ECONOMIC, ECOLOGICAL AND SOCIAL RISKS IN DURBAN'S PORT-PETROCHEMICAL-COAL EXPANSION

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In Durban, South Africa, the risks associated with economic planning errors - especially the city's growing herd of white elephant construction projects - combine with ecological dangers and social upheaval to generate a potentially explosive situation in coming years. As the South Durban port's \$25 billion expansion gathers momentum and container traffic rises from recent levels of 2.5 million per year (Africa's highest) to a projected 20 million by 2040, social activists have been establishing lines of argument that pick away at the edges of state-corporate investment logic. That logic has obvious flaws in terms of rising risk in the shipping industry (especially with the Agulhas Current continuing to capsize even extremely large vessels), externalization of costs, overcapacity, inefficiencies and national economic interests. Moreover, the years since 2008 have witnessed a process of 'deglobalized' flows of trade and investment, with South Africa increasingly uncompetitive what with recent credit ratings downgrading certain to lower the country's currency value (hence deterring imports) and to raise interest rates, even on trade finance. In addition, to the extent that Environmental Impact Assessments now include concern about climate change, a project of this magnitude is both a victim and a villain when it comes to rising sea levels, extreme storms and ocean acidification. The risks associated with social unrest, especially as a result of displacement as the back-of-port operations encroach on poor people's residences, are compounded by the likelihood of community activists (including this author) embarking upon 'financial sanctions' campaigning against corporations (such as Transnet) involved in the portpetrochemical expansion. Hence a full spectrum of risks now emerges in an era of frenetic mercantile and fossil fuel activities, in what is already a politically-volatile Durban municipality, stretching eastwards out into the maritime-volatile but potentially oil-rich Agulhas Current.

Introduction: The Imperatives of Port and Fossil Fuel Expansion

If the anthropology of maritime security has so far been understood mainly in terms of geo-strategic positioning, fisheries and mitigation of naval attacks, then major new dimensions of risk associated with port expansions and associated infrastructure mega-projects may stretch the sub-discipline. Vast new investment in maritime infrastructure capacity is terribly risky given the paucity of evidence that containerization can continue at the same rates as in the past, especially what with climate change and social unrest now rising as major considerations in energy, transport, production and consumption systems. Those systems have come to rely upon containers as the most efficient way of packaging commodities for long-distance transport.

The historic shift of mercantile commerce towards shipping containers was also an outcome of risk management in the sense that war-time logistics offered the basis for what came to be world maritime commerce's primary unit of measure,

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the Twentyfoot Equivalent Unit (TEU) metal box. As Deborah Cowen (2014) observes.

The standard shipping container, another US military innovation, has been repeatedly dubbed the single most important technological innovation underpinning the globalization of trade. While shipping containers have a long history of experimentation, the standardization of an intermodal container that could be transferred across different modes of transport was first experimented with during World War II as a means to reduce the time and labour involved in transporting military supplies to the front. It was not until the Vietnam War that the military use of the shipping container entrenched its standardized global form.

That war was lost by Washington because of a popular liberation movement's courage. Although it would be invidious to compare, since there is nothing of the same intensity, resistance to the contemporary commercial transport system can be traced at several stages: petroleum extraction and refining, container shipping expansion, truck freight and warehousing and retail systems. To illustrate, one of the most extreme sites of the mercantile sector's vulnerability is also targeted for one of Africa's single largest infrastructure expansions. The largest project in Africa is on the Congo River: the \$100 billion Inga Hydropower Project designed to generate more than 40 000 megaWatts of power, making it three times larger than the world's next largest dam, China's Three Gorges. But that project's financing remains in doubt since the host Democratic Republic of the Congo is too unstable and the surrounding region too vulnerable for long-distance high-tension electricity power supply routes in the foreseeable future.

In contrast, in South Africa, two major projects are underway that will boost overall infrastructure spending by several tens of billions of dollars' worth: the Strategic Investment Projects 1 and 2 run by the Presidential Infrastructure Coodinating Commission (PICC). Both involve extensive port expansions, and both are controversial because of the debatable economics, community displacement and ecological devastation – especially climate-related – associated with the state-subsidised projects. The first is the new rail line (plus \$4.5 billion in locomotive purchases) that will bring coal from Limpopo and Mpumalanga Provinces to Richard's Bay. The second – the subject of most of this article – is the expansion of the South Durban Basin's port and petrochemical complex. In both cases, the port municipality and parastatal agency Transnet have begun detailed planning, and both are being contested by environmentalists, with community activists also opposed to South Durban, as discussed in more detail below.

To demonstrate the global and national priorities associated with South Africa's port infrastructure expansion, consider the broad justification offered by President Jacob Zuma (2014) for the PICC projects:

At the close of the second decade of our democracy, it is clear that we need to change gear. All South Africans need to work together in a concerted effort to improve service delivery, bolster job creation and expedite economic transformation. In South Africa, joblessness is

still unacceptably high even with recent growth in jobs numbers. Global economic prospects remain fragile. In response, the Government of the Republic of South Africa has taken a bold decision. We have chosen a path of counter-cyclical spending driven by catalytic infrastructure investment. We are striking a fine balance between protecting our sovereign integrity while leveraging the multiplier impact of fixed capital formation. Valuable lessons have been learned from our most recent build programmes, such as the 2010 World Cup stadiums, King Shaka International Airport, Medupi Power Station and Gautrain.

In the same spirit, Public Enterprise Minister Malusi Gigaba(2014) – who was in charge of Transnet from 2009-14 – made claims two weeks before the 7 May 2014 election that after its decisive win (which was nearly 63 per cent of the vote), the ANC would implement "radical socioeconomic transformation" to make the economy "a more labour-absorbing one that is characterised by deracialised and widespread ownership." Gigaba advocated "local beneficiation and value addition," "inclusive and equitable growth" and "millions of sustainable and decent jobs. One of the levers we are using to restructure the South African economy is infrastructure investment" of \$380 billion.

Likewise, the National Planning Commission's (2011) Diagnostic report argued, "South Africa needs to move away from the unsustainable use of natural resources" and optimistically asserted, "South Africa can manage the transition to a low-carbon economy at a pace consistent with government's public pledges, without harming jobs and competitiveness." Yet the Commission's (2012) National Development Plan endorsement of the PICC SIPs 1 and 2 would, in reality, amplify that very unsustainability and carbon-intensity. The Plan calls first for "The construction of a new coal line to unlock coal deposits in the Waterberg, extension of existing coal lines in the central basin," and hence a rapid expansion of coal exports – mostly to India – from the world's largest export coal terminal, Richards Bay. In past years, Durban had the honour of exporting the bulk of South African coal, a process which, shipping journalist Sidney Howard (1936) reported in the mid-1930s, "helped to make the port of Durban prosperous. The coal is shipped to East African and Red Sea ports, largely by Union Government vessels, as well as to other parts of the world... The capacity of the loading plant exceeds 1,000 tons an hour."

By the mid-1970s, coal shipments began to be directed to the new deep-water port at Richards Bay, where the purpose-built Coal Terminal and mechanisation lifted the rate dramatically. By 2014, Transnet used Richards Bay to run 85 per cent of its export capacity of 78 million tonnes per year. Still, when Botswana aimed to annually export more than 100 million tonnes of its vast coal reserves – an estimated 212 billion tonnes—by developing a rail link to Walvis Bay, in 2013 it began the process at its Debswana joint venture with DeBeers with Indian and Chinese buyers who loaded at the Durban port.

The odd exception like that aside, during the late 20th century, Durban became an extremely expensive and inefficient port. By 2012 it was reportedly the world's

most costly harbour, with a tariff of \$285,000 per average container ship, nearly five times higher than the world average. Along with Cape Town (just a bit less expensive), this price was nearly double the next highest, Melbourne (Dyer 2014). As a result, the second major PICC project would be its modernization: "the development of the Durban-Gauteng freight corridor, including the development of a new dug-out port on the site of the old Durban airport" (National Planning Commission, 2012). The prior work on doubling Transnet's Durban-Johannesburg pipeline capacity (at a cost of more than \$2 billion) and a few smaller projects were central to expanding the shipping, freight, and petrochemical industries, in spite of near universal South Durban community opposition. The vast damage done by coal and petroleum to local and global ecologies was not acknowledged in Planning Commission, Transnet or municipal documents, even when repeated Environmental Impact Assessment challenges were made in 2012-14 by the South Durban Community Environmental Alliance (SDCEA) (2014), the University of KwaZulu-Natal Centre for Civil Society (Paton 2014) and other Durban environmentalists.

