values of the semi-evergreen vine thicket ecological community over the long term, by minimising the loss of both remnant and regrowth SEVT and improving their condition and management.

In addition, natural disturbances, such as storms and cyclones, can impact the ecological community (especially if it is disturbed or fragmented) and are likely to increase in frequency and intensity with climate change.

The images in Fig. 6 below give some idea of how much has been cleared. The rest contains habitat good enough to support at least one white-bellied sea eagle nest. Lose that and there will be downstream impacts on the Caley Wetlands ecology as this species preys on these wetland birds.

There is not much difference in vegetation cover between the latest Google Earth satellite image (Fig 6(a)) and the aerial photo taken in 1982 Fig 6 (b).

Rather than clear the remaining vegetation it should be conserved to assist in the conservation of the Caley Wetlands, protection of the Great Barrier Reef waters, and protection of turtle nesting habitat along Abbot Beach to the east where locals report a decline in the numbers of nesting turtles along that beach.

Fig. 6 (a) Remaining coastal vegetation that would be cleared if T0 is approved – Google Earth image copied April 2013

Fig 6(b) 1982 Aerial image of the Project T0 area showing remaining vegetation.





Other Impacts

There are other impacts not addressed such as road kills of bird species which nest in Saltwater Creek to the east and walk their young when old enough across the Abbot Point access road and rail corridor into the wetlands e.g. the black swan which has its northernmost nesting range in Australia in these wetlands. We have at least one reliable report of a swan and her young killed on the access road in the last few years.

Since Xstrata's on-site land manager has been removed feral pig control in the wetlands consists of aerial kills which are ineffective in this type of country. There must be properly funded, experienced land management of these wetlands. This can easily be funded from a modest levy on each tonne of coal or other freight exported/imported through Abbot Point to support an adequate number of rangers with power to enforce protection. This was our request in a submission on the draft Environment Management Plan for these wetlands produced by the former Queensland government two years ago.

Since then there has been no progress on a suitable EMP. The wetland condition has visibly deteriorated since the land manager was removed.

New Project

Table 4-1 which covers new projects in Abbot Point needs to be updated. Waratah Coal has applied to the Queensland government for a Stand Alone Jetty project to be approved as an 'infrastructure facility of significance' another coal terminal with a capacity of 240 Mtpa at the western end of the Caley Valley wetlands.

“ Waratah Coal plans to provide an additional 240 MTPA of coal export capacity at “Palmer's Wharf” annexed to the current NQBP T4-T9 Project”

This appears to be eight coal terminals T4-T9 (attached to the Stand Alone Jetty) and an adjoining resurrected Multi-Purpose Cargo Facility, all to the west of current coal port infrastructure (Fig.5). There is a connecting transport corridor across the western end of the Caley Wetlands to coal stockpiles at the south western edge of the wetlands. The documentation seems outdated, about a year old, so the role of the MCF is not clear, as it was rejected by the current Queensland government this year.

In addition to the Waratah Coal proposal in Dec 2012 the Queensland government called for Registrations of Interest for a rock wall to which terminals with a total capacity of 60 Mtpa could be attached. It was in a location very similar to Waratah Coal's proposal.

In light of these changes the Cumulative Impacts section of the Adani T0 draft EIS needs to be re-visited and updated.

Fig. 7 Waratah Coal Infrastructure of Significance Application for an additional 240 Mtpa Stand Alone Jetty at Abbot Point.¹⁷



Application for Declaration of
Infrastructure Facility of Significance



¹⁷ <http://www.waratahcoal.com/port-of-abbot-point.htm>

Section 4.4 Ecosystem Resilience

As it is anticipated there will be no impacts to MNES and ecosystem function, combined with the avoidance and mitigation measures Adani is proposing to undertake (refer to Table 5-34), there are currently no set restoration activities or timings for such activities. The EMP will be an adaptive process which will continually review impacts and guide any necessary mitigation measures or corrective actions. If restoration is required in the future, Adani will undertake activities as necessary.

There obviously will be impacts to MNES. The wetlands and offshore World Heritage areas are ecologically rich and diverse. The draft Management Plan for the wetlands listed potential impacts. Coal is already in the offshore marine waters and in the ground and surface waters. PM2.5 and PM10, VOCs and other environmental monitoring will be required to quantify the location and concentrations of harmful air and water pollution from the Project and other coal terminals at Abbot Point. Hydro-ecology will be changed and noise and light pollution will degrade the local environment.

4.5 Climate Change

The current developments (proposed and approved) for port expansion will facilitate the export of coal, the combustion of which is recognised as a significant contributor to greenhouse gases and the global effects of climate change. However, the need to consider the potential impacts of greenhouse gas emissions on MNES arising from the mining, transport and use of coal under the EPBC Act has been tested by the Federal Court, in:

- Wildlife Preservation Society of Queensland Proserpine/Whitsunday Branch Inc v Minister for the Environment and Heritage and Ors [2006] FCA 736; and
- Anvil Hill Project Watch Association Inc v Minister for the Environment and Water Resources [2008] FCAFC 3 (14 February 2008).

In accordance with the outcome of both cases this report focuses on an assessment of how port operations may interact with climate change, how the key MNES may be affected, and how Adani may contribute to mitigating these interactions (if they are negative).

Adani appears to be saying that they do not need to address climate change impacts from the burning of their coal. In the two court cases cited the owner of the coal was not the same entity that burned the coal, and at the time of those cases there was less public acceptance and evidence that anthropogenic sources of carbon dioxide emissions were a contributor to climate change impacts on the Great Barrier Reef.

Adani will both own and burn the coal so downstream impacts are relevant because carbon dioxide and other GHG emissions acknowledge no border

and will contribute to climate change impacts on MNES in the Great Barrier Reef waters. The amount of coal that Adani plans to move through T0 is 70 Mtpa over 90 years i.e. up to 6.3 billion tonnes. That is approximately 17 billion tonnes of CO2 equivalent.

Scientists tell us that now we need to avoid making additional anthropogenic contributions to rising world temperatures because each additional degree rise moves the human race and many fauna and flora into temperature ranges to which they cannot adapt.

It is quite legitimate to expect Adani as a global company having global impacts to give details on its GHG emissions from burning its Australian coal in India, as well as its emissions in Australia and how they will be addressed.

4.6 Matters to be considered

4.6.1.1 Existing, Planned or Potential Developments

Adani mentions the Northern Economic Triangle and the need for port infrastructure and the Abbot Point State Development Area. Neither of these developments dealt with future potential impacts of large scale industrial development on terrestrial ecosystems and the Outstanding Universal Values of the Great Barrier Reef, other than to mention protection of areas of high ecological significance.

As a result we now face the possibility that the U.N. World Heritage Organisation may declare the Great Barrier Reef to be a World Heritage Site “in danger”, and is asking that no more port expansion occurs outside of current port boundaries.

There is a limit to how many coal ships can travel through the Reef and to how many coal terminals can be built within current port boundaries, and how much dredge spoil can be dredged and dumped in Reef waters without adverse impacts i.e. trading off the fishing and tourism industry for an industry where 80% of the profits do not remain in Australia and jobs per tonne of coal exported drop as automation continues. That is not sustainable. Nobody is quantifying that limit. Until that happens no more coal terminals should proceed along the Reef coast.

4.6.1.2 Intensification of Industry

Near shore waters under the control of the Queensland government have a C rating in the GBRMPA federal Strategic Reef Plan rating for their report to the World Heritage Committee.

This indicates that heavy industry on the coast around and partially in nationally listed wetlands and the health of the Great Barrier Reef are mutually exclusive. Development at Gladstone Harbour has shown that. Also read MCG comments in E1.1 Background and Need about the economic risks Australia is taking if it continues to pursue that strategy of coastal industrial development at the expense of the coastal environment and the Reef.

Abbot Point Coal terminal T1

Owing to the similarities between the Project and the existing T1 operation it is possible to use the impacts resulting from the T1 development as an analogue to predict impacts of the Project, T2 and T3 developments. For example, it is important to note that offshore infrastructure associated with the T1 development had no noticeable adverse impacts on coastal processes at Abbot Point (WBM 2006a).

It is speculative and misleading to state that the T1 development had no noticeable adverse impacts on coastal processes at Abbot Point if monitoring to detect impacts did not occur. Our information from locals is that fish resources, and turtle nesting numbers have declined considerably since the port was built.

The northern edges of the proposed dredged channels for T0, T2 and T3 will be subject to high erosion which will increase turbidity and affect environmental values in port waters.

4.6.3 GBR

Most of the sediment entering the GBR comes from catchments in the major agricultural areas, including the Burdekin, Herbert, and Fitzroy Rivers, and particularly during floods (GBRMPA 2009). Of note is the recent presentation of data that identified tropical cyclones, coral predation by crown-of-thorns starfish, and coral bleaching as accounting for significant losses in the respective estimated losses is coral cover for the most recent monitoring period (De'ath *et al.* 2012).

Coal ports are a significant source of sediment and coal particle pollution to the Great Barrier Reef.

Dr. Kathy Burns in her comments on the CIA reports stated that 25 million tonnes of dredge spoil was dumped from Abbot Point port lands in May 2012 **This was equivalent to five times the total annual input of sediments from all the rivers entering the GBR Lagoon!**

The plumes from that dumping smother benthic ecosystems and would reach inshore reefs.

Sediments dredged from ports are full of the materials loaded, and all the chemicals including oils used in the port. Dumping provides ever more fine sediment material to be resuspended by tides and wind, and therefore **increases the area of turbid coastal waters.** Then there is the expected increase in ship transits through the Reef waters from 14,000 / yr now to 80,000 predicted. Much of that will be increased coal shipping if demand continues and more coal mines are built. This increases by over 5X the probability of a ship grounding on a reef. There have been spectacular incidents in recent years of ship groundings!

