

Strategies for a Sustainable Bunker Fuel Industry in South Africa

Hello everybody my name is Gavin Naidoo

I'm the bunker business manager at Linsen Nami Bunker services.

Linsen Nambi is a South African Owned and operated shipping company.

We permanently employ 125 South Africans of which 115 are seafaring staff aboard our 3 bunker tankers. We have operations in Durban and Cape Town.

I've been in the bunkering industry for over 20 years, involved in areas of Administration, Crewing, Operations, HSE and Risk and Compliance management.

I've seen the industry change drastically in the last 20 years. There's been transformation and success in some areas but the industry has suffered in others.

Today I'm going to briefly talk to you about the South African bunker industry and explore some of the challenges facing the industry and considerations for reform. My topic is titled: Strategies for a sustainable bunker fuel industry in South Africa

Introduction:

The South African bunker fuel market has regressed from moving 2.3 million tons of bunker fuel per annum through its port systems in 2008, to under 9 hundred thousand tons of bunker fuel per annum in 2022. This equates to a 61% decline in bunker fuel volumes moved across the major South African ports. The infrastructure includes, refining capacity, storage capacity and barging capacity all of which need to be maintained and are required to ensure efficiency in the delivery of bunker fuel and continuity of supply. These are critical components of market sentiment and have a significant bearing on the view ship owners and charterers take when deciding on which harbour ports to dock their vessels and arrange bunker fuel replenishment.

Since 2008 we've seen a steady but substantial downturn in the movement of bunker fuel in our ports. The South African Bunker fuel industry is potentially a R33 billion rand per annum industry purely on the sale and movement of bunker fuel within our

ports. If we work on last year's volumes the industry is valued at around R13 Billion. We contrived to lose R20 Billion rand per annum somehow. So instead of seeing a thriving industry with research and development projects for oil / gas and shipping technology, we are seeing instability, and jobs losses.

Why has bunker fuel volumes declined in South African Ports:

- Global environmental pressure calling for sustainable/ renewable and less harmful forms of bunker fuel in shipping. These calls have led to changes in international regulations mandating, cleaner, less harmful forms of bunker fuels in the industry. The most significant regulation change in recent times has been Marpol Annexure VI, The sulphur cap for marine fuel oil is now 0.5%, unless vessels are fitted with scrubbers and 0.1% sulphur content when operating in emission control areas. World leaders recognise that global warming must be slowed if the generations to come are going to have a habitable planet.
- Lack of investment in local refineries. This is required in order to produce sufficient quantities of compliant fuel at globally competitive prices to meet industry demand. This has led to the shutdown of refining plants and the change to an import model to service the countries energy needs and that of the maritime industries bunker fuel needs. None of South Africa's refineries are producing bunker fuel for the shipping industry. All fuel is being imported. This model negatively effects pricing and along with other contributing factors, the value and attractiveness of bunkering in South African Ports.
- Lack of investment in terminal infrastructure to support efficient bunker fuel delivery operations. Here we need to consider the inability to load multiple bunker barges simultaneously. Poor loading rates at the terminals increase the turnaround times for barges and cause substantial delays to ships waiting to receive bunkers. This is less of an issue if overall supply is reduced, as is the case in South African Ports.

- Poorly trained staff and management of terminal operations. Terminal management and those tasked to carry out terminal operations do not fully understand the impact delays have on shipping and the consequences thereof.
- Union influence and a Unionised workforce, In Cape Town harbour terminal and barge loading operation stop at 19:00 daily and will resume the next morning around 09:00.
- Lack of bunker berths at the major ports, ships anchor outside harbour limits for extended periods due to the lack of bunker berths in the port.
- Poor turnaround times for bunker ships due to port congestion and inefficient port services. In Durban it is a legal requirement for the Port to have 4 fully operational tugs at any given time. 2 or 3 operational tugs is TNPA's standard operating model. It is unsafe and creates all kinds of operational inefficiencies and Shipping delays.
- Competition from offshore bunkering operations in Algoa Bay. The data we've collected indicates a drop in bunker fuel volumes in Cape Town and Durban since the emergence of the offshore bunkering operation in Algoa.
- Competition from neighbouring ports with lower port tariffs, adequate bunker fuel reserves and less red tape as far as setting up bunker fuel operations in these Ports are concerned.