Finally, by way of background, it is revealing that this kind of port-centric infrastructure strategy was endorsed by SA Communist Party deputy general secretary Jeremy Cronin (2013), who enthused over unlocking the northern mineral belt. Major mining houses have extensive mining licences in the Waterberg region of Limpopo, one of the poorest regions of our country. There are major coal, platinum, chrome and other mineral deposits there, but unlocking these resources for development has been severely restricted by water and energy shortages, and by the absence of an effective transport infrastructure. Through our major parastatals (Eskom and Transnet), coordinated by the PICC, we are addressing the energy and logistics challenges, and through the Department of Water Affairs major dam and water pipe-line construction is underway. The funding for this public-sector driven infrastructure will be recouped through user-pay, off-take agreements with the mines. The mining houses bring investment and technology that government doesn't have. Obviously the objective of the mining houses is profits, but in pursuing profits they create jobs.

As Cronin (2013) continued, "The rail infrastructure that is provided by Transnet needs to focus not just on maximising exports (which the mining houses want), but also on connecting coal mining, for instance, more effectively to beneficiation in the new generation power stations. The state-regulated pricing of water, electricity and logistics will also need to ensure that our strategic developmental objectives are leveraged. In particular, we need to ensure that the towns and cities that grow up around this development do not replicate old patterns, but are green and integrated."

Even with sustainability rhetoric added, this 'development' narrative – from the President, Public Enterprise Minister, National Planning Commission and

Communist Party – confirms South Africa's ongoing control by what is termed the Minerals-Energy Complex (Fine and Rustomjee 1996). As one casualty, this means that no change to *status quo* climate destroying policies is on the cards (Bond 2012). Even a few weeks before Durban's hosting of the United Nations November 2011 world climate summit, Pretoria's *Climate White Paper* also refused to grapple with fossil fuel addiction. As the national Plan argued, the top priority for economic growth is to "raise exports, focusing on those areas where South Africa has the endowments and comparative advantage, such as mining." Though this *status quo* strategy is destructive to economy, society, polity and ecology, it was unsurprising to see *Business Day* editor Peter Bruce (2012)– for many, the leading organic intellectual of SA capital – make the same point without any distracting sustainability discourse, urging on the state's promised \$100 billion infrastructure spending in early 2012 with the mantra: "Mine more and faster and ship what we mine cheaper and faster."

What is unique about the PICC's plans for South Durban, is that although the Basin's residents include many people (mostly black) with employment and other commercial links to shipping, freight and petrochemical industries, the extra pollution in this toxic-saturated 'armpit of Africa' has over the past decade catalyzed extraordinary resistance (Bond 2011, Desai 2002). The resistance is one of several resistance sites to consider when understanding project risk. Others relate to the character of maritime security and mega-ship construction in an era of extreme weather events and climate change's impact on one of the world's most volatile coasts. First, however, consider the risk associated with economic adjustments in South Africa and the world.

Durban in a Risky National and World Economy

The Durban port is an excellent case site in which to explore multifaceted risk-taking. As researcher Jack Dyer (2014) points out:

- it accounts for over 70 per cent of trade passing through South Africa's ports;
- over 5000 vessels calling per year;
- a total of 2.69 million 20 foot TEU units of container traffic growing at 1.2 per cent in 2013;
- over 6800 containers handled per day, with 44,829,622 tons of general cargo;
- worth over \$10 billion per year in terms of direct expenditure in the local maritime economy and value related activities;.
- most significant port in the Southern Hemisphere and in Africa in terms of marine-related economic activity;
- comprises a significant part of not just Durban but the South African economy.

The national economic context is vital when considering the prospects for Durban's increased container turnover traffic from around 2.5 million per annum in the 2009-13 period to what the National Planning Commission (2012) estimates will be 20 million by 2040. South Africa's major economic problem remains the sustained overaccumulation of capital (Bond 2014). With its major corporations having the third highest profit rate in the world (IMF 2013) and also, according to a PricewaterhouseCoopers survey in early 2014, ranking first in the world in corporate fraud (Hosken 2014), South African capital is rapacious. The long history of corporate collusion with apartheid could not be erased overnight (Saul and Bond 2014), and as black liberation in 1994 ushered in a "Faustian Pact" (Kasrils 2013) between the new ruling party and capital, demands by a leading fraction of business for neoliberal reform were implemented (Bond 2014). This was economically unwise, for as exchange controls fell, for example, in 2007, an estimated 23 per cent of GDP was taken offshore in the form of capital flight (Mohammed 2010).

South Africa was left extremely vulnerable to world economic twists and turns. As the global financial crisis unfolded in 2008-09, the Johannesburg Stock Exchange lost over half its value within weeks, and The Economist's risk ranking of South Africa was worst of 17 emerging market peers, especially due to the current account deficit, itself driven not mainly by trade deficit but by the negative balance of payments, as profits and dividends flooded out to the new London financial headquarters of the country's largest firms. The foreign debt then soared, from \$25 billion in 1994 to \$80 billion in late 2008 to \$140 billion by 2014. One reason for this degree of vulnerability was a series of persistent currency crashes: by more than 15 per cent within a month-long period on seven separate occasions, in 1996, 1998, 2001, 2006, 2008, 2011 and 2013, the worst record over the last 15 years experienced in any medium or large country. Another reflection of vulnerability especially to rising interest rates in defense of the currency, was the excessive local consumer credit expansion, a large part of which was based upon mortgage bonds, given South Africa's world-leading real estate bubble (389 per cent larger in 2008 than in 1997, double the height of second place Ireland's bubble). Internally, domestic state borrowing was kept under control, and although the decline in corporate tax revenue drove the budget deficit to a near-record 7.6 per cent of GDP in 2009 and a bit less in 2010, South Africa was not pursuing classical Keynesian strategy. The state was instead carrying through with massive and usually irrational mega-construction projects contracted years earlier, especially the World Cup stadiums and elite transport infrastructure such as the new Durban airport and the Gauteng fast train and highway e-toll upgrade (Bond 2014).

In this dismal macro-economic context, the most successful sectors were communications, construction and finance while labour-intensive sectors such as textiles, footwear, and gold-mining shrunk. Overall manufacturing also fell as a per centage of GDP, and there appeared no incentive to reach out to the growing

black working class market, but instead to surrender cheap production of basic goods – clothing, textiles, appliances, electronics, etc – to East Asian imports, mostly through Durban's port. The Gini coefficient measuring inequality rose after 1994, and this was racialised, as black households lost and whites won. One reason was the widespread casualisation of labour and the decline of labour's share of the social surplus, while another was that total unemployment rose to a rate of around 40 per cent at peak (if those who have given up looking for work are counted; otherwisearound 25 per cent, and just 6 per cent for whites) (Bond 2014). Environmentally, the depletion of non-renewable resources was formidable, and so was pollution. The economists' favourite measure of well-being, GDP, should be adjusted to account for these two factors (amongst others), because GDP only considers mining activity as a positive increase eachyear, instead of factoring in mineral depletion, i.e., a country's decline in natural capital. If those corrections are made, South Africa would have a net negative per person rate of national wealth accumulation of US\$245 per year (for 2005), according to the World Bank (2011). In other words, South Africans are growing poorer all the time, the more the country is stripped of minerals.