4.6.4 Potential Cumulative and Consequential Impacts

In this section Adani states that many impacts will be temporary. But because more coal terminals are being planned the impacts will actually be chronic and cumulative. This means less food such as sea grasses for dugongs and turtles.

Global climate change exacerbated by coal burning will continue to cause the reduction of suitable marine habitats for many marine flora and fauna.

The Port of Abbot Point does and will likely continue to contribute to the deposition of coal dust to the marine environment (ELA and OpenLines 2012). There may be turbidity (shading) effects on benthic organisms and communities arising from increased turbidity, however the impact is projected to be low to negligible as the concentration of total suspended solids (TSS) is low relative to background turbidity levels. Trace metal concentrations in the coal dust will not accumulate in living organisms as they are not bioavailable (ELA and OpenLines 2012).

We refer you to the research work of Dr Kathy Burns on coal dust in the marine environment and its impacts on marine organisms, and the article on the heavy metal selenium and its impacts in the environment "*What You Need to Know about Selenium*" by Terry Young et al from the University of Wollongong, 2011 (online). Small coal dust particulates can be ingested and heavy metals released in the body through digestion processes according to the selenium article.

<http://www.boisestatepublicradio.org/post/closer-look-coal-dust-northwest-part-two>

A Closer Look At Coal Dust In The Northwest: Part Two

The U.S. Environmental Protection Agency says that if rain falls on piles of coal it can flush out heavy metals – like arsenic and lead.

Elevated levels of arsenic have been found in the soil surrounding a large coal export terminal in Virginia.¹⁸

The fact that mussels and oysters filter feed means that small particles of coal will be taken up by these organisms," says Gary Shigenaka. He's a marine biologist with the National Oceanic and Atmospheric Administration. He has over 20 years of experience working emergency response on events like the Exxon Valdez oil spill in Alaska and Deepwater Horizon in the Gulf.

We asked him what happens to marine animals if they ingest coal dust. The answer? Scientists aren't sure.

John Incardona is a biologist and toxicologist with the National Oceanic and Atmospheric Administration. He's an expert on the impact of fossil fuels on fish.

"You can't just say, blanket statement "coal's not bioavailable" you have to look at specific coal and do the study and answer the question.," he says.

More research needs to be done on just how much heavy metals may escape from coal dust. One thing to consider, however: the coal coming from Wyoming and Montana is softer than the coal mined on the Eastern side of the country. That means it breaks down into dust more easily. And that might make it more readily available to animals – especially the filter feeders at the bottom of the food chain.

But Incardona says heavy metals might not be the most concerning contaminant in coal dust.

His research focuses on what are called Polycyclic Aromatic Hydrocarbons or PAHs. You'll find these compounds in fossil fuels, including coal. And they're a problem for fish.

"It's a very simple matter if it leaves the PAH source and goes into the water and gets taken up by the fish it will be toxic," Incardona says. "It doesn't matter if it's coming from coal dust or fuel."

¹⁸ **Lambert's Point Docks, which is the largest marine coal shipping terminal in the Northern Hemisphere** <http://link.springer.com/article/10.1007%2Fs11270-007-9442-9>

PAHs have been connected with liver disease and lower reproductive rates in English Sole in Puget Sound. Incardona's research has shown that when salmon and zebrafish embryos are exposed to PAHs in the lab, their hearts don't develop normally. That can affect their growth as well as their ability to survive and reproduce.

Scientists don't know exactly how much heavy metals and PAHs escape from coal – especially when it's in dust form as opposed to solid chunks. But Incardona says it wouldn't be too hard to find out.

"There is a lot of simple science that can be done to answer these basic questions but even with oil, almost all things relating with fossil fuel, seems like nobody really wants to get those answers," says Incardona.

Trains have been carrying coal around the country for decades. But there is little research that looks specifically at the environmental impacts of chronic exposure to coal dust.

So far the Environmental Protection Agency, The Washington Department of Ecology and The Oregon Department of Environmental Quality have raised concerns about coal dust.

Some say coal dust isn't as much of a concern as the larger environmental impacts of coal exports – like global CO2 emissions, air pollution from Asia or diesel exhaust from locomotives. But as communities in the Northwest consider coal export terminals, and the significant increase in coal train traffic that those terminals will bring, some experts believe coal dust merits a closer look

Measurements in the water column are no guide to the bioavailability of coal dust and heavy metals in coal dust. The coal particulates sink to the sea bed and are taken up by benthic organisms and from there can accumulate up the food chain.

...

p.4-18

Draft EIS states that the Australian painted Snipe is EPBC- listed as Vulnerable; Marine; and Migratory (CAMBA).

Squatter pigeon (southern species) is EPBC-listed as Vulnerable. Nearly every mine or port project lists this species as being within the development site. A study of the cumulative impacts of such widespread development on this

species in central Queensland has yet to be undertaken to quantify the regional impacts.

In considering the significance of threatened, migratory and other species at Abbot Point it is important to recognize that the value of their wetland habitat is rated as internationally and nationally significant. As the Caley Wetlands are ecologically connected to the GBR they must remain healthy to protect the health of this section of the GBR. As all of the GBR system is rated as of Outstanding Universal Value by the World Heritage Committee, then the Abbot Point - Caley Valley Wetlands as a sub-system of the GBR system can be considered as of OUV. It must be protected and managed to maintain those values.

Adani misses that point.

4.6.4.1 Resilience

4.6.4.1 Resilience

It is considered highly unlikely that the ecological integrity of the GBRWHA will be affected by construction or operational activities at Abbot Point, due to the scale of the GBR and the distance between the port and the GBR (ELA and OpenLines 2012).

Again Adani misses the point. The GBR coastal catchments are ecologically connected to the GBR and are a part of the GRB ecological system. They must be protected to ensure the health and resilience of the GBR.

4.6.4.2 Aesthetics and Tourism

A place of international significance for its bird life, as Caley Valley has significant bird-observer and eco-tourism values. These values are not apparent to Adani.

The port will not exist over the long-term and consideration has to be given to the landscape and environmental values that will remain after the port is gone. That landscape, because of its importance for the health of the Great Barrier Reef in the region, (including the operation of local healthy fisheries and maintenance of local tourism values) must retain its ecological health and productivity. That is the challenge for NQBP and the companies that operate within the port.

It may be that the health of the GBR and the operation of coastal heavy industries are not compatible next to significant wetlands and more

sustainable ways of maintaining export industries through the Reef will have to be found.

If the recommended baseline studies had been done before establishing the Abbot Point State Development Area, the lack of incompatibility between environmental and industrial values would have been recognised and dealt with.

The Adani Project is not directly next to the Caley Valley Wetlands but it provides habitat to species ecologically connected to the health of these wetlands.

There will be impacts on turtle nesting grounds along the length of the beach next to the Project.

There will be no buffers between the Aboriginal traditional burial grounds of the Juru people and the coal stockpiles of the Project.

Significant vegetation will be cleared for the Project.

Dumping of dredge spoil for this Project offshore will be just 4km from nares Rock which has significant marine environmental values. That is another indirect impact.

Shipping will increase as a result of this project and will have impacts on the GBR.

4.6.4.3 Resilience

The potential cumulative or consequential impact of the Project on aesthetics and tourism in this part of the GBRWHA are considered to be negligible, given its existing function as an industrial port, the distance of the port from casual observers or tourist hot spots and travel routes, and existing management controls on ship movements.

The resilience of tourism on the GBR will have more to do with global and regional economics, and the impact of climate change on the integrity of the reef.

It is encouraging to see Adani is aware that climate change will impact the Reef. But they seem to not acknowledge the role they will play in increasing GHG emissions and climate change impacts on the Reef.

Table 4.3

Appears only to deal with climate change impacts from fire control management options. Rising temperatures, more intense rainfall and cyclone

and flooding events and their impacts on significant flora and fauna and the Caley Valley Wetlands are not addressed.

4.6.6.2 Animal Species

It is important to note that the 2010 Action Plan for Australian Birds (Garnett *et al.* 2011) has revised the status of the Squatter Pigeon (*Geophaps scripta scripta*). In the 2000 Action Plan the species was considered as near threatened (although it was noted that the decline did not appear to be continuing). The 2010 Action Plan has now removed the Squatter Pigeon from its near threatened listing status as there have been no further declines and the species persists at numerous sites across its broad distribution.

The Squatter pigeon (southern species) is EPBC-listed as Vulnerable on the SEWPac SPRAT database. It is present at Abbot Point. Nearly every mine or port project lists this species as being within the development site. A study of the cumulative impacts of such widespread development on this species in central Queensland has yet to be undertaken to quantify the regional scale impacts.

Our collected records for EPBC and NCA-listed bird species at Abbot Point are shown in Appendix IV Table 1 and a summary of the number of species likely to be in the Project area is listed below. The draft EIS does not address each of these species and how they will be affected.

Species likely to be in the Project T0 area are shown in green text in the Appendix.

30- Marine; 8 - Migratory;

9 -Migratory (International Agreements): Fork-tailed swift; White-throated needletail; Black-faced monarch; satin flycatcher; Rainbow bee-eater; Common tern; Pacific golden plover; White-bellied sea eagle; Osprey.

2- Vulnerable: Squatter pigeon (Vulnerable - NCA& EPBC); Beach stone-curlew –Vulnerable (NCA);

3 - Near Threatened (NT) - Grey goshawk; Black-necked stork; Radjah shelduck

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2nd January, 2014

Objection to issuing a permit to NQBP to dump dredge spoil from dredging for Coal Terminals T0, T2 and T3 in the Great Barrier Reef Marine Park marine waters outside of Abbot Point boundaries.

Mackay Conservation Group is a regional environmental conservation NGO with 160 members covering land and offshore waters of the Great Barrier Reef from Bowen to Broadsound and west to Clermont (and often further west as community demand dictates).