So these are some of the reasons, that have contributed to the 61% decline in bunker fuel volumes across the major bunkering ports in South Africa in the last 14 years. All of these could have been systematically predicated and addressed before they manifested into serious issues if strategic leadership within the significant stakeholder ranks were committed to a long-term strategy in the South African bunkering industry. To summarise: Market volatility, political influences/ instability, investor confidence and market uncertainty have brought a once thriving industry to its knees.

Changes to international regulations pertaining to clean fuels. and their impact on the industry has also contributed to the uncertainty and the lack of decisive action.

Now that we understand what we've done wrong, we are going to quickly look at the consequences.

What are the consequences of declining bunker fuel volumes in South African Ports

The sale and movement of bunker fuel volumes in South African Ports translates to an injection of foreign currency in the local economy, essential for developing economies but not only in terms of the revenue generated by the sale of bunker fuel but also related shipping activities in the South African Maritime value chain i.e., revenue generated by port costs/ services (tug assistance, pilotage, berthing services, electricity, water etc.). These Port revenue streams are being eroded and will continue to be unless the port bunkering industry recovers.

Other industries in the Port Service sector i.e., Marine engineer, surveying, road tankers, slops removal, stores and provisions, spare parts etc. are also impacted if the demand for bunker fuel in South African ports continues to diminish.

We've seen the port service industry struggle for a while now, Ship repair yards experiencing financial difficulty and eventually closing, bunker barge operators retrenching staff and selling ships, these are events related to a drop in shipping traffic in South African ports of which the unattractiveness of bunkering in South Africa is a major contributor.

The most harmful consequence for South African society is job losses, local companies in the bunkering industry in last 3 years have retrenched staff and expect further retrenchment processors to follow in 2023.

The major takeaway from this is that we once had a thriving bunker fuel industry in this country. Companies like Linsen Nambi utilised its position and resources to create jobs and meaningfully contribute to the well being of South African society.

This sort of development and social uplift will be lost if the bunkering industry does not recover. The success of business is intertwined with social upliftment.

What needs to be done to arrest the degradation, recover to historic levels and create a sustainable bunker fuel industry in South Africa?

Understanding the business environment and collective strategy: The environment in which the South African bunker fuel industry exists is extremely turbulent. Businesses are heavily regulated and there are high compliance requirements. There are many factors impacting companies that are outside of their control but there are also environmental factors that are within an organisation's or an industries control. The Macro, Micro and Global environmental factors impacting businesses must be analysed and understood.

The South African Bunker fuel industry including the various independent organisations that operate within this sector must understand that they are part of a larger system, a system that must function in synergy and toward a collective objective, which is ultimately to ensure South Africa recovers lost bunker fuel volumes and is sustainable in the long term. The role of the Parastatal, Transnet National Ports Authority is paramount to the success of the local bunkering industry, it is TNPA's role as custodian of the harbour ports to ensure a collective strategy that provides competitive value for ship owners and thus renders bunkering in South African Port attractive. There are many other factors that can be mentioned under this facet but the role of the Port authority to the success of the industry can not be over stated.

Training and development strategies to meet international standards and resource needs: Maritime professionals or maritime skills are required all over the world. The safest and most cost-effective way to move large quantities of cargo, goods, merchandise, and other commodities between trading countries is by ship. As a result, maritime skills are in global demand.

The Demand orientated model is a Human resource strategic approach that relies on the identification of training or skills need before the development of a solution. Also referred to as bottom-up model. The need for maritime professionals and the required skill levels within the profession if understood can be used to develop the required skills in anticipation of future needs. Here in lies the opportunity for the South African

Maritime industry, fundamentally to meet their own skills needs but also use the International Maritime industry as a means to create employment for its people.

South African's must be educated and skilled in the maritime field and in particular the liquid bulk field in order to provide the major oil companies with the necessary assurance that South African companies, Ships and South African maritime professionals are able to safely transport and delivery bunker fuel safely over water. Training and development of maritime skills is critical to the success of the South African Maritime industry and in particular the bunkering industry.

Therefore, organisations within the South African Bunkering industry are required to ensure that their human capital and skills-based development is competitive on a global scale. A high performing and standard of maritime expertise and maritime professionals operating within the industry, with strategic goals for the development and sustainability of the industry will result in improved collective industry performance at all task levels.