In Durban, aside from very strong ethnic links to the ruling faction of the African National Congress (ANC), the political rulers have little beyond tokenistic social grants to offer its 3.5 million residents, of whom more than a quarter live on the very margins of life, in shacks. ANC patronage to major and minor construction companies and other semi-privatised municipal tendering (home building, bus services, etc) has created a small wealthy elite whose performance has been subject to ridicule (the names Mpisanes, Jay Singh, Roy Moodley, Willy Govender, Vivien Reddy, Andrzej Kiepiela, Roy Moodley and Carver Media, for example, all reflect various scandals). The former mayor, Obed Mlaba, was named in an official Durban municipal corruption commission, the 2013 Manase Report, as having hijacked a \$300 million tender for waste incineration, yet national ANC rulers soon named him the country's High Commissioner to Britain. The city's ruling economic elites have just as dirty roots in apartheid profits, especially the sugar barons who landgrabbed the coast and abused indentured Indian labour, as well as shipping magnates and the tourism industry. But Durban never bragged of a strong organic manufacturing bourgeoisie, although there are several major production sites like Toyota automobiles, the petrochemical complex and a manganese smelter. The city's status in both manufacturing and the country's fastest-growing sectors, finance and communications, is merely as branch-plant town. As a result of these rulingclass characteristics, Durban would never be the kind of city that could shape its own future.

As a result, most municipal economic development efforts entailed crafting a marketing strategy based upon sports tourism and convention centre activity (Durban has Africa's largest hall), as well as a strong patronage impulse within the

ruling party, which together generated high-profile white elephant projects. These include a new \$390 million stadium built next to a perfectly good stadium for the 2010 World Cup; high annual subsidies to that stadium, the convention centre and the uShaka Marine World entertainment site; and a new airport 40 kilometers north of the city that operates at a fraction of its promised capacity, with unfulfilled fantasies of an "aerotropolis" development at the Dube Trade Port. It was no surprise for Toyota South Africa CEO Johan van Zylto announce, "Durban as a brand is not strong enough to simply say 'come and invest in Durban'. What it needs to attract investors are big projects. Durban needs to keep ahead of the competition. China is building ports they don't even know when they will use. If return on investment is the line of thinking we may never see the infrastructure" (Naidoo 2012).

Yet there is great risk associated with reliance upon the maritime sector, tourism and commodity exports, as the globalised economy begins what may become known as a 1930s-style "deglobalisation" era. As *The Economist* (2013, 1) argued in October 2013 in its cover story entitled "The Gated Globe",

Globalization has clearly paused. A simple measure of trade intensity, world exports as a share of world GDP, rose steadily from 1986 to 2008 but has been flat since. Global capital flows, which in 2007 topped \$11 trillion, amounted to barely a third of that figure last year. Cross-border direct investment is also well down on its 2007 peak... hidden protectionism is flourishing, often under the guise of export promotion or industrial policy.

The pause button will no doubt be lifted. Yet in what was otherwise a celebration of global flows, the consulting firm McKinsey Global Institute (2014, 5) also acknowledged that a peak had been reached in 2007 with \$29.3 trillion worth of flows – 52 per cent of world GDP – which then sunk substantially in relative terms over the subsequent five years, to just 36 per cent: "This reflects the correction from the global credit bubble and deleveraging of the financial system. Financial flows have changed direction, too, with outflows from emerging markets rising from 7 per cent of the global total in 1990 to 38 per cent in 2012." Beginning in May 2013, investors roiled South Africa and four other major emerging markets when the US Federal Reserve's Quantitative Easing began to be phased out ("tapered"). As a result of US interest rates slightly higher, outflows meant that four of the five "BRICS" - South Africa, India, Brazil and Russia (which suffered again in early 2014 from financial sanctions imposed after its Crimea invasion) – suffered substantial currency crashes that, in turn, would limit import capacity. Even China's property bubble burst in the 44 largest cities by 19 per cent in the year between April 2013 and 2014 (Wall Street Journal, 2014). Because of the turmoil in BRICS, Indonesia, Turkey and similar sites, it is wise to recall the United Nations (2013, 32) warning, that the world's financial markets aim to shift "highrisk activities from more to less strictly regulated environments," especially sites where massive state-subsidized and guaranteed infrastructure projects are envisaged. In these sites, including the BRICS, both borrower and lender are facing intense levels of desperation: to sink excess funds into new mega-projects on behalf of multinational capital. Durban's port-petrochemical expansion is a fine example of the high degree of economic risk involved, in part given what awaits in the nearby waters.

Risks in Riding and Drilling the 'Remarkably Stable' (sic) Agulhas Current

Seeking to locate India in 1497, as had Christopher Columbus before being redirected westward five years earlier, Vasco da Gama arrived at what is now assumed to be the Durban harbour, and as it was Christmas, he named it Natal. Not even stopping to alight, he rapidly proceeded up the coast, but names are sticky. The area he glanced at in transit during those weeks fighting the Agulhas Current is today known as KwaZulu-Natal Province and the natural port he might have seen over the sandbar then blocking the entrance —dug out to take in large ships only in the 1880s — is Durban's harbor. The city was named after a governor of the Cape Colony, William D'Urban, once white English-speaking settlers drove King Shaka's forces off the land and established a borough in 1835; while the metropolitan area was renamed Ethekwini 160 years later, Durban is the core city.

Although it was South Africa's leading port by the early 20th century as the sugar industry began exporting in earnest, Durban's waters were never easy to navigate. The Natal Pulse races down the Agulhas Current a half-dozen times each year, pushing 20km per day. It is the main reason Durban's coastline hosts more than 50 major ship carcasses. In 1909, one notable victim of mega-waves reaching 9 meters was the Waratah, which sunk 180 miles south of Durban (en route to Cape Town) on 27 July with 211 passengers and crew, leaving no survivors or sign of the wreck. The ship was one of the world's largest at 142 meters in length and 16 000 gross tonnes. Indeed, the Pulse contributes to waves that have sunk 1000 more vessels off the Transkei Wild Coast. Susan Casey's (2010) book The Wave: In Pursuit of the Oceans' Greatest Furies pays Agulhas this respect: "Crude, diesel, jet fuel, liquefied natural gas: oil in all its forms was heartbreaking, infuriating and all-too-common sight in the ocean. Supertankers, behemoths that couldn't make it through the Suez Canal, swung down from the Middle East, took their chances hopping a ride in the Agulhas, and met their share of disasters. Salvagers used every tool at their disposal to prevent the damaged tankers from gushing out their contents, especially in fragile near-shore environments, but sometimes the battle was lost."

The near shore at South Durban is a critical site for not just shipping accidents but other oil spills. In 2004, just offshore South Durban's Cuttings Beach, there was a significant spill of five tons at the Single Buoy Mooring, the 50-meter deep intake pump that feeds the refineries with 80 per cent of SA's crude oil imports. Onshore, corporate pollution standards are so lax that the South Durban refineries

regularly spring disastrous leaks and explode, sometimes merely from lightning strikes. Daily, poisons are flared onto thousands of neighbouring residents. The Indian, coloured and African communities suffer the world's highest-ever recorded asthma rate in a school (52 per cent of kids), as Settlers Primary sits next to the country's largest paper mill (Mondi) and between two refineries: one run by Engen, Chevron and Total; and the other, called Sapref, combines BP, Shell and Thebe Investments. Sapref's worst leak so far was 1.5 million liters into the Bluff Nature Reserve and adjoining residences in 2001. Together these refineries can process 300,000 barrels of oil a day, more than any other single site in Sub-Saharan Africa.

But it is when extreme weather combines with destructive oil shipping that risk amplifies. As just one example of the rogue waves that periodically arise, a swell of more than 20 meters caused by a southwesterly gale sunk a major oil tanker, the World Glory, on 13 June 1968. That ship, heading from Kuwait to Spain, took the hit 65 miles east-northeast of Durban and after two hours had drifted 40 miles further through the Southeast current, eventually spilling its 334,043 barrels of crude oil. Two dozen of the 34 crew lost their lives. *Time* magazine (1954) reported that when launched in February 1954, World Glory was the world's largest tanker, "with a capacity of 16.5 million gallons, enough to fill 2,062 railroad tank cars."