Greg Hunt, Minister of the Australian Department of the Environment in Dec 2014 set 92 conditions to be met for this dredging project.

The original dredge spoil disposal site some 20 km northeast of the dredging site is preferred by North Queensland Bulk Ports. This is the one 8km southwest of Holbourne National Park and 4km from Nares Rock fishing grounds. Commercial fishermen from Bowen to Mackay we have talked to state that turbidity will definitely increase if dumping in the proposed area is permitted and will have negative impacts on their fishing businesses. There are also some recreational fishing tourism business ventures that favour Nares Rock as a fishing ground. As you know migratory turtles and birds nest on Holbourne Island and would do so mainly because of the rich source of food in the surrounding marine waters.

The Minister requires other alternative sites NQBP has identified to also be modelled for sediment plume dispersal and the final choice to be the one with the least environmental impacts.

Two management plans, one for dredge spoil and the other for ecological impacts, and a sediment offsets plan have to be in place for review by the Minister before final approval is considered.

Of the 3 million cubic metres (i.e. ~5.4 million tonnes) of dredge spoil, only 1.3 million cubic metres (2.34 million tonnes) can be dredged each year. This has to be offset by 150% i.e. a total of 8.1 million tonnes or 2.7 million tonnes a year over three years.

Offsets have to be reasonable.¹ That includes being able to be executed in a reasonable time frame and to be affordable.

The dredge spoil offset will be unreasonable because judging by past experiences of programs to reduce sediment runoff to the Reef the offset requirements could not be met in a timely manner and would be prohibitively expensive.

The offset the Minister is requiring has to apply to reduction of 8.1 million tonnes of sediment flows from the mouths of the Burdekin and Don Rivers. Reduction of that vast amount of sediment flow from the Burdekin and Don Rivers is highly unlikely to happen. We estimate, based on the cost to reduce agricultural sediment runoff to the Great Barrier Reef under the Reef Water Quality Plan, (\$200 million cost to for 360,000 tonnes of sediment reduction) it could cost \$2 billion a year to offset 1.3 million cubic metres. Total offset cost for 3 million cubic metres would be \$4.5 billion!

There is also the challenge of this offset being fungible.² Fungibility is the property of a good or a commodity whose individual units are capable of mutual substitution. Sediment composition from river mouths does not match sediments that will be dredged from the near-shore environment.

Ecological properties are also different as the sediments from the near-shore environment where the dredging will take place are different from the ecological environment where the spoil will be dumped. This dumping action will adversely affect the ecological integrity of the dumping site and surrounding areas, the extent to which this will occur being as yet unknown.

If GBRMPA approves this permit it would set a precedent for allowing dumping of large amounts of dredge spoil to be dumped outside of port boundaries within the Great Barrier Reef marine waters. There would be more dumping in the selected spoil ground over time as the port of Abbot Point is not yet at capacity for building more coal terminals. The Queensland government has declared its intent to build more terminals “as demand dictates”. There are no caps on future development in the major port hubs which include Abbot and Hay Points.

There could be up to 42 million cubic metres of dredging before port capacity is reached (judging by what was planned for the previous government’s proposal for a Multi-Cargo Facility). Nine coal mines are planned in the Galilee Basin and the Queensland government

¹ Australian Government Productivity Report *Major Project Development Assessment Processes*. Productivity Commission Research Report, Nov. 2013. p.215-216
http://www.pc.gov.au/data/assets/pdf_file/0015/130353/major-projects.pdf

² Australian Government Productivity Report *Major Project Development Assessment Processes*. Productivity Commission Research Report, Nov. 2013. p. 229

is preparing to declare the Galilee Coal Basin and rail corridors to Abbot Point a “State Development Area” so future expansion is likely.

Permit denial will establish that there must be a scientifically-based threshold set for dumping in Reef waters outside port boundaries that cannot be exceeded. The law has not yet established such a threshold and it is urgently needed to protect the GBR’s ecological integrity.

The Australian Productivity Commission Research report on Major Project Development Assessment Processes recommended that there be consistency between offset policy objectives and relevant, higher-order legislative objectives to be considered in a national offsets review. Where these objectives are not aligned, alternative offset policy objectives should be identified.³ We submit that such a situation exists with the proposed offsets for the dredge spoil dredging and dumping when considering the legislation underpinning the protection of the Great Barrier Reef marine waters and ecosystems. All proposed offsets for this project are unlikely to work and the lack of science to validate their integrity is also a warning signal under the Precautionary Principle approach not to approve the permit request. Our 160 members do not support the permit request and the proposed offsets and urge GBRMPA to refuse it.

Sincerely,

Patricia Julien
Coordinator,
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³ Ibid. p239.



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31st January, 2014

Mackay Conservation Group is a regional ENGO covering the region from the Whitsundays south to Broomsound and west to Clermont, and areas beyond that where activities impact our region. That extends offshore into our section of the Great Barrier Reef World Heritage Area (GBRWHA) and west to incorporate the coal fields of the Bowen and Galilee Basins. It includes the Mackay Central Queensland Coast Bioregion (Fig. 1). This includes parts of the Burdekin and Fitzroy river basins, both of which are major Great Barrier Reef river catchments. Our membership is 150.

Fig. 1 Bioregions in Mackay Conservation Groups area of interest



Bioregions:

CMC - Central Mackay Coast
BBN - Brigalow Belt North
DEU - Desert Uplands

It includes Great Barrier Reef Marine Park zoning maps 8 through 13 from Cape Upstart to Hardline Reef.

We partner with our neighbouring regional ENGOS, North Queensland Conservation Council , Capricorn Conservation Council and Gladstone Conservation Council on matters of overlapping interests as needed. These are all organisations that border the GBRWHA.

Our major concerns with regard to the GBRWHA are adverse impacts on water quality and biodiversity from polluted runoff, coal ports, rail lines and mines, coastal development and climate change.

Our region of interest includes intensive horticulture, sugar cane farming and grazing as well as growing mining industries that include coal and unconventional gas. We have three of the major coastal ports at Abbot Point, Mackay and Hay Point. The Queensland government plans to make Abbot and Hay Point the largest coal export ports in the world at 370 million tonnes of coal export capacity per annum. At present coal exports from these two ports total ~98 Mtpa, well below their present capacity of 190 Mtpa which is restricted by rail capacity. That represents almost a doubling in coal export capacity, and almost a 480 per cent increase over current export volumes.

That has enormous implications for the health of the Great Barrier Reef Marine Park in terms of increased air and water pollution, much more dredge spoil dumped in the GBRMP outside of port boundaries, more coal rail lines in a port wetland of international significance, a substantial increase in the size and numbers of shipping trips and upstream impacts from wastewater releases from new coal mines in the Galilee Basin. Most coal mines in the Bowen basin range from 3-8 Mtpa of export coal. If built the ten new mines proposed for the Galilee Basin would be in the range of 20 – 60 Mtpa of coal exports. If the Dudgeon Point expansion for two new coal terminals of 90 Mtpa of coal exports is approved it means 18 million cubic metres of dredge spoil could be dumped outside of port boundaries into the GRRMP i.e. 3 million cubic metres for access for the T0, T2 and T3 new terminals at Abbot Point and 15 million cubic metres for the Dudgeon point terminals. While the *Great Barrier Reef Marine Park Act* allows the dumping of clean dredge spoil in the GBRMPA under permit conditions it has never had to deal with such large amounts. If the port of Abbot Point expands to its full capacity there will be up to 40 million cubic metres of dredge spoil to dispose of.

Obviously now is the time to deal with what is an acceptable cap on dumping dredge spoil in the GBRMP, and what technical options and alternatives need to be developed to avoid such dumping altogether if impacts from a growing economy and climate change are to be managed. It is obvious from the thousands of contacts the public has made with GBRMAPA in the last few months they do not want to see dumping of dredge spoil in the GBRWHA outside of port boundaries.

HOW MUCH AUTHORITY DOES THE GREAT BARRIER REEF MARINE PARK AUTHORITY HAVE?

One of the difficulties GBRMPA faces is that even though it is called an “Authority” which implies full control to meet its responsibilities to safeguard the Outstanding Universal Value of the Great Barrier Reef, it *only has jurisdiction and regulatory control over one aspect of GBR impacts* i.e.

Section 5.3.2

The strategic assessment identified four categories of high risk impacts: climate change, catchment run-off, degradation of coastal ecosystems and **direct use**. *Of these, only one — direct use — has components that are within the Authority’s jurisdiction and regulatory control. The Authority’s capacity to influence the drivers and activities causing most impacts on the Region relies on its capacity to engage and work collaboratively with its partners and stakeholders.*

Table 6 Key indicators of the Region’s values, processes and impacts

DIRECT USE
<ul style="list-style-type: none"> • Dredging and spoil control • Extraction – death of discarded species • Extraction – fishing in spawning aggregations • Extraction – predators • Illegal fishing and poaching • Marine debris • Noise pollution • Outbreaks of disease

The Authority in order to fully exercise the leadership role it must assume to meet its responsibilities will need more power than its ability to influence the drivers of adverse impacts on the GBR Region and engage and work collaboratively with its partners and stakeholders, as desirable and necessary as these tools are.

Even where it has jurisdiction and regulatory control over Direct Uses, the current experience with the Queensland and Australian governments’ plans to allow the dumping of a large volume of dredge spoil in the GBRMP show that the Authority is being subject to extremely strong political pressures to allow the dumping permit at Abbot Point. We expect the same pressures will apply if dredging of 15 million cubic meters of dredge spoil is approved by both levels of government off Dudgeon Point if the proposed two coal terminals are built there within the Port of Hay Point port lands.