Improving human resource quality is crucial in improving overall industry performance and creating sustainability.

Role of Bunker traders and independent operators

Traditionally the role of these stakeholders have been restricted by storage constraints. Access to storage tanks and location of the tanks in relation to the terminal berths are the greatest challenge and the seemingly insurmountable barrier. The further away tanks are from the jetty the more expensive it becomes to move product from a storage tank to the jetty and onto a bunker vessel.

There are restrictive environmental regulations and bureaucratic red tape that serve as entry barriers along with uneconomical costs.

Successfully overcoming these challenges holds the key to truly unlocking the potential of this industry. This will serve to grow the economy and create jobs for South Africans and long-term sustainability.

Assessment of the effects of environmental regulations on bunker fuel and the use of cleaner fuels in shipping and on the South African Bunker fuel industry.

Although the potential for environmental damage is significant if fuel is not transferred safely over water, the normal operational environmental effects when compared to other industries is insignificant. When looking at the impact of shipping on climate change in the global context, shipping is a minor contributor to global warming. The main contributors to greenhouse gas emissions and global warming are Agriculture, Forestry & Land use 18.4 %, Energy use in industry 24.2% (Iron and Steel, Chemical and Petro chemical), Other industries 12%, Energy use in buildings 15.5 %, Waste (Land fill and wastewater) 3.2% and transportation 16.2%. Transportation includes Road transport 12.6%, Aviation 1.9% and Shipping 1.7%. Despite the relatively low percentage contribution of shipping operations toward global warming in comparison to other industries, governments and regulatory authorities including the International Maritime Organisation (IMO) have introduced strict and decisive regulations to reduce the impact of shipping operations on the environment and its impact on climate change.

Environmentally Responsible Behaviour (ERB) is a specific term referring to any action, individual or group, directed toward remediation of environmental issues/problems. The International maritime organisation (IMO), through regulation promulgated via Marpol Annex XI, understand the destructive impact of bunker fuel on the environment and the necessity for change behaviour on a global industry scale.

These type of regulations ensure that refineries produce less environmentally damaging fossil fuels and ships and ship owners must purchase and burn cleaner less harmful fuels with the aim of reducing the industries carbon foot print, while researching and developing renewable sources of energy to eventually replace carbon based energy sources. These regulations have had a significant impact on the maritime industry and has created additional costs for oil companies and ships owners. It has also contributed to the downturn in the demand for bunker fuels in South African ports.

Getting to zero coalition with cost efficiency will require policy instruments and market-based measures to close the gap between conventional bunker fuels and zero emission fuels. To scale ammonia, investments are necessary in hydrogen generation, fuel synthesis and port infrastructure. There will need to be collaboration between relevant land based and maritime industry stakeholders. This is just one form of renewable energy.

World shipping is expected to be carbon free by 2050, in order to achieve this objective, commercially viable zero emission ships, powered by zero emission bunker fuels must be in operation by 2030

A common theme is that moving toward zero emission ships and bunker fuels will require substantial investment in upstream bunker fuel supply chain infrastructure /functions as well as maritime infrastructure/ assets. Although there are many options in terms of renewable sources of energy as forms of bunker fuel are concerned, the South African bunker fuel industry must understand the global strategy and what the global maritime industry determines or perceives as the best form/s of bunker fuel for the global shipping fleet. It may be a combination of renewable sources of energy, but the strategy must be understood. Any misalignment with the global demand for bunker fuel will result in substantial monetary losses and further plunge the already recessionary industry into complete collapse.

Conclusion:

South Africa's harbour ports are the life blood of our economy and the bunker fuel industry is a key component in the South African maritime value chain. The destruction of this industry must be arrested and firm and decisive measures taken to recover and sustain the industry. The bunker fuel industry has the ability to provide jobs and create a brighter future for South Africans. The industry must serve South Africans. Companies that carry the South African flag, that own and operate South African ships and above all employ ordinary South Africans must be promoted and allowed to flourish.

Let me leave you with this closing comment, If the bunker fuel industry in South Africa with all the known physical and environmental risks, does not serve South African society, then we need to ask ourselves as South African what is the purpose of such an industry?

We have a vast and beautiful coastline, Our natural position and resources must be used for the upliftment of South African lives.

Thank you