In recent years, major storms have worsened. Just offshore Durban on 26 July 2011, the 40-year old MT Phoenix oil tanker was hit by six-meter high waves. It lost its anchor mooring and drifted 25 km north in the main Agulhas eddy, landing on the rocky shoreline in Christmas Bay. The ship was wrecked at the heart of a beautiful – albeit class/race-segregated tourist and retirement site – on Durban's North Coast. Two weeks earlier, the same beach held an Association of Surfing Professionals (ASP) world competition, Mr Price Pro, which boasted some of the best waves ever seen in ASP history, contestants testified. The Agulhas Current is the second most volatile in the world, with a 5 knot speed at peak, but is most intense in the July-September months, to the delight of surfers who can find world-class tube waves in which to perform the barrels through which the highest scores are achieved.

The winter swells arose just when MT Phoenix was being towed into Durban harbour for confiscation, having lost its engines a few hundred miles down the coast. According to Cathleen Jacka(2011) of the maritimematters.net website, the incident confounded the South African Maritime Safety Authority (Samsa), what "with hints at a deliberate beaching; the possibility of a mystery stowaway still hiding onboard; uncertainty as to the true identity of the owners and even that the vessel was scrapped in India last year." A Samsa official observed that the 15-member crew "seemed inexperienced in the basic actions required to stabilise the vessel's position" and remarked, "It would not be the first time that an unscrupulous ship owner was prepared to sacrifice a vessel in attempting to realise the insured

value". There was apparently no insurance for the MT Phoenix, since Lloyds had removed it from the books the year before and allegedly it was on its final trip, from West Africa to India's ship-breaking graveyard. The owner, Suhair Khan of *Dubai, stopped taking calls, leaving South Africans to bear the* risk of 400 tons of oil spilling if the ship broke on the rocks. Estimates of the heroic rescue operation's cost to the taxpayer easily run into the millions of dollars, but at least the crew was saved and oil was laboriously pumped ashore (Jacka 2011).

Just weeks before, in May 2011, the Petroleum Agency of SA (PetroSA) began authorizing seismic oil surveying in the same area. The initial applicant, followed by Sasol and ExxonMobil, was Silver Wave Energy, a Singapore-registered company whose owner is Burmese businessman Min Min Aung, a close associate of the junta that still rules Myanmar. The Burmese connection is important, in part because exploitation of oil and gas in the Andaman Sea has long been controversial. When Unocal – now Chevron – built a pipeline to Thailand, it did such enormous damage to people and the environment that local villagers, supported by Earthrights International, successfully sued the firm for \$30 million. Since 2007 the Arakan islands on Burma's Bay of Bengal coast have been the main site of intense conflict, as Jockai Khaing from Arakan Oil Watch has revealed, and again Aung is a key player. Silver Wave has also been exploring dubious extraction projects in Russia, Sudan, Guinea-Conakry, Indonesia and Iraq, but in spite of sanctions against Burma at the time, Aung received PetroSA's endorsement to explore 8000 square km stretching from Durban to Richards Bay. Silver Wave's permission extends from 30 meters out into the ocean, to depths of 2 kilometers, while ExxonMobil's goes as deep as 3.5 kilometers. By comparison, BP's Deepwater Horizon platform in the much calmer Gulf of Mexico drilled 1.5 km down to the seafloor surface. Sasol's oil drilling is also contentions; it is the former state-owned company (privatized in 1979 and subsequently co-listed on the New York Stock Exchange) repeatedly fined for pollution, with a Secunda synthetic fuel (coal/gas-to-oil) operation that is considered the single largest point-source of CO2 emissions in the world.

As if to demonstrate that a company like Silver Wave (2011) is a high risk, its own Environmental Impact Assessment (EIA) filing to explore for oil includes this prose: "Compared to other western boundary currents the Agulhas Current adjacent to southern Africa's East Coast exhibits a remarkable stability." Still today, large ships continue to founder off the KwaZulu-Natal coastline. One winter day, 19 August 2013, the China-bound MV Smart tried to exit the port of Richards Bay in ten-meter waves with a load of nearly 150 000 tons of coal and 1 800 tons of oil. The huge vessel split after grounding on a sandbank at the entrance to the world's largest coal export site. Three tugboats failed to dislodge the boat (Rawlins 2013), after "the slamming of the vessel's stern on the seabed while encountering exceptional swell," according to Greek owner NG Moundreas (van der Sandt, 2013). Environmentalists accused the captain and harbor master of negligence for allowing

the ship to sail under those conditions; the impact of an oil spill of that magnitude could have been devastating to the fragile ecosystem around Richards Bay. Once the oil was pumped safely off, local port officials agreed to Moundreas' dumping of nearly all the coal into the Richards Bay harbor, so as to tow the broken-backed Panama-registered ship 70km out to sea for sinking. The project was of great concern to the Department of Environmental Affairs, whose spokesperson Zolile Nqayi worried that "the vessel may break up eventually, sink there, and we will have to close off the port. That may be devastating for the area" (Lancaster 2013), including sensitive nearby estuary sites such as the uMfolozi, uMlalazi and the uMlhathuze Sanctuary.

Although in that case, the sinking didn't occur within Richards Bay, the local shipping industry appeared ill-prepared for extreme weather and "monster waves". This is a global problem, as insurance expert Sven Gerhard of Allianz Global Corporate and Specialty explained in 2014: "The claims arising out of maritime emergencies of these 'mega ships' can be huge," in part because – as MV Smart showed – there is "risk of such vessels blocking port and terminal accesses"; as well as enormous costs of "salvage operations to recover ship and cargo when accidents occurred" (Fairplay 2014).

The largest of the mega-ships are container vessels which now regularly carry more than 10 000 TEUs. In 2013 alone, the Danish firm Maersk commissioned seven ships, each 400 meters long and 60 meters wide and 16 meters deep below the waterline, that can carry 17 000 containers. In 2015, China Shipping and United Arab Shipping Company will begin sailing 480-meter long Hyundai ships that carry 18 400 containers. And there will be more built with 24 000 container capacity by 2016, mainly in South Korea. These are known as "super post-Panamax", in that the Panama Canal's limits allow 5 000. The \$5.5 billion dig to deepen and widen the canal by 2015 will not deter a \$40 billion Chinese-funded competitor in nearby Nicaragua. Most harbours are following suit.

The severe economic risk associated with these ships, however, is akin to many aspects of capitalist overproduction; overcapacity is associated with larger ships on the East-West route, then cascading to smaller ports through hand-medown post-Panamax ships of only 12 000 TEU capacity. According to Andrew Penfold of Ocean Shipping Consultants, "Ports and terminals, especially in the north-south trades, are being asked to handle ships which would have appeared to be totally out of scale with the demands of the trade – that's not because the shipping lines are being careful with where they put their ships, but because they've got so many of them, there's nothing else they can do with them." Economies of scale in the shift from ships carrying 16 000 TEUs to 24 000 TEUs saves 17 per cent per container (\$10 per unit per day at sea is the target). According to Penfold, "Despite the wounds of overcapacity, further ordering off even larger vessels seems inevitable" (*International Shipping News* 2014). Other savings come in the form

of labour; Walmart's 2011 purchase of the Maersk 18 000 TEU capacity ships for its trans-Pacific route (four days from China to California full, and the ship returns empty to reload) allows it to hire merely 13 to 19 crew (Martin 2011).

Under the pressures of globalization, containerization and mechanization, ports like Durban will then be compelled to install new gantry cranes to unload containers four at a time. But as Transnet's 2013 installation of seven Chinese cranes costing \$65 million showed, design specifications are critical because these now lift not four but only two at a time. Ports are also being pressured to service much larger boats by dredging their harbour entrances deeper; by 2013 the 12 500 TEU boats could only enter and exit Durban at high tide and half-full, even after a major widening and deepening operation. Other requirements are the expanded size of berths to accommodate longer ships, and longer (and stronger) quay walls. The expansion of Durban's Berths 203-205 reflects these additional requirements, Transnet claims. But South Africa's leading maritime journalist, Terry Hutson (2014), disagrees, and questioned Transnet's economic logic in early 2014: "In Durban there is little likelihood of any big growth in volumes in the near future. A few years ago, the port went backwards in the number of containers it handled, dropping something like 200 000 TEU in a year and there has been little growth since... So the questions remain: Does Durban need the deeper berths and aren't the bigger ships premature?"