Both levels of government approved the Abbot Point dredging and dumping in the GBRMP before GBRMPA decided to approve the permit on 31st Jan 2014 subject to 47 conditions and other requirements for additional examination of alternative dump sites further from the 'sensitive receptor' sites. By pre-empting approval the Australian and Queensland governments undermined GBRMPA's authority and approval power. They removed the "authority" out of GBRMPA and politicised the decision.

The Australian Environment Minister Greg Hunt approved offsets as a part of the control conditions without even knowing if they would be appropriate or "reasonable" i.e. affordable and achievable as required in best practice offset policies. The whole approval process has been politicised rather than being ruled by scientific research under the direction of GBRMPA. The scientific requirements came in after the decision was made to approve, rather than before, under a process of adaptive management which is designed to discover where bearable thresholds for the operation exist.

The Precautionary Principle cannot be applied under such an approach, which is try it and if things start to go pear-shaped, back off. The adaptive approach under the set conditions for the approvals also relies on self-reporting by those carrying out the operations if things go wrong. This is not the best way to ensure the best reporting record.

GBRMPA also sits in the conflicting position of facing a significant portion of its budget to manage the GBR WHA coming from offset payments into the Great Barrier Reef Trust Fund for actions that adversely impact or destroy some of the OUVs and MNES within the GBRWHA. And there is nothing in the Strategic Assessment reports that indicates that offset funds would be spend close to or at the impacts sites. In fact these funds could be spent anywhere within the GBRWHA where GBRMPA deems. That also goes against best practice intent for the use of offsets. So although the World Heritage Organisation supports the use of offsets it also says elsewhere that best practice must prevail in all actions. And there are questions as to how close to best practice offsets for the GBR WHA actually are.

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Comments by Mackay Conservation Group (in blue text) on the Great Barrier Reef Strategic Assessment Program Report Draft

Draft program report 2013

Introduction 1-3

Through the IUCN's *Convention on Biological Diversity*³, the Australian Government has made a commitment to respect, preserve and maintain the knowledge, innovations and practices of Indigenous communities (Article 8(j)) and to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements (Article 10(c)).

The Convention on Biological Diversity (CBD), while being an agreement the Australian Government has signed, has not been incorporated into legislation such as the EPBC Act. This means enforcement actions based on its requirements to protect protected areas of significance, will not necessarily be done.

This is more likely to affect the inshore and shoreline areas of the GBR. For example Adani's proposed T0 coal terminal at Abbot Point will be built adjacent to traditional burial grounds of the Juru people despite elders having requested a buffer zone between the two. This indigenous group will also be excluded from their traditional hunting and fishing grounds at Abbot Point and other places of cultural significance within Abbot Point will be impacted. A similar situation is shaping up at Dudgeon Point where two very large coal port terminals are planned. Before Christmas a public notice to de-gazette the public road through Dudgeon Point was posted. The NQBP Plan calls for an Environmental buffer zone around the terminals and there should be public including indigenous access to it. De-gazettal of the road is a clear message that such access will be denied. Specific legislation to ensure the obligations of the Australian and Queensland government under the IUCN's Convention on Biological Diversity must be implemented.

The draft report does not mention that the CBD applies to protection of all biological resources in Australia including the Great Barrier Reef. Federal government money has been funded through the regional Natural Resource Management Groups that are within the GBR coastal catchments e.g. the Reef Water Quality Program to improve water quality in the GBR but this a small amount considering the need and ongoing impacts e.g. 360,000 tonnes reduction in sediment flows to the GBR waters from the RWQP at a cost of \$200 million, is dwarfed by proposals to dispose of 5.4 million tonnes of capitol dredge spoil sediment for coal terminal expansions at Abbot Point outside of port boundaries and into the Great Barrier Reef Marine Park. Similarly there are plans in our region to dump 27 million tonnes in the Great Barrier Reef Marine Park from the Hay Point coal port terminal expansions proposed at Dudgeon Point. This does not include ongoing maintenance dredging at Hay Point and the Port of Mackay in our region plus Abbot Point to the north with lower amounts than capitol dredging, volumes being closer to what the RWQP has been able to achieve in sediment reduction into the GBR.

Most of the expansion of Great Barrier Reef ports is due to expansion of coal terminals. This will substantially increase shipping in reef waters. Another issue is that coal ships require larger drafts and that means more dredging. Another factor that adds to dredging volumes is the increasing size of coal shipping. The

GBRMPA has no power over how much dredging can be done for ports, nor how deep channels can be, nor port capacities. This is like trying to build a levee for a local flood while upstream a much larger regional flood is approaching which will overwhelm the levee, GBRMPA must have meaningful input into the factors that at a much larger scale impact on the OUVs of the GBR and the big one hardly mentioned in these reports is mining, on which there is no expansion cap. Adaptive management to such impacts can only work so far, and the limits to this type of impacts growth need to be understood and planned for.

As long as dumping of dredge spoil in the Great Barrier Reef Marine Park remains the cheapest disposal option for major port expansions, it will be the preferred choice for developers and port authorities. Actions must be taken to show the full cost of such a policy. There is little to no evidence to show past long-term impacts of dredging spoil dumping on OUVs in the Great Barrier Reef Marine Park.

4 Foundational management

GBRMPA is not considering the wider scale outside the GBR WHA which impacts the region e.g. mining which is slated for much higher and widespread growth.

4.1 Environmental regulation & 4.1.8 Fees and charges

The Great Barrier Reef Marine Park Act and its Regulations govern protection and management of the Great Barrier Reef Region. The Act provides **the Authority's head of power** to regulate certain activities in the Region. It provides for the Zoning Plan and plans of management, governs permitting decisions and allows for the development of policies to guide decision making and the **application of fees and charges**.

Is there a fee for dumping dredge spoil in the GBR Marine Park?

4.2 Engagement Impacts from outside sources

By establishing ongoing and collaborative working relationships, the Authority aims to influence actions which affect the Reef and instil a sense of collective stewardship. P.13

This will not be sufficient! What work has been done by the Authority on climate change impacts and the impacts of the mining industry?

The *Great Barrier Reef Water Quality Protection Plan* (Reef Plan) has been a significant initiative, and is making progress towards the goal of halting and reversing the decline in water quality entering the Reef

UTTERLY IGNORING IMPACTS OF COAL MINING EXPANSIONS THAT ARE PLANNED I.E. OPENING THE Galilee Coal Basin. The contributions of dredge spoil will vastly outweigh the reductions in sediment loads achieved by the Reef Water Quality Plan. Suggested offsets will be too costly to be workable.

These declines clearly identify the **need for all levels of government and the community to take a coordinated and focused approach to conserve biodiversity.**

HOW? NOT HAPPENING. OFFSETS WILL NOT HELP EITHER

Climate change adds another pressure on biodiversity; as a result, we need to reorientate management objectives from preserving all species in their natural habitat and current locations to **ensuring space and opportunities are available for ecosystems to adapt and reorganise.** This will increase the chances that they can maintain the provision of ecosystem services through a diversity of well-functioning ecosystems.

FOR HOW LONG? SUGGESTS A LIMITED UNDERTSANDING OF THE SCALE AND COMPLEXITY OF THESE IMPACTS.

4.2.2 Advisory role

As highlighted in the strategic assessment, many of the impacts affecting the values of the Region arise from activities that are beyond the direct jurisdiction of the Authority. Therefore, in addition to implementing formal agreements with key partners, the Authority works directly with a range of Australian and Queensland government agencies, local government and industries by **providing technical and policy advice in relation to matters that affect the Reef.**

THIS IS A VERY SHORT SECTION BUT ONE OF THE KEY AREAS OF FOCUS TO ACHIEVE A REVERSE IN THE DECLINE OF THE HEALTH OF THE REEF. THERE HAS BEEN STRONG POLITICAL AND INDUSTRY PRESSURE ON GBRMPA TO ALLOW MASSIVE AMOUNTS OF DREDGE SPOIL TO BE DUMPED IN THE GBRMP FROM PORT EXPANSIONS. ADVICE HAS BEEN IGNORED E.G. IMPROVED DREDGE SPOIL PLUME MODELLING. STRONGER METHODS ARE NEEDED WHEN ADVICE IS NOT TAKEN.

4.2.5 Consultation

The GBRMPA has four Reef Advisory Committees (RACs): Catchment and Coastal; Ecosystem; Indigenous; and Tourism and Recreation.

A key role for the RACs is to advise the GBRMPA in relation to actions that can be taken to address the risks to the Great Barrier Reef Marine Park identified in the *Great Barrier Reef Outlook Report 2009*.

While climate change remains the major threat to the Great Barrier Reef, **there is no separate RAC addressing climate change, instead issues relating to climate change will be considered by each of the RACs.**

THEN HOW DOES THIS ISSUE GET ADDRESSED AT HIGHER LEVELS?

...

The RACs are **appointed by the Board of the Marine Park Authority (MPA) for a term of three years**, and members are eligible for reappointment. Each of the RACs includes members appointed as a representative of a particular group or sector (e.g. **industry, recreational, government NOT ENVIRONMENT?**), or for their linkages to Traditional Owner groups. All RAC members are expected to adopt a broad perspective on issues that are addressed, mindful of the objectives of the relevant branch or sections and of the GBRMPA's corporate priorities.

Why haven't summary documents of RAC meetings have not updated online since 2011?

5.2.5 Principles for managing environmental impacts within the Great Barrier Reef Region

Conservation of biodiversity and ecological integrity should be the fundamental consideration in decision making The natural environment is the foundation of the Region's values and there are **limits to the amount of disturbance it can absorb** without compromising its integrity. **Decisions about managing impacts should support the outcomes of maintaining and restoring the condition of values and processes.** Improvements in **biodiversity and ecological integrity** also represent the best opportunity to protect Indigenous heritage values and community benefits for generations to come.

In this section we agree with the points made by EDO QLD

The DCZPR:

1. does not mention the impact of new Queensland laws 'opening up' what once were protected areas on the GBR coastline in Queensland and state waters, yet scores Queensland 'very effective' for avoiding protected areas for threatened ecological communities and migratory species
2. There is often no mandatory public consultation process for many types of development in Queensland that may affect the GBR (for example, small scale mining and CSG exploration activities, ecotourism facilities, grazing)

3. Summary of effectiveness is not a true reflection of the vast number of threatened species listed and continuing to be listed; and does not acknowledge that not all categories of wildlife will be protected.
4. There is often no mandatory public consultation process for many types of development in Queensland that may affect the GBR (for example, small scale mining and CSG exploration activities, ecotourism facilities, grazing)
5. The Queensland Government has shown a willingness to 'rush through bills' without undertaking a public consultation by way of a public discussion paper on the policy behind the Bills

Weakening protection of threatened species is contrary to WHC recommendations which require a commitment to ensure legislation protecting the property remains strong and adequate to maintain and enhance its OUV. Reform is needed of the Queensland *Nature Conservation Act* (NCA) to achieve adequate protection. The NCA should be amended to ensure all protected areas are adequately protected in perpetuity. The protection of all threatened species could be improved by clear commitments to designate more protected areas where there is threatened species habitat;

The DCZPR refers to public participation in the Coordinated Project EIS process. The SKM Review does not acknowledge the significant current and proposed restrictions on the public's ability to engage in decision-making. These bare references fall short of satisfying Recommendation 5(7) of the Monitoring Mission.

At the very least, Queensland should

- ensure third party and public interest provisions remain (and not remove existing public appeal rights) in all legislation that will impact on the GBR, including all planning and environmental laws in Qld,
- introduce mandatory public consultation process on all development proposals in the GBR zone including proposed development to be built in national parks,
- remove barriers to access to justice such as free and available public information and legal standing for judicial review, and
- remove costs order risks for public interest litigants.

Mining and Gas Projects

The proposed increases in production of coal and gas are the key justifications of port expansions on the GBR coastline, directly impacting on the GBR and indirectly impacting on the GBR through greenhouse gas emissions.

In November 2013, the Queensland Government extended a pilot pollution trading system for four mines in the Fitzroy catchment to release excess mine water for the 2013-2014 wet season.¹⁵⁰ The program includes a lessening of water quality standards for receiving waters and less mine responsiveness required to the annual review of the Water Management Plan.¹⁵¹

Release of contaminated water in GBR catchments was made easier by recent amendments to the EP Act. From 11 December 2012, Temporary Emission Licences (‘TELs’) may be applied for and must be decided within 24 hours.¹⁵³ There were existing provisions for emergency directions.¹⁵⁴ However, TELs are available not merely for emergencies as commonly understood, but also for ‘applicable events’ that were not foreseen when conditions were imposed on an environmental authority or development approval.¹⁵⁵ *So environment authority holders under the EP Act, for example mining companies, can now argue that they had not foreseen flood or rain leading to contaminated water in their mines, even if they knew, or ought to have known of such a possibility and ought to have spent money planning to handle the event without releasing contaminants.*¹⁵⁶

The administering authority, EHP, will only have a rushed and inadequate 24 hours to make a decision. The standard criteria under the EP Act are not all relevant under the amendments. The economic impact of not granting the TEL is relevant under the amendments, even if the problem is due to poor environmental planning by the license owner. So the TEL amendments make it more likely that contaminated water will be approved for release into a river in the GBR catchment.

Cumulative impacts from GBR catchments should be an essential part of the strategic assessment, however none of the above issues have been significantly addressed in the DCZPR.¹⁵⁸ This is contrary to WHC6 which requested that the strategic assessment ‘fully addresses the direct, indirect and cumulative impacts’ on the GBR. It is unclear how WHC5 has been implemented, as there is no requirement to address the cumulative impacts of resource activities proximate to GBR catchments when approving such activities. The EP Act

should be amended to require a cumulative impact assessment of resource activities proximate to GBR catchments.

Enforcement and Compliance

The Queensland Government has not allocated sufficient resources (and political will) to enforcement and compliance of environmental matters in Queensland. In order to protect GBR, the WHC has urged the Commonwealth and State Governments to: “sustain *and increase* [their] efforts and available resources to conserve the property.”¹⁶⁴

The UNESCO Mission Report also called for an increase in “overall levels of funding” to provide for “effective protection and management” of the GBR.¹⁶⁵ Whilst funding has increased in some areas (Reef Rescue commitments) it is clear that decreases have occurred in other key areas resulting in a net loss.

EHP, the main agency charged with enforcing breaches of environmental law in Queensland, has considerably scaled back its operations choosing to focus on education, industry partnerships and only regulating ‘high risk’ activities... EHP does not make prosecution data publicly available, only watered down ‘prosecution bulletins’ which serve little more than a marketing purpose.¹⁷⁹ EHP no longer publishes details of individual prosecutions in their annual reports¹⁸⁰, only a brief paragraph on the total fines they have raised.

Severe public service staff cuts of approximately 15-20% across the Queensland State public service during 2012 are likely to hamper ongoing essential legislative implementation and enforcement. Recently the Courier Mail reported that an emergency permit to remove flying foxes could not be given because EPH staff were not available to provide it.

In October 2013, EHP continued its plan of downsizing and ‘outsourcing’ responsibilities. The Department cut a total of 30 staff in the areas of water quality, koala research and conservation. The Environment Minister said this move was in line with the Government’s agenda of shifting environmental responsibilities to ‘a range of partners’ including (under-resourced) local councils. Local councils usually lack the needed level of expertise.

The Queensland Government changed the legal costs rules in Queensland’s Planning and Environment Court in 2012, meaning community groups acting in the public interest to enforce the law are now at a far higher risk of having to pay their costs and those of the companies they are trying to stop. Many

people will not take the risk on what they perceive to be unauthorised developments or environmental wrongs.

Uranium, Mining in Queensland

The State Government is not ruling out shipping Uranium through the GBR from the port of Townsville. The Strategic Assessment for the Reef, to inform a long term plan makes no mention of uranium mining or how it will be regulated to protect the OUV of the reef.

Bill giving force to WHC's recommendations not passed

The industrialisation of Gladstone, for example Curtis Island and other areas along the coast, has intensified under the existing Commonwealth legislation, highlighting the need for the EPBC Act to be amended and strengthened. Since our advice dated 24 January 2013, proposed amendments to Commonwealth legislation²¹² to competently²¹³ implement UNESCO recommendations to protect the GBR have been tabled by the Green party in the Commonwealth Senate.²¹⁴ The proposed amendments to the EPBC Act included clear-cut fresh duties on decision-makers, for example, prohibition on development of existing ports if that action would impact individually or cumulatively on the world heritage values of the GBRWHA.

The Commonwealth government and the opposition did not support the proposed amendments, which would have delivered stronger protection for the GBR by implementing the WHC's recommendations. The Commonwealth government instead merely developed information sheets²¹⁵ and interim guidelines²¹⁶ about 'outstanding universal values', but those are not legally binding under the EPBC Act and do not change the law.

Offsets must only be considered where impacts cannot be avoided or mitigated and where residual impacts will not exceed critical thresholds in the short, medium or long term Historically, environmental offsets have addressed 'significant' residual impacts. Given the declining health of the Reef and the Authority's goals of protecting and restoring the Reef's condition and ensuring ecologically sustainable use, offsets now need to be more widely applied to compensate for all residual impacts. They need to produce measurable conservation outcomes within timeframes relevant to affected values or processes.

The WHC requested there not be any development if it would impact individually or cumulatively on the OUV of the GBR or compromise the Strategic Assessment. OUVs should never be offset. Offsets are inapplicable in

this situation as they allow inappropriate developments to proceed. The WHC also requires world's best practice in managing OUVs. Offsets do not fit into that requirement.

We agree with EDO QLD in that:

- In failing to offer a best practice offsets policy, the DCZPR fails to satisfy the WHC's recommendation.
- Even if the Commonwealth offsets policy is applied (which is superior to the draft Queensland Offsets Framework), this does not guarantee an overall net benefit to the GBR. For example, 'environmental equivalence' is difficult to achieve and projects are often approved in which the offsets do not achieve environmental equivalence.
- WHC 8 recommended that the state party ensure that plans, policies and development proposals affecting the property demonstrate a net benefit to the protection of OUV. The draft Queensland Offsets Framework falls short of this requirement and the Commonwealth offsets policy needs improvement. Projects that have significant impacts on the OUV of the GBR should be prohibited.
The conditions and offsets used to justify development impacting on the OUV will be difficult to impossible to enforce and ultimately unsuccessful in protecting the GBR from the impacts.
- There appears to be a culture of approving with conditions and yet without a culture enforcing those conditions (EDO) or examining those conditions to see if they pass the "reasonable" and "possible" test.
- Whilst conditions to mitigate impacts are obviously an important element of approvals, they do not result in developments not having impacts on the OUV of the GBR.
- there is no mention of mitigation of climate change in the DCZPR, which reflects the Queensland Government's position that "the Government cannot do anything about climate change."
- The WHC requested there not be any development if it would impact individually or cumulatively on the OUV of the GBR or compromise the SA.124. However in December 2013, the Commonwealth approved four major developments within the World Heritage Area of the GBR, including capital dredging program at Abbot Point, a terminal expansion at Abbot Point, a LNG Facility on Curtis Island and a Gas Transmission Pipeline to Curtis Island – all after and contrary to the WHC recommendations.

- If approval powers are delegated to Queensland to approve actions impacting MNES and the GBR, Queensland will seek to apply its own offsets policy including for projects affecting the GBR, in place of the Commonwealth offsets policy. The DCZPR does not contemplate the true effect of the new policy. It is a major problem in the DCZPR and DCSAR that the Queensland's offsets strategy is not detailed.