Climate Risk when Transnet is Both Victim and Villain

One factor persistently eluded Transnet in its port expansion advocacy and planning: climate change. As shown in a 2012-14 debate between community critics and Transnet's environmental consultants - initially adjudicated in the former's favour by the national government regulator – the extreme weather and rising sea levels that can be expected in coming decades allow a new climate narrative to emerge as part of resisting the port-petrochemical expansion. Disputes date to the first recent stage of major Transnet spending, the oil pipeline's doubled capacity starting in 2006. By 2008, SDCEA had utilized the climate narrative vigorously, both to highlight damage done to South Durban by climate change, and to consider the damage to the earth done by South Durban industries. That pipeline, originally estimated to cost \$600 million, increased to \$2.34 billion by 2014. Collusion in the tendering process by major construction companies was one reason (Venter 2013). But there were other telling reasons, too, as the main politician then responsible for Transnet, Public Enterprises Minister Malusi Gigaba (2012), concluded after a review. Amongst "systemic failings that compromised the intended outcomes"were project managers who "lacked sufficient capacity and depth of experience." He pointed out that "analysis of risks" was weak and that EIAs and water and wetland permits were not "pursued with sufficient foresight and vigour."

The critique by SDCEA (2008) of the oil pipeline EIA reflected concerns about local environmental injustices and the race-class combination of biases associated with rerouting the pipeline to black areas from wealth white areas. But in addition, SDCEA observed that there was relevance in the Kyoto Protocol, which as Transnet put it, "commits a country to quantified emissions limitations and reductions." As SDCEA (2008) claimed, "the rise of CO2 emissions that will be facilitated by the pipeline is immense, and is only referred to in the Draft Scoping Report as a potential legal problem, with no details provided." And SDCEA (2008) pointed out many other aspects of pipeline and refinery mismanagement in South Durban, including the health of the port itself: "Durban Bay, in which the harbour is situated, is struggling to cope with the pollution loads from harbour and associated activities, contaminated riverine and storm-water inflows. The expansion will require further removal of aspects of the Bay's ecosystem, which will in turn further reduce the assimilative capacity of this threatened and fragile estuary."

These objections neither changed Transnet's mind nor slowed the EIA process, even though a risk warning was provided on 19 March 2007. According to marine expert Andrew Mather (2007), a massive storm hit Durban that day: "wave run-up heights were measured at twelve beaches along the Durban and Ballito coastline and these peaked at 10.57 meters above Mean Sea Level." But having successfully ignored ecological problems caused by the pipeline, the next stage for Transnet was downplaying climate change associated with the first stage of the port's expansion, in a 2012-14 EIA process. Yet by then, even the Ethekwini metro municipality's (2009) own *Municipal Adaptation Plan* had, in late 2009, identified a series of vulnerabilities to the harbour:

cyclones are projected to track further south down the Mozambique Channel increasing the likelihood that severe storms will occur in the Durban region... roads, bridges, railway lines, storm water and sewerage pipes as well as beachfront property could be washed away... Disruption to serves at the Port of Durban (e.g. damaged cranes and ships) could have short to medium term impact on a wide range of businesses, organisations and activities. High winds disrupt the entry of ships to the Durban harbor and prevent the operation of port-side cranes.

The climate report done by Transnet (2012) via its consultants ZAA was revealing, with Transnet in both a victim and villain role. As for the latter, Transnet's failure to incorporate trends in global climate negotiations meant that even the official statement from the 2011 United Nations climate summit – the 'Durban Platform' – was ignored, insofar as that process will erase differences between Annex 1 and 2 countries, hence drawing South Africa into formal obligations at the 2015 Paris climate summit. Those obligations will probably include emissions cuts in shipping and bunker fuel consumption, just as airline emissions cuts began to be mandated by the European Unionin 2012. The South African government's (2010) own climate green paper noted the growing "reluctance to trade in goods with a high carbon

footprint." The carbon tax announced in 2013 would inevitably apply to shipping, given current trends to incorporate maritime activities – but again was ignored by Transnet (2013). In addition, when it came to mitigation, Transnet (2013) made another revealing argument: the vast expansion in shipping that the capacity expansion will facilitate could lead to *lower* CO2e emissions. Transnet's (2012) Nemai consultants claimed that the economies of scale associated with post-Panamax shipping would be decisive: "The project will decrease the ship waiting and turnaround times which will have a lower carbon impact" – not realizing that if efficiency is increased by reducing the ships' offshore wait, this increases their ability to load, unload and hence raise emissions.

As for Transnet as victim, the desire to build the \$380 million first stage of the project as quickly as possible, thereby raising annual container processing capacity from around 2.8 million to 5 million, led to an apparent case of climate denialism. One government researcher – the Council for Scientific and Industrial Research's Roy Van Ballegooyen (Transnet 2012) – working for Transnet entirely ignored climate in his "Modelling of potential environmental change in the port marine environment" report. After being repeatedly challenged on climate, Transnet's (2013) formal EIA then resorted to using 2008-and-earlier information, especially about the impact of sea level rise (SLR):

The probability of sudden large rises in sea level (possibly several metres) due to catastrophic failure of large iceshelves is considered unlikely this century... In 2008, the UN's expert scientific body on climate change projected that the sea level around the world could rise from anywhere between 180 mm and 580 mm by the end of this century as result of rising ocean temperatures and the melting of glaciers, snow and ice in polar regions.

That EIA report was rejected by the Department of Environmental Affairs as inadequate on two counts: the Durban harbour's sensitive sandbank would be partially destroyed, nor was climate properly considered (Paton 2014). But in its mid-2014 update, Transnet (2014) and its consultants demonstrated an unwillingness to change, misreading a report by the Intergovernmental Panel on Climate Change (IPCC) (2013) to still maintain a maximum 0.58 meters of SLR within 45 years, the berth upgrade's lifespan. As SDCEA (2014) pointed out in great detail in their EIA critique, this is a disturbing underestimate of the problem as it will affect Durban. There are two reasons: the IPCC actually estimated a higher SLR figure than the Transnet consultants identified; and in any case the IPCC is persistently too optimistic about climate impacts (typically by 60 per cent), and hence more updated scientific literature was required. Columbia University's Earth Institute (2013) projected in 2013 "sea-level rise of as much as six feet (1.83m) globally instead of two to three feet" by 2100, with higher amounts (3m) possible if more giant ice sheets crack. In May 2014, weeks before Transnet's (2014) updated filing, scientists calculated the West Antarctic ice sheet's more rapid submersion and generated much higher SLR estimates.

In addition to SLR and ocean acidification, at least four basic concerns remain, which Transnet failed to answer in its EIA statements:

- by expanding the shipping capacity of Durban harbour to super post-Panamax scale container vessels, will Transnet take up excessive amounts of South Africa's carbon budget and therefore ruin the government's pledge to peak and then decrease emissions after 2020?;
- expanding the shipping capacity also requires expanding the freight capacity, the danger is that more emissions, congestion, and trucking-related accidents will occur in an area demonstrably unsuitable given lack of road transport and inadequate shifting of freight to rail, so it is critical to know the amount of the new freight capacity being built to handle the much larger shipping capacity i.e., what proportion of this is being anticipated for freight haulage by rail and by trucking respectively?
- has the recommendation by the Academy of Sciences of South Africa, in its 2011 book *Towards a Low Carbon City*, commissioned by the city, been incorporated? "The transport sector is pivotal to the transition to a low carbon city... The top priority was identified as the need to reduce the vehicle kilometers travelled in the road freight sector as this provided the greatest opportunity to simultaneously reduce emissions of GreenHouse Gases and traditional air pollutants."
- how much additional CO2 will be emitted by the bunker fuel that is consumed by ships en route to and from Durban as a result of the vast new capacity associated with super post-Panamax ships soon capable of entering the Durban harbor, and how much additional CO2 will be emitted by the trucks that will haul the new freight, assuming this expansion is the crucial link in raising capacity to 5 million containers annually?