The Australian Productivity Commission in its report to COAG in Nov 2013 on the assessments process for major developments recommended that there should be a comprehensive review of offsets policies by the end of 2014.¹

The Strategic assessments on the Great Barrier Reef should take that review's recommendations into account.

The offsets policies of the Australian and Queensland governments do not meet many of the requirements set by the IUCN who commissioned, in partnership with the International Commission for Mining and Metals, a 2013 report on Biodiversity Offsets.²

Policy intent

This policy will guide actions required to support ecosystem health and deliver **net benefits** to the Region's values. It will facilitate a strategic and coordinated approach to delivering improvements to ecosystem health, and complement and **support implementation of Australian and Queensland government offsets policies and restoration programs.**

The policy will:

- ☐ provide a framework to ensure the management of impacts results in a net benefit to the Great Barrier Reef
- ☐ guide implementation of **mandatory investments required under Marine Park permissions and for delivering offsets required under the EPBC Act**
- ☐ guide voluntary actions and contributions to restore the health and resilience of the Reef, including the Authority's stewardship and partnership programs
- ☐ set out the arrangements for **a Great Barrier Reef trust**, including governance and administration.

We have great concerns about the use of funds for offsets. Pay to develop!

¹ <http://www.pc.gov.au/projects/study/major-projects>

² www.icmm.com/.../icmm-and-iucn-release-report-on-biodiversity-offsets

OUVs should never be offset by payments.

Through the policy, priority will be given to actions to restore ecosystem health and resilience, as this is fundamental to protecting all matters of national environmental significance and the community benefits they support. The policy will set the basis for pre-identification of priority areas or management actions that will best tackle the most serious issues facing the Great Barrier Reef. It will provide greater certainty and deliver improved environmental outcomes, complementing the proposed arrangements of the Queensland Government.

MCG has concerns Offset money will not used close to the site of impact or not used to restore values once impact is finished. This makes it much easier for developers to pay into an offset fund for impacting OUV. Offsets encourage more damage.

OFFSETS

All actions will be consistent with, but additional to, the Authority's foundational management activities. Activities may encompass:

- ▣ **restoration of habitats and species**, such as active reattachment of dislodged coral following cyclones, and restoration and reconnection of coastal habitats of high value to the Reef
- ▣ **enhanced protection of the Great Barrier Reef ecosystem**, such as the control or mitigation of outbreaks (for example crown-of-thorns starfish), and installation of public infrastructure to protect fringing reefs.

THESE ACTIONS SHOULD NOT BE TIED TO OFFSETS FUNDING. THEY SHOULD BE PART OF GBRMPA'S REGULAR BUDGET. SUCH A PRACTICE JUST ENCOURAGES GBRMPA TO ALLOW DESTRUCTIVE PROJECTS AND SPEND OFFSET MONEY ON PROJECTS ELSEWHERE WHICH SHOULD HAVE BEEN FUNDED THROUGH ITS BUDGET NOT THROUGH OFFSET FUNDING.

Reef Trust **WILL TAKE OFFSETS MONEY!** This is a conflict of interest for GBRMPA

5.2.5 The Authority will work closely with the Australian and Queensland government agencies to facilitate strategic and collaborative implementation of **offsets across jurisdictions**. The Authority will help inform Australian and Queensland government offsets arrangements and restoration programs by **identifying actions that will maximise the delivery of environmental benefits to the Region**.

GBRMPA has no requirement to have offsets close to the source of impact! Makes offsets look like a source of funding for management of the GBR something the Australian Productivity Commission did not recommend in its review of large project assessments.

The program

The program will use the **outcomes-based management framework, cumulative impact assessment policy** and **net benefit policy** to build upon and better integrate current initiatives to reduce threats, restore degraded habits, improve water quality, and re-establish connectivity and functioning of coastal ecosystems. It will systematically address the cumulative impacts on the Region's biodiversity, giving priority to inshore areas and those threats that have been identified for at-risk species, species groups and habitats. Integral to the program will be the acknowledgement, promotion and transfer of the many rich sources of knowledge held within the community, along with supporting opportunities for local communities to develop and implement remedial actions to restore values.

How will this apply to ports as public access is not allowed? Public access to Internationally significant wetlands such as the Caley (Kaili) Valley Abbot Point wetland aggregation sit between the port lands of Abbot Point and the Abbot Point State Development area and will be affected by chronic air and water pollution from both of these sources.

Future development within the Abbot Point State Development Area proposes smelters, coking and power plants and other types of heavy industry.

We suggested a levy on every tonne of exported product through the port to pay for resources including staff to manage, monitor and enforce protection from environmental impacts on these wetlands to protect their environmental values including OUVs as they are connected to the terrestrial and marine systems of the Great Barrier Reef Marine Park.

That request has been ignored by the Queensland government which has yet to implement the draft Environmental Management Plan for these wetlands. GVK/Hancock significantly reduced the offset payment it made to GBRMPA for the impacts it will have on these wetlands with its coal rail lines and terminal and the money will not be spent in these wetlands but elsewhere.

These internationally significant wetlands are still a part of the GBR and they need protection by GBRMPA and the Queensland government.

Recognising the inherent variability in the values and uses across the Region, the Authority will work with its partners to establish desired outcomes for individual regions. The outcomes will be **based on national and international obligations to protect values and the levels of community acceptance of modifications to the system at local and regional levels to allow for ecological sustainable use.**

National and international obligations are not being currently met with regard to protection of migratory shorebirds, wetlands and nationally significant ecosystems in the Central Queensland Coast Bioregion. The Mackay Regional Council continues to allow coastal clearing for MNES and development along GBR creek tributaries. We watch development announcements and check if MNES are present e.g. disturbance of habitats or changes in water salinity for the EPBC and Queensland listed false water rat as Council planners do not check for this. Council planning departments need much more education and oversight and probably resources to ensure referable matters under the EPBC Act are addressed, especially where they affect the Great Barrier Reef Marine Park. How will the Authority manage this? What powers will they have to intercede when planning departments and regional Councils ignore their obligations?

How will “regionally-based standards and guidelines (see Section 5.3.1), including best practice approaches to meet the Authority’s outcomes” be enforced when the Authority has little power to do so within the near-shore and terrestrial environments of the Reef catchments?

Program delivery

The Authority will seek to have relevant outcomes from the program formalised in **relevant local, state and Australian government decision-making frameworks**. The Authority will consider both regulatory and non-regulatory approaches to achieve the desired outcomes. Options range from **partnerships and stewardship approaches** to extending the Authority’s regulatory powers for managing facilities and works that may pollute waters in a manner harmful to the Marine Park.

This will not be sufficient. Oversight and enforcement mechanisms will be needed where necessary (i.e. soft measures do not work) to ensure regional Council compliance for the Great Barrier Reef catchments.

5.2.7 Integrated monitoring, reporting and adaptive management program for the Great Barrier Reef World Heritage Area

Purpose

Are existing monitoring programs sufficient to cover the scope of issues required? How much for example does the Authority know about impacts from air and water pollution from the coal industry on the OUVs of the Great Barrier Reef?

Hay Point coal terminal is the single most industrial source of the highest particulate emissions in the greater Mackay area according to data published on the National Pollution Inventory at 230,000 kg during 2010-2011.

Dalrymple Bay coal terminal has been fined twice in the last two years for polluted stormwater runoff in the adjacent creek and bay. For weeks after these pollution events a local, Peter Dallas, picked up scores of lobster shells on the adjacent beach. The fines were small at \$2,000 each and not enough for Dalrymple Bay coal terminal management to hasten to address a repeat of the problem by installing more stormwater containment ponds. They told me it would take them three years to build the ponds! Right now we are experiencing heavy rains from Cyclone Dylan so we fully expect more polluted runoff from Dalrymple Bay coal terminal flowing into the adjacent Great Barrier Reef World Heritage Area.

The current Queensland DEHP Minister told me he was addressing the problem by trying to increase the fines! That speaks volumes about the Queensland government's attitude towards its responsibilities towards the Great Barrier Reef Marine Park. Meanwhile North Queensland Bulk Ports is publicizing its increased volume of coal exports from the Port of Hay Point coal terminals. The Authority will need substantially increased enforcement powers to deal with such impacts especially from the mining industry.

Streamlining, harmonising and enhancing regulatory tools

The Authority will review the adequacy of its regulatory tools to protect areas within the Region that remain in good condition, areas of high conservation value and areas subject to high cumulative risk. Where necessary, it will strengthen its regulatory safeguards. This will include evaluating the adequacy of existing planning arrangements in areas north of Cooktown and areas subject to high growth in recreation and other uses (for example, Keppel Bay).

The Authority will improve alignment of its regulatory tools, reduce unnecessary regulatory burden and seek to harmonise definitions and provisions with other similar and relevant legislation, while maintaining strong levels of environmental protection and adequate safeguards. It will also seek to improve alignment between Commonwealth and Queensland protected area management arrangements including the application of standards and joint permitting and approval processes.

It will rationalise and streamline its tourism management arrangements to improve alignment between plans of management, policies and permitting processes and reduce regulatory burden commensurate with risk.

How will it achieve this in the face of the Queensland government increasing environmental deregulation, staff cutting and new proposed Regional Planning Interests Bill in which the government will only agree to protecting “strategic environmental areas” as yet not well defined or shown on maps?

Improving certainty

The strategic assessment demonstrated that, for many activities in many areas, such as tourism, research activities and shipping, **the Authority’s regulatory framework provides a high degree of certainty about where activities may occur and under what conditions.**

The assessment identified there was less certainty in relation to the **port activities** within the Region. In line with the recommendations of the strategic assessment, the Authority will support development of a Queensland ports strategy that concentrates port development around long-established major ports in Queensland and encourage port master planning.

Why is there no cap on the amount of dredge spoil that may be permitted by the Authority outside of port boundaries?

5.3.2 Engagement

Influencing drivers and activities affecting the Region’s values

None of this deals with downstream mining impacts on the GBRWHA.

Supporting best practice and stewardship

Recognising the Region’s world heritage status, an emphasis on best practice and stewardship encourages all regulated and unregulated activities within the Region to be carried out in accordance with world’s best practice standards

Dredge spoil dumping is not world's best practice.

Table 6 Key indicators of the Region's values, processes and impacts p.44

How will these indicators be linked to show the impacts e.g. climate change on values of biodiversity such as shorebirds?

Appendix 4.

Direct drivers, activities, impacts and risks

How were these ratings derived?

Ratings seem to relate to point sources being seen as a lesser risk. Were cumulative impacts of multiple sources of the same risk (e.g. dredging) considered, especially in light of the Queensland government's plans to greatly expand ports for example? It would appear they were not. Given that long-term monitoring of dredging impacts has not been done how reliable are these ratings? What degree of confidence can we place in them?

Research Analyst.

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13th Dec 2013

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Due: 13th December 2013

Submission on the draft QLD Ports Strategy

Social and Economic Impacts of Major Expansions of Ports handling Hazardous Materials

Air Quality and Health

Almost the entire focus is primarily on short-term economic aspects with little attention paid to social and environmental impacts on the regions surrounding the ports, save a mention towards the end on the need for addressing social and environmental impacts on communities around the ports.

For example the strategy says nothing about the extensive baseline air pollution studies on community health that will be needed in regions where ports are exporting huge hazardous cargos such as coal, LNG and uranium or importing hazardous substances such as fuel. The Hay Point and Abbot Point port lands are expanding to make their terminals the biggest exporters of coal in the world. The Port of Mackay has expressed its interest in trucking and exporting uranium through Mackay.

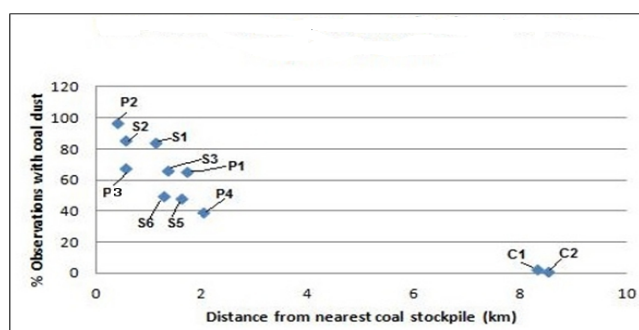
A new European study estimates that increase in exposure to particulate matter pollution increases risk of death more than twice as much as assumed so far by the European Environmental Agency (14% increase in risk vs 6% for every 10 ug/m³ increase in PM_{2.5} concentrations). The study also confirms that PM_{2.5} levels that are well below the European standard of 25 ug/m³ increase risk of death.¹

1

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(13\)62158-3/abstract?rss=yes](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)62158-3/abstract?rss=yes)

As there is no level at which exposure to coal dust has been determined as safe for human health, no coal dust should be emitted outside of port boundaries or from coal trains to the coal ports. North Queensland Bulk Port's (NQBP) own monitoring data shows frequent coal dust deposition many kilometers from coal stockpiles in the Hay Point port lands (Fig. 1).

Fig.1 Percentage of Dust Deposition Records (2000-2012) Containing Coal Dust for Residential Sites around Hay Point and Control Sites at Grasstree Beach.



Larger coal ports will mean more coal dust from Hay Point port terminals, especially if Dudgeon Point terminals are built. Dudgeon Point is only 13 km directly from downtown Mackay and easily within range of particulates pollution from the port.

PM₁₀ particulates air emissions from the Hay Point coal terminal for 2011-2012 was 430,000 kg and 71,000 kg from the Dalrymple Bay coal terminal². The Hay Point coal terminal was the highest industrial point source of this type of particulates emissions in the Mackay local government region (Table 1).

Table 1. Largest Industrial Sources of PM10 Particulates in the Mackay Local Government Area 2011-2012

Industry	PM10 (kg)
Hay Point Coal Terminal	430,000
Boral Resources	40,000
Mackay Asphalt Plant, Farleigh	30,000
Hanson Construction – Farleigh Quarry	35,000
Farleigh Sugar Mill	320,000
Marian Sugar Mill	201,000
Racecourse Sugar Mill	330,000
QR National – Jilalan Rail Yard, Sarina	21
Stanwell Corp. Ltd – Mackay Gas Turbine	12
Sucrogen Plane Creek	250,000
Thomas Borthwick & Sons (Aust) - meatworks	140
Dalrymple Bay Coal Terminal	71,000
TOTAL	1,707,173

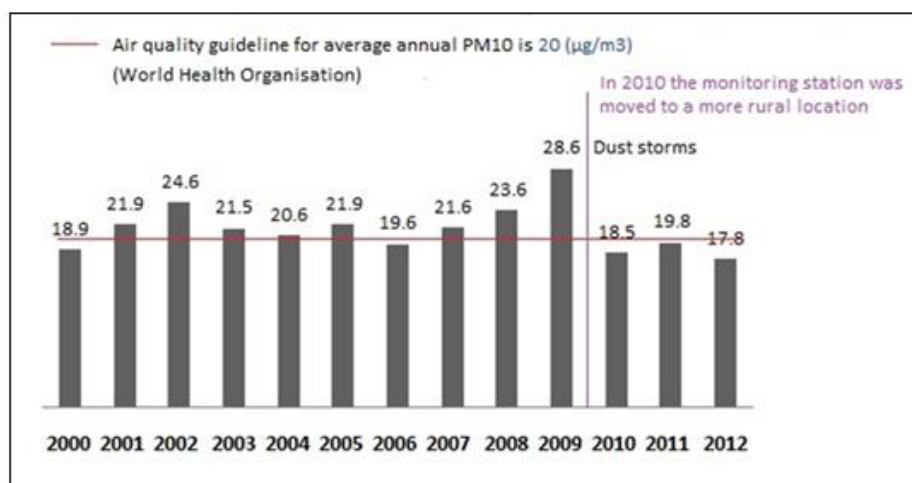
² Source: National Pollution Inventory <http://www.npi.gov.au/>

The Mackay local government area also has another source of high particulates emissions. These are the from the sugar processing mills at Farleigh, Marion and Racecourse sugar mills as well as Sucrogen at Plane Creek which together contributed 1,101,000 PM₁₀ particulates air emissions in 2011-2012.

As Mackay is a major coal mining support centre it also has significant particulate emissions from the traffic and heavy transport services.

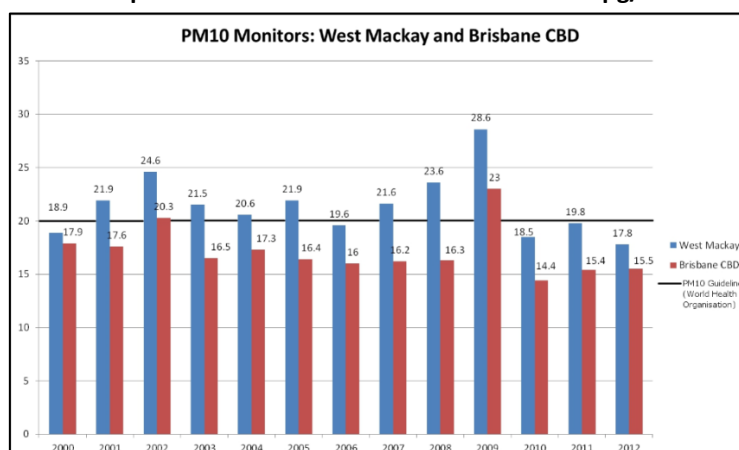
The average annual particulate emissions recorded at the sole DEHP monitoring station in West Mackay show that the air shed for the Mackay local government area is almost at capacity according to World Health Organisation guidelines, even after the monitoring station was moved to a more rural location in 2010, away from a commercial soil business (Fig. 2).

Fig. 2 Average Annual Ambient Air Quality for the Mackay Local Government Area 2000-2012 (West Mackay Air Quality Monitoring Station)



Dust particulates in the Mackay local government area are even consistently higher than the Brisbane CBD (Fig. 3).

Fig. 3 Annual average PM10 Dust Particulate Values (µg/m³) in West Mackay and Brisbane CBD 2000-2012 compared to the World Health Guideline of 20 µg/m³.



This indicates that particulates are a human health issue and that the coal port terminals and the sugar industry have a major role in addressing this issue. NQBP states that its air quality modelling shows that its Hay Point port land terminals fall below current particulates standards, but it refers to average 24 hour standards for all forms of dust emissions, and has yet to ground truth its modelling results.

The community has no baseline or ongoing monitoring data to show what levels of hazardous coal dust they are being exposed to and in the absence of health studies has no information on which to calculate their levels of risk to different subsets of the exposed population in the Mackay local government region. Coal dust is not the only hazardous component of airborne dust coming from the coal terminals. There are carcinogenic diesel particulates and precursors to ground-level ozone such as nitrogen oxides (NO_x) and volatile organic carbons (VOCs) which are also associated with circulatory and respiratory diseases and cancer.

It is clear that until the health risk levels are determined and made available to the public, no further expansion of coal terminals should proceed in the Mackay local government region.

Massive expansion of coal terminals are proposed at Abbot Point north of Bowen. Much of what we have mentioned for the Mackay region applies to the Bowen region in terms of pollution impacts. While Bowen is further from Abbot Point than Hay Point is from Mackay, there is an extensive agricultural base close to Abbot Point and the impacts of such massive expansion of coal terminals on the agricultural and fishing industries needs to be quantified. Prevailing winds will also blow coal dust to Merinda and Bowen for part of the year.