Conclusion: The Risks of Resistance, and of Activists Connecting the Dots

Few if any of the risks discussed in this article can provide any genuine, lasting deterrent without social agency. Vast parastatal corporations and the for-profit corporations they serve can easily turn their backs on even the most glaring contradictions, as Transnet demonstrated in repeated EIAs when faced with climate-related objections to the South Durban port-petrochemical expansion. The threat climate change represents to our future survival was, for Transnet and its consultants, merely an opportunity to file repeated arguments representing denialism.

The greatest risk to Durban'sproposed port-petrochemical complex expansion is the repertoire of mandatory tools in any activist's toolbox: popular education, democratic decision-making, mass-based organization, linkages of people across interest areas leading to new alliances, unity of purpose, an ability to transcend divisions, powerful analysis, fluidity and pragmatism combined with a

profound commitment to eco-social justice principles, and effective strategies and tactics.

There is not sufficient space to do more than reveal some of the discourses being developed in 2011-14 in South Durban by SDCEA activists and their allies. One risk that Transnet and major oil companies – even ExxonMobil – face is that the critical narrative catches on in the broader society, and affects the way we think about infrastructure priorities. The timing is propitious, because for at least two decades, South Africa has witnessed what are probably the most prolific protests in the world dedicated to improved "service delivery" – i.e. demonstrations against lack of (or excessively expensive) water and sanitation, electricity, housing, clinics, schools, roads and the like). These have occurred in South Durban, but as ever, the challenge is linking people's immediate concerns to wider matters, i.e. to connect the dots between local and global and back again, and between economic, social and ecological matters.

SDCEA's activists were motivated by a variety of minor victories against polluting industries. In two cases, substantial landfills that were used as toxic dumps by unethical waste companies were shut down. SDCEA leaders of those campaigns, Bobby Peek and Desmond D'Sa, were successful in 1996 (Umlazi) and 2012 (Chatsworth), respectfully, and in each case they won the Goldman Environmental Prize for Africa two years later as a result. SDCEA recorded other victories, notably against the Engen and Sapref refineries which are collectively the largest refinery zone in Africa. Because of SDCEA lobbying, they both installed SO2scrubbers so South Durban is not nearly as thick with airborne pollution and the sickly-sweet smells of chemical emissions.

SDCEA's own strength ebbs and flows, as does any civil society institution fighting injustices where the adverse balance of forces is so glaring. In an earlier stage of opposition to the port-petrochemical expansion, in 2004-05, SDCEA gathered thousands of residents to halt a major link road planned from the city's main southern freeway to the port. In 2006 SDCEA began campaigning against the doubling of the oil pipeline capacity and its rerouting through South Durban. In 2008, SDCEA used the EIA to challenge the climate implications of a major project for the first time. But at that stage, neither protests nor allegations (quite valid) of environmental racism nor EIA interventions slowed Transnet; Gigaba (2012) openly admitted the roughshod way Transnet treated such contestation led to numerous problems in the pipeline's implementation.

In 2011, Durban municipal City Manager Mike Sutcliffe – perhaps the city's most controversial leader in history (Bond 2011) – drew up a secret plan, estimated to cost the equivalent of \$25 billion, for the entire South Durban Basin. The plan reflected many decades of official ambition to re-engineer the Basin, in the wake of the 1940s-60s attacks on black residents which turned South Durban communities into racial enclaves. Racial settlement patterns existed nearly entirely enchanged

into the second decade of democracy, with the exception of Clairwood's desegregation by shack settlers as urban blighting began in the 1990s. Sutcliffe's master plan was only unveiled to the public in mid-2012 at which point a half-dozen community meetings called by the city under the rubric of public participation were taken over by SDCEA activists, led by D'Sa. A near unanimous sentiment was expressed in meeting after meeting: close down the event and refuse to have it declared a form of tick-off participation. The main planner, consultant Graham Muller, was repeatedly frustrated.

The narrative in the August 2012 pamphlet, "ACT NOW! EXPANDING PORT, POLLUTION AND FREIGHT THREATEN SOUTH DURBAN" is worthy of even brief consideration because, like a poster for a March 2014 SDCEA protest at Durban's City Hall, it helps reveal activist attempts to link issues and constituencies. The first of eight SDCEA critiques in the pamphlet was that "We need one planning process. The municipality refuses to discuss the port expansion projects, which are spear-headed by Transnet." The city's strategy was to join Transnet in fragmenting the long 2014-2040 process of approval, construction and operation so that the vast implications for the entire project are not collected in any single moment of opposition. In reply, SDCEA demanded "a *single participation process* with all spheres of government, developers and communities to chart a sustainable and common way forward. Otherwise we will be arguing one puzzle piece at a time and will never change the overall picture."

The second critique was "Cost vs. Benefit... Proponents boast 130 000 permanent jobs will be created – is this accurate? If correct this means a high capital investment of \$190 000/job created. What other ways could this money be invested to create sustainable livelihoods without the terrible social and environmental impacts? Are the full costs – including community destruction, adverse health effects, and our greater contribution to climate change – being considered?" Activists suspected the jobs calculation was far out of touch with reality given, as noted earlier, that even the largest container ships are designed to have crew numbering less than two dozen (13 in the case of Walmart's 15 500-TEU China-California shuttle).

The third critique also questioned the planners' understanding of global shipping demand: "Is the expansion justified? Transnet are arguing expansion based on projections for the growth in container handling. At an 8 per cent growth rate their projections show that a capacity of only 12 million containers will be needed by 2040 – yet they are building capacity for 20 million. Is this growth rate attainable given competition from other ports, growing resource constraints, carbon taxes on shipping, and global economic collapse?" Activists pointed out that harbour efficiency was appalling and that Durban's notorious status of world's highest-cost port would not be changed by adding \$25 billion in capital costs given high interest rates affecting repayment of loans plus high operating and maintenance costs.

The fourth critique was that "Increased containers mean increased impacts," and that this would translate into "8x the traffic, pollution and noise... There will also be an increase in Port related illegal activity including smuggling, drug trafficking, prostitution and shebeens" (informal pubs).

The fifth was of the "wrong fossil fuel development model. Port expansion will serve increased imports of consumer goods (60 per cent of container cargo are imports to Gauteng), expansion of petro-chemical industries & fuel storage and the automotive industry (Toyota). This does not take into account dwindling resources, especially oil, and the need to stop climate change."

The sixth was the environmental risk: "In addition to increasing climate change, port expansion will increase large water areas within the south Durban flood plain while removing the last natural wetlands. Toxic industry is also expanding in the basin. This increases the potential for flooding and hazardous chemical spills as extreme weather events increase." Moreover, "the Bay's estuarine ecosystem has been compromised to the point that it has lost resilience... The Bay provides a critical breeding ground for reef associated and migratory marine fish. 132 species of birds are found here and 62 species of endangered, migratory birds rest and feed here."The sandbank's destruction in the first phase would wreck any remaining chance of restoring the harbour's ecological integrity.

The seventh was the resulting "Community upheaval... Clairwood is earmarked for rezoning to logistics with some light industry. 6000+ people will be forced to relocate through market pressure, and with no active community present will inevitably result in the degeneration of historic cultural sites in the area. The port expansion requires 878 hectares of land for containers!"

The eighth critique was to ask, "Freight – rail or road? The documents make reference to rail and interchange nodes. However, the documents refer to 'freight routes' which on some plans are shown as rail but more recently as roads." Just over a year later, on the Field's Hill slope through the main mountain pass towards Durban, 24 people were killed by a runaway truck carrying a container belonging to Taiwanese-based shipping behemoth Evergreen. It was being freighted from Johannesburg by a small Durban truck transport agency, which skimped on paying toll fees (staying on the main highway with its more gradual slope would have cost \$4 more), hired as a driver a low-paid Swazi national with an illegitimate license, and failed to have its faulty brakes repaired before the fatal trip. The SDCEA 'truck off' protest of 500 residents on the freight area's main throughway (Solomon Mhlangu Drive) in March 2012 had forewarned of this kind of risk, given that there were 7000 accidents in Durban in 2010 involving trucks, leaving more than 70 fatalities. In Clairwood alone, trucking companies invading the residential area with illegally zoned truck yards, and accidents there and on nearby Bluff roads had killed nine residents in the prior five years. The Clairwood community leader who opposed trucks the most vigorously, Ahmed Osman, was assassinated in April 2009, shot dead on his front porch in one of many unsolved crimes involving the deaths of Durban activists (Bond 2011).

In spite of such dangers (D'Sa himself was a target of a nighttime firebombing in his working-class flat in December 2007), the rhythm of street protest is also revealing. As the municipality and Transnet began public consultations in 2012, SDCEA activists were able to use the mass meetings as rallying points. For example, in September 2012, Clairwood's established Indian residents most immediately threatened by the existing harbour's expansion invited then Finance Minister Pravin Gordhan – who thirty years earlier was a community organiser against apartheid housing in those very streets – to make a presentation defending Transnet and the city. He attempted to do so, using the standard neoliberal narrative of international competition, and specifically the threat that Maputo would get ahead in port traffic to Johannesburg (itself a reasonable proposition given that it is a shorter route without the Durban-Johannesburg mountainous terrain to cross). Tellingly, however, Gordhan also hinted that a divide-and-conquer strategy lay ahead against SDCEA activists, because Clairwood is also a site of several thousand black African shackdwellers barely surviving in informal settlements, backyard slums and even large tents. Fires regularly ravage these residents' shacks, destroying their belongings and often injuring (and even occasionally killing) people, including one night-time blaze that wrecked a double-yard settlement of 500 shacks in mid-2013. The mainly middle-class audience of traditional homeowners of Indian ethnic origin were reminded by Gordhan that the ANC's ability to mobilise in a relatively desegregated Clairwood could haunt a coming political showdown, in which those with the most to lose were Indians in Clairwood and Merebank, followed by those in the mainly Coloured area of Wentworth (which suffers the most pollution) and the traditionally white Bluff area.

Still, three months later, in December 2012, several hundred people heeded SDCEA's call to block the back port entrance, leaving a three kilometer long queue of trucks. Protests slowed in 2013 as the port EIA process and other high-profile debates with Transnet and municipal politicians took priority. But by March 2014, when SDCEA held a march to City Hall of 800 residents, new issues and constituencies were added to the coalition, including farmers on the old airport land who are to be displaced as the Dug-Out Port is built, and subsistence fisherfolk whose access to the existing harbour was contested from the time of the 9/11 bombings – thus generating US paranoia over port security – until in 2013 they were permitted back into their traditional fishing area. The challenge for connecting dots and adding issue areas would arise in subsequent years, as the Umlazi Unemployed People's Movement (UPM) joined the anti-port coalition, for their ambition is to have the old airport land turned into low-income housing and labour-intensive industrial cooperatives. There is also potential for the country's largest trade union, the National Union of Metalworkers of South Africa (Numsa), to

concretise its ambitions of a United Front linking workers, residents, environmentalists, women and youth. If Numsa succeeds in taking over the organization and representation of Durban port workers – as they were doing down the coast at the Coega container terminal – and evoking genuine eco-socialist politics, if the UPM leads land invasions at the airport before the 2016 digging is due to begin, and if Clairwood shackdwellers and nearby worker-hostel residents in Umbilo and Jacobs are fully organized, then the threat of racial divisions would fade.

However, it must be conceded, finally, that SDCEA remained weak when it came to an alternative approach to the South Durban Basin's development. As SDCEA's 2012 pamphlet reported, "We must urgently invest in a post-fossil fuel development path including renewable technologies and resilience to climate impacts. Are we giving up our land, environment and community to facilitate imports feeding rampant consumerism?" That stark choice lay ahead not only for SDCEA, South Durban residents and the broader city – but for the country and world as a whole. With the capitalist "development model" representing by far the greatest risk to the continuation of a decent life on a climate-constrained planet, and with inequality and political degradation out of control in South Africa and across the globe, then the showdown over South Durban's future would, in microcosm, signal whether disparate forces can find unity in opposition, and use that unity to plan a future based on less risky ways of arranging economy, society and nature.

References

Bond, P. (Ed) (2011). Durban's Climate Gamble. Pretoria: University of South Africa Press.

Bond, P. (2012). *Politics of Climate Justice*. Pietermaritzburg: University of KwaZulu-Natal Press

Bond, P. (2014). Elite Transition. London: Pluto Press.

Bruce, P. (2012). 'Thick End of the Wedge,' Business Day, 13 February.

Casey, S. (2010). The Wave: In Pursuit of the Rogues, Freaks, and Giants of the Ocean. New York: Macmillan.

Cowen, D. (2014). 'Logistics', Unpublished manuscript, University of Toronto Department of Geography.

Cronin, J. (2013). 'Ruth First, Gold Fields and the National Development Plan,' *Umsebenzi Online*, 5 September, http://www.sacp.org.za/pubs/umsebenzi/2013/vol12-32.html

Desai, A. (2002). We are the Poors. New York: Monthly Review Press.

Dyer, J. (2014). 'The Consequences of Durban's Proposed Port Development,' Presentation, University of KwaZulu-Natal Centre for Civil Society, Durban, 20 June, http://ccs.ukzn.ac.za/ default.asp?11,61,3,3232

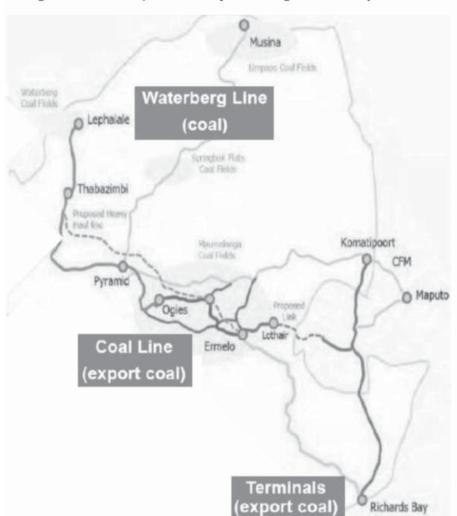
Ethekwini Municipality (2009). Municipal Adaptation Plan, Durban, http://relaunch.citiesclimateregistry.org/uploads/tx_carbonndata/eThekwini%20Municipal% 20AdaptationPlan%20-%2016.11.2009%20ERM090168.pdf

- Fairplay (2014). 'First 24,000teu ships set for 2018,' China Shipping Company press release, 17 March, http://www.cnshipping.com/en/home/shippingnews/35168.shtml
- The Economist (2013). "The gated globe," 13 October.
- Fine, B. and Z. Rustomjee (1996). *The Political Economy of South Africa*. London: Hurst and Johannesburg: Wits University Press.
- Gigaba, M. (2012). 'Where the Transnet pipeline project went wrong,' Statement by Public Enterprises Minister MalusiGigaba, Pretoria, 2 December.
- Gigaba, M. (2014), 'Radical economic change should be the focus of this election,' 23 April, Mail&Guardian, http://mg.co.za/article/2014-04-23-soapbox-radical-economic-change-should-be-the-focus-of-this-election
- Hosken, G. (2014). 'World Fraud Champs,' The Times, 19 February.
- Howard, S. (1936). 'South Africa's Eastern Port', Facts about Durban, http://www.fad.co.za/ Resources/bay/bay.htm
- Hutson, T. (2014). 'Berth-deepening is in the dock,' The Mercury, 22 January.
- International Monetary Fund (2013). 'Article IV Consultation: South Africa', Washington, DC.
- International Shipping News (2014). 'The 24 000 TEU containership just two years away,' 30 June, http://www.hellenicshippingnews.com/the-24000-teu-containership-just-two-years-away/
- Jacka, C. (2011). 'Curiouser and curiouser', 30 July, Maritime Matters, http://maritimematters.net/ 2011/07/30/curiouser-and-curiouser/
- Kasrils, R. (2013). Armed and Dangerous. Johannesburg: Jacana Press.
- Lancaster, K. (2013). 'Salvors ready to remove coal from stranded ship,' The Mercury, 6 September.
- vanMarle, G. (2013). 'Small Ports Feel the Heat from Big Box Ships as Cascade Effect Begin,'