Coal dust will also be deposited in large amounts on the Caley (Kaili) Valley Wetlands adjacent to Abbot Point and north of the Abbot Point State Development Area, which will expand with heavy industry if the port grows. No standards exist for health impacts on wildlife from hazardous particulates because at the National Environmental (Air) Measures (NEPM) states there is insufficient baseline information on which to create standards. Heavy metals found in coal do move up the food chain and common sense reasons that in the absence of standards the Precautionary Principle should prevail. That means port expansions should not proceed in the absence of progress to introducing new standards and updating present ones.

COAG supported the 2011 review of the NEPM standards for air quality as part of a plan to introduce a new National Plan for Clean Air in 2014. There are at least seven recommendations out of the 23 changes in the 2011 review that could apply to coal dust. We suggest that these recommended changes be incorporated into meeting social and environmental health protection strategies in the final version of the QLD Ports Strategy. The ports should plan to be compliant with the National Plan for Clean Air. It will be especially important to have an air quality monitoring network that is comprehensive

enough to gather adequate data on health impacts from the ports and other major air pollution sources to inform new standards and risk levels.

Dredging

Coal ships require much deeper drafts than other vessels and so dredging at the Abbot Point and Hay Point coal ports will need to be at greater depths than the other ports. That means a greater degree of damage to the marine environment, the creation of more dredge spoil from initial capital dredging and ongoing maintenance dredging compared to other types of ports. These greater impacts need to be described and taken into account in the Queensland ports strategy. Recreational fishing is an important tourist attraction in Mackay and Bowen. How will the significantly greater amounts of dredging operations affect such tourism operations? Mackay and Bowen recreational fishers already report dead zones for fishing around Abbot and Hay Point port lands.

It is not clear how much dredge spoil dumping from a port would be allowed within the Great Barrier Reef outside of port limits. No caps are mentioned. No long-term monitoring of the fate of a dredge spoil plume in the dumping area seems to be required to ascertain long-term damage to the marine environment from chronic dumping. Dredge spoil is to be screened for contaminants yet not all of the contaminants GBRMPA lists for water quality testing have established standards. This is of major concern if massive port expansions are to take place because the scale of dredging and dumping will increase well beyond what has occurred historically. The risk of damage to the Great Barrier Reef greatly increases.

More than Matters of National Environmental Significance have to be considered because the Reef is one massive ecological system and downstream environmental impacts have to be understood. Adverse impacts may not be fully understood for years. How many resources will be devoted in an ongoing scientific assessment program to understand such impacts?

Stranded Assets

In the draft QLD Ports Strategy the entire focus for Abbot Point and Hay Point/Mackay is on servicing the coal industry. This locks the Central Queensland region into a coal future at a time when it is glaringly obvious we will need much more diversification of industry to avoid a boom and bust economy. Planning should provide for flexibility for easy transition of coal port functions to alternative cargos in the future as the world moves away from coal as a major fuel source. It seems at present with worldwide low prices for thermal coal that that transition is already underway. There should be caps on coal port expansions that would consume the maximum capacity of a port to avoid the development of stranded assets especially where it is at the expense of the environment (e.g. Great Barrier Reef and significant coastal wetlands) and surrounding communities. Without any cap dredging for capital works at Abbot Point could reach 42 million cubic metres i.e. ~ 84 million tonnes.

That would have significant and far reaching adverse impacts on the Great Barrier Reef. The lack of recognition in this plan for the need to plan for the future diversification of our regional economies is of particular concern.

Cost/Benefit Analyses

Independent realistic cost/benefit analyses need to be done on further port expansions rather than the present emphasis on short-term benefits. They are needed to evaluate if the expansion will be sustainable in a regional context.

Port expansions open up the way for significant environmental and social impacts in their regions of origin. Alternative existing industries may suffer greatly e.g. grazing with coal mining, rail and port impacts where the whole of the Galilee Basin has recently been declared a State Development Area (SDA) together with the coal rail corridor from the Basin to Abbot Point. SDA declaration means that affected properties (primarily grazing) can be acquired compulsorily by the Queensland government. There are 85 properties alone within the rail corridor containing the Adani, GVK/Hancock and Waratah Coal rail proposals. Whether it is a mine, port or rail line DSA designation automatically provides affected property owners with a total lack of uncertainty about their businesses in the future. It also affects their property values adversely as there is only one buyer, the state government.

Witness what happened with the Gladstone SDA expansion where organic farmers polluted with the failed QER shale gas retort pollution were forced to sell for well below the pre-pollution price of their properties. The adverse monetary and health costs of that were paid by these farmers through the low compensation that was offered. The economic, social and environmental costs have to be well understood before port expansions proceed.

Offsets

Biodiversity offsets are to be provided where coal development and export impacts are inevitable. There is no scientific evidence to support the use of offsets to maintain no net loss of environmental values. Offsets can be as little as a token payment for the losses, with moneys obtained not required to be used in the area near the damage (e.g. GVK/Hancock offsets at Abbot Point paid to GBRMPA). Offsets can also be offset once the life of the original offset is finished. Ports are national sacrifice areas with regard to environmental impacts and any expansions need to be economically and scientifically justified. The process of port expansions should be transparent and open to sufficient time for adequate professional independent scrutiny and review.

Planning

The creation of five Priority Port Development Areas around the long established ports of Brisbane, Mackay/Hay Point, Gladstone, Townsville and Abbot Point will provide these ports with a 'licence to grow' — supported by rigorous and comprehensive master planning. The growth of these ports will be driven by greater efficiencies within these port areas and

through supply chain connections that will flow from more transparent planning and approval processes.

It is not clear why Mackay and Hay Point have been lumped together as one Priority Port Development Area. They have totally different functions with Mackay handling fuel and mining machinery imports, and sugar exports and Hay Point handling coal exports.

There is also the problem of an urgent need to upgrade supporting infrastructure for the Port of Mackay. The Vines Creek Bridge to Harbour Road which many trucks use to transport goods for the mining industry through Mackay from the port is in dire need of replacement. The bridge is so unsafe it has been reduced to only one access road lane. This problem is symptomatic of government's approach to planning for the mining industry, with insufficient money from the industry going to maintain supporting infrastructure yet allowing more and more mines and port expansions. Mackay is showing the stress. Port expansions have to consider the impacts on the wider community.

... the government will prohibit capital dredging for the development of additional deepwater port facilities outside of these Priority Port Development Areas for a period of ten years.

This is an easy promise as there is not likely to be a demand for such port facilities outside the PPDA's in the next decade.

Development at ports will continue to be subject to existing rigorous environmental assessment standards. Additionally, Environmental Management Frameworks (EMFs) will be required to be developed in accordance with the guideline for mandatory master plans for PPDA's.

Monitoring

Because of an outdated and insufficient environmental monitoring regime and integrated whole-of-region approach to pollution monitoring it is not always currently possible to identify individual polluters e.g. contributors to a pollution plume in marine waters off the coast (could be port, sewage works, agricultural runoff from farms or a combination). This needs to change and the ports strategy is a chance to introduce an integrated approach by all potential polluters. This involves the ports management communicating and working more extensively with the authorities in the communities in which they operate i.e. off-site as well as on-site.

MASTER PLANNING p.33

Matters that may be considered through master planning include:

- matters normally considered to be outside port boundaries, including preservation and management of supply chains and transport corridors

- environmental management considerations, including existing regulatory requirements, and various specific issues including shipping management, dredging, offsets and cumulative impacts
- establishing a competitive advantage through providing a plan-based foundation for economic and infrastructure decision-making
- current and forecast trade demands
- port governance and performance
- provision of increased certainty for port communities and port users about future development and operations
- ensuring a balance with industries and communities that use areas impacted by port development such as fishing and tourism.

OFFSETS

Offsets are mentioned in the Master Plan section (p.33)

Environmental management considerations, including existing regulatory requirements, and various specific issues including shipping management, **dredging, offsets and cumulative impacts.**

Offsets are unlikely to work in the marine environment e.g. seagrass because is ephemeral and a favourable outcome cannot be predicted, and dredge spoil sediments because the amounts are so enormous it is prohibitively costly to implement them and they are not the same composition as the offset areas. For example the offset for dredge spoil sediment for the T0, T2 and T3 coal terminal projects at the port of Abbot Point will be 8.1 million tonnes. The Reef Water Quality Plan spent \$200 million to achieve a reduction of 360,000 tonnes of sediments in agricultural runoff to the Great Barrier Reef i.e. a cost of \$555 a tonne. Using those figures the proposed dredge sediment offset in the Burdekin and Don rivers (SEWPAC condition for the dredging) would cost \$4.5 billion!

There is no requirement to show if and when an offset would be considered to be successful, or how science will underpin the selection, management and acquittal of offsets.

CUMULATIVE IMPACTS

The spatial extent for the investigation of cumulative impacts needs to be shown. There are impacts on surrounding communities and the region in which a port operates and to fully determine whether the benefits of a port expansions justifies the costs the relevant spatial extent needs to be determined by independent experts and not consultants hired by the agency which has self-interest i.e. the port authority or proponent who is seeking port access.

- ensuring a balance with industries and communities that use areas impacted by port development such as fishing and tourism

BALANCE

Please define balance. Too often it means token efforts to placate affected communities and sectors such as the environment, fishing and tourism. Moving a coal stockpile off a migratory

shorebird habitat and placing it adjacent to that habitat means it will still have severe impacts and does not represent “balance”. Such terms are vague and subjective and need to be replaced with something more meaningful and backed up by science.

INTEGRATION WITH REGIONAL COUNCIL PLANNING SCHEMES

It is important that port authorities consult meaningfully and honestly with local government authorities they impact and coordinate their planning with that of local government to minimise their impacts. Industry and transport hubs are planned to grow around the port lands of Hay Point and along the Bruce highway. They will greatly increase particulate’s pollution above World Health Organisation standards. Both port and local government authorities need to plan on how to prevent exceedances of emission standards and monitor emission impacts on human health in the communities they impact.