 The Loadstar, 7 January, http://theloadstar.co.uk/small-ports-feel-the-heat-from-big-boxships-as-cascade-effect-begins/
- Martin, R. (2011). 'The Triple-E Maersk Container Ship will be the World's Largest Ship and the Most Efficient', *Gizmag*, http://www.gizmag.com/triple-e-maersk-worlds-largest-ship/17938/
- McKinsey Global Institute (2014). Global Flows in a Digital Age. New York: McKinsey.
- Mohammed, S. (2010). 'The State of the South African Economy', in J. Daniel, R. Southall, P. Naidoo and D. Pillay (eds), New South African Review. Johannesburg: Wits University Press
- Naidoo, O. (2012). 'Tourism Focus can win City Investment,' *The Mercury*, 8 February, *http://www.iol.co.za/mercury/tourism-focus-can-win-city-investment-1.1229658?ot=inmsa.ArticlePrintPageLayout.ot*
- National Planning Commission (2011). *Diagnostic*, Pretoria, Ministry in the Presidency, *http://www.npconline.co.za/pebble.asp?relid=23*
- National Planning Commission (2012). Our Future Make it Work: National Development Plan, Pretoria, Ministry in the Presidency, http://www.npconline.co.za/pebble.asp?relid=25.
- Paton, C. (2014). "Transnet's Durban port plan earns "climate-change denialist" gibe', *Business Day*, 20 January, *http://www.bdlive.co.za/business/transport/2014/01/20/transnets-durban-port-plan-earns-climate-change-denialist-gibe*

- Rawlins, L. (2013). 'Fears for Habitat as Ship Left Stranded,' The Mercury, 20 August.
- van der Sandt, V. (2013). 'Tons of Coal to be Dumped,' Daily News, 10 September.
- Saul, J. and P. Bond (2014). South Africa The Present as History. Johannesburg: Jacana Press.
- Silver Wave (2011). 'Environmental Impact Assessment', DETAILS TO BE PROVIDED.
- South Durban Community Environmental Alliance (2008). 'Comments on the Transnet Multi Product Pipeline Proposal,' Durban, 7 July.
- South Durban Community Environmental Alliance (2012). 'Act Now! Expanding Port, Pollution And Freight Threaten South Durban', Pamphlet, Durban, 12 August.
- South Durban Community Environmental Alliance (2014). 'Comments on the Transnet Environmental Impact Assessment of Berths 203-205,' Durban, 2 July.
- Time (1954). 'Biggest tanker,' 22 February, http://content.time.com/time/magazine/article/0,9171,860511,00.html
- Transnet (2012). 'Environmental Impact Asssessment', Johannesburg, http://berth203to205expansioneia.co.za/documents/DraftScopingReport/Berth%20203-205%20Final%20Scoping%20report%20review%20-%2025%20May%202012.pdf
- Transnet (2013). 'Environmental Impact Asssessment', Johannesburg, http://www.berth203to205expansioneia.co.za/documents/FinalEIA/Final%20EIA% 20Report%20I%20Moonsamy%20Berth%20203-205v26%2022%20April%202013.pdf
- Transnet (2014). 'Amended Environmental Impact Asssessment', Johannesburg, http://www.berth203to205expansioneia.co.za/documents/AmendedEIA/Amended%20EIR011%20Moonsamy%20Berth%20203%20to%20205%20EIA%2003-06-14.pdf
- United Nations (2013). 'World Economic Situation and Prospects 2013', Department of Economic and Social Affairs, New York.
- Venter, I. (2013). 'Construction Industry Must Deal with 'Great Anger' over Collusion, Says Upton,' Engineering News, 12 August, http://www.engineeringnews.co.za/article/construction-industry-must-deal-with-great-anger-over-collusion-says-upton-2013-08-12.
- Wall Street Journal (2014). 'China's property bubble has officially popped,' 5 May, http://blogs.wsj.com/chinarealtime/2014/05/05/chinas-property-bubble-has-officially-popped-report-says/
- World Bank (2011). The Changing Wealth of Nations. Washington, DC.
- Zuma, J. (2014). 'The Presidential Infrastructure Coordination Commission,' Pretoria, http://www.economic.gov.za/picc

Strategic Investment Project 1: Coal exports through Richards Bay Port



- Unlock mineral resources
- Rail, water pipelines, energy generation and transmission infrastructure
- Thousands of direct jobs across the areas unlocked
- Indusands of direct jobs across the areas unlocked Urban development in Waterberg first major post-apartheid new urban centre will be a "green" development project Rail capacity to Mpumalanga and Richards Bay Shift from road to rail in Mpumalanga

- Logistics corridor to connect Mpumalanga and Gauteng.

- Strengthen the logistics and transport corridor between SA's main industrial hubs
- Improve access to Durban's export and import facilities Integrate Free State Industrial Strategy activities into the
- corridor
- New port in Durban
- Aerotropolis around OR Tambo International Airport.

Primary Mineral Reserves



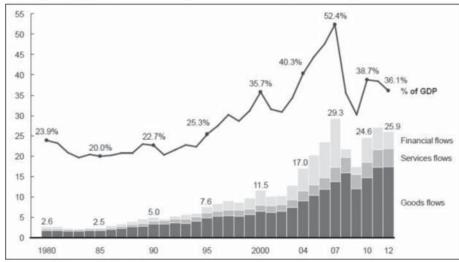


Strategic Investment Project 2: the South Durban port-petrochemical expansion



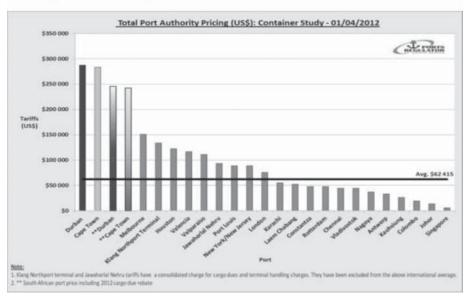
Plans		Back of Port Local Area Plan – rezoning in particular: Clairwood to logistics, Clairwood race course to offices/logistics/recreation, Mobeni East to logistics, Mobeni West to logistics, Merewent to extend industry with office buffer.	Public comment period closing end September 2012	
Port phases	1	Expanding Durban Container terminal	EIA for Berths 203- 205 began Feb 2012	2.9mill TEU
	2	Pier 1 expansion - Phase 1 & 2	By 2014	1.4 mill TEU
	3	Maydon Wharf redevelopment	By 2017	0.6 mill TEU
	4	Dig-out port at Reunion (old Durban International Airport site) -(16 container berths, new bulk liquid terminals, vehicle terminals	Complete by 2019 - 37	9.6 mill TEU
	5	Dig-out at Bayhead to extend harbour into the railway marshalling yard area	Complete by 2037 - 2050	6 mill TEU
Freight routes		New freight route from harbour around Clairwood, through the uMhlatuzana river valley connecting to N2	2012 -17	
		North-South truck freight roadway from airport dig-out on the M4, then through Mobeni to a junction at Clairwood	2014 - 2020	
		East - West freight route from port via Mariannhill to Cato Ridge	2015 - 2023	

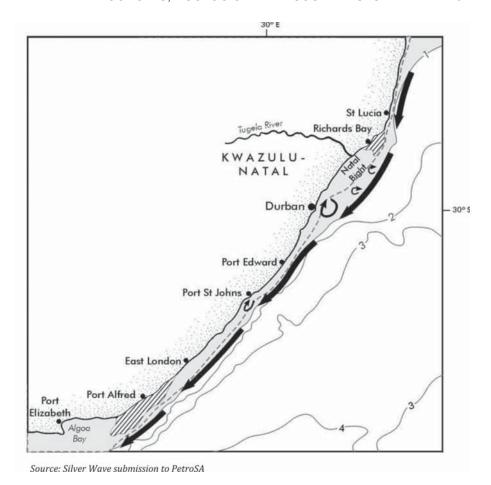
Global flows of goods, services and finance: absolute \$ (tn), share of GDP, 1980-2012



Source: McKinsey (2014, 14)

Durban port's inefficiency





Ballito's barrel at the Mr Price Pro surf competition, July 2011









The World Glory's inglorious end



Source: http://thepowerofthesea.com/images.html

South Durban oil refinery explosions



Source: South Durban Community Environmental Alliance photos of 2007 incidents

