

ALGOA BAY CONSERVATION : OFFSHORE MARINE REFUELLING.

Algoa Bay Conservation (Baywatch Project, Nelson Mandela Bay Tourism and Raggy Charters) has prepared the following information document to record and inform on the ongoing progression of the marine offshore refuelling project and the impact on the Algoa Bay marine environment and associated tourism and other sectors that depend on a healthy Algoa Bay.

Background

Algoa Bay Conservation have been monitoring the offshore refuelling project developed and projected by South African Maritime Safety Authority (SAMSA) since inception in 2016. The refuelling at sea is also known as ship-to-ship (STS) bunkering and is performed outside the protection of the Port of Ngqura in Algoa Bay outer anchorage. At the outset it was believed that there should have been regulatory and environmental authorisation processes being followed that took into account the high risk nature of the operations that impact on the sensitive marine and seabird island environments of the Bay and on the boundary of the Addo National Park Marine Protected Area (MPA).

Research and legal advice has confirmed a regulatory gap in the standing legislation that has been exploited by SAMSA and Transnet National Port Authority (TNPA) and which requires Ministerial or other processes to close the gap in the legislation.

Notwithstanding, the Constitutional principles on which NEMA is founded, still apply. Legal environmental opinion has described the awarding of offshore refuelling licences as environmentally reckless.

Oil spill concerns

The obvious concern of fuel transfers at sea is the accidental spilling of quantities of bunker fuel oil (marine Heavy or Residual Fuel Oil, per Safety Data Sheet). The fuel oil is internationally classified as a **dangerous substance** with acute toxicity and carcinogenicity to people. Environmentally, the fuel is classified as **hazardous to aquatic environment** with a specific hazard statement of ***very toxic to aquatic life with long-lasting effects***. The fuel oil is not readily biodegradable and contains components that have the potential to bioaccumulate in the ecosystem. Spilled material is expected to be very toxic to aquatic organisms and will cause long term adverse harm to the ecosystem.

In this regard there have been three publicly reported oil spills and minutes of meetings indicate at least 5 more spills, one spill for each year during the operations and two spills during 2021. In 2019 the spill resulted in the killing of endangered bird species, with numerous oiled birds rescued and cleaned.

Other impacts, whales and dolphins

In addition to the residual fuel oil spills, other impacts which have been noted, but not yet scientifically assessed, include the high numbers of vessel traffic under power, vessels at anchor with waste water discharge and continuous noise and vibration pollution, interference with pelagic fish natural movements, interference in the feeding and foraging habits of endangered bird species, interference with resident dolphin populations and traversing migratory whales.

It is to be noted that Algoa Bay was awarded **World Whale Heritage Site** status by the independent controlling advisory body, the World Cetacean Alliance.

Refuelling done in a sensitive location

The locality of the two refuelling anchorage sites are of particular concern, being on the boundary of the MPA, and within the foraging range of protected bird species on St Croix, Brenton and Jahiel islands. The refuelling anchorage areas are also within the natural pelagic fish (sardine and anchovy) shoaling areas. Oil spill dispersion studies show the drift will be around the St Croix Island and bird sensitive areas, through the MPA, to reach the northern beaches. This in fact is exactly how the most recent oil spill in November 2021 moved, ending up on the beaches as tar balls.

Decimation of African penguins of St Croix

Members of our concerned group of individuals have been involved in annual penguin census counting over many years, as well as retrieving oiled penguins from the breeding islands in Algoa Bay when there have been oil spills. The penguin census is commissioned annually by Department of Environmental Affairs and the data is used by scientific groups for monitoring and research purposes. Algoa Bay Conservation group have used the data to plot the numbers of breeding penguins on the islands of the Bay, using St Croix Island site (impacted by vessel and bunkering activities) and Bird island as a reference and control site. The result of this study are shown as Figure 1. The **penguin pair decline of 80% at St Croix Island** is more than three times higher than the decline at Bird Island. This indicates the alarming state of distress of the St Croix Island penguin population.

St Croix Island was counted as the largest number of breeding penguin pairs in South Africa just 5 years ago, and is now facing local extinction of penguins in the near future.

A further study has been completed to investigate the correlation of marine traffic vessel movements with penguin breeding pairs at St Croix Island and shows a direct inverse relationship (Figure 2). Clearly an increase in vessels and their associated moving across and close to the foraging areas of the penguins, will further adversely affect the conditions for penguins around the St Croix Island.

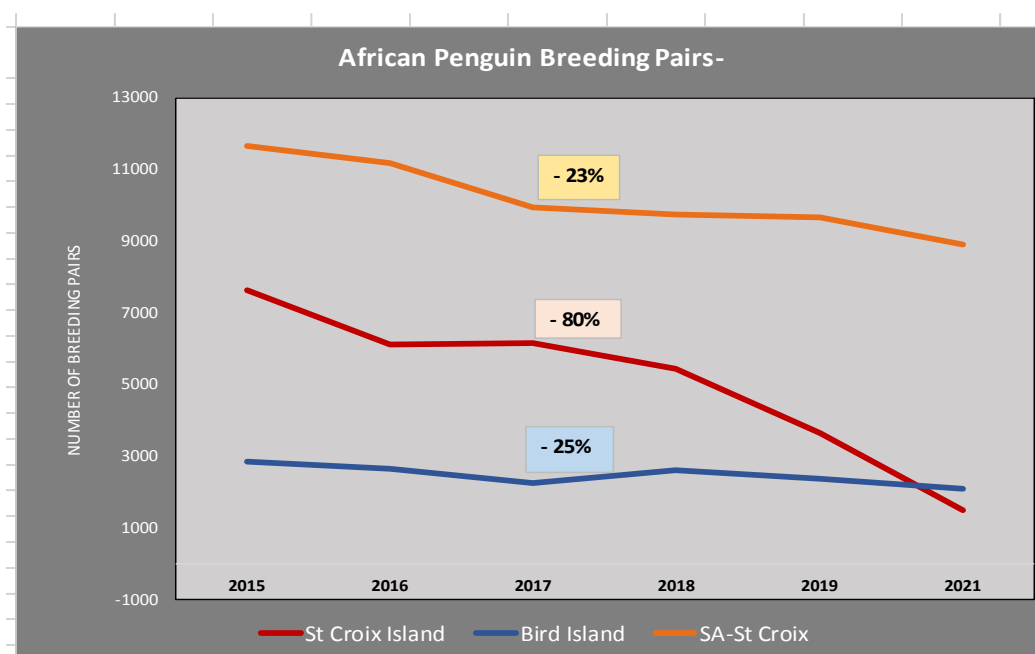


Figure 1: Number of African Penguin breeding pairs at St Croix Island, Bird Island and the rest of South Africa without the influence of the decline of St Croix Island.
(% values indicate the % decline in penguin pair numbers from 2015 to 2021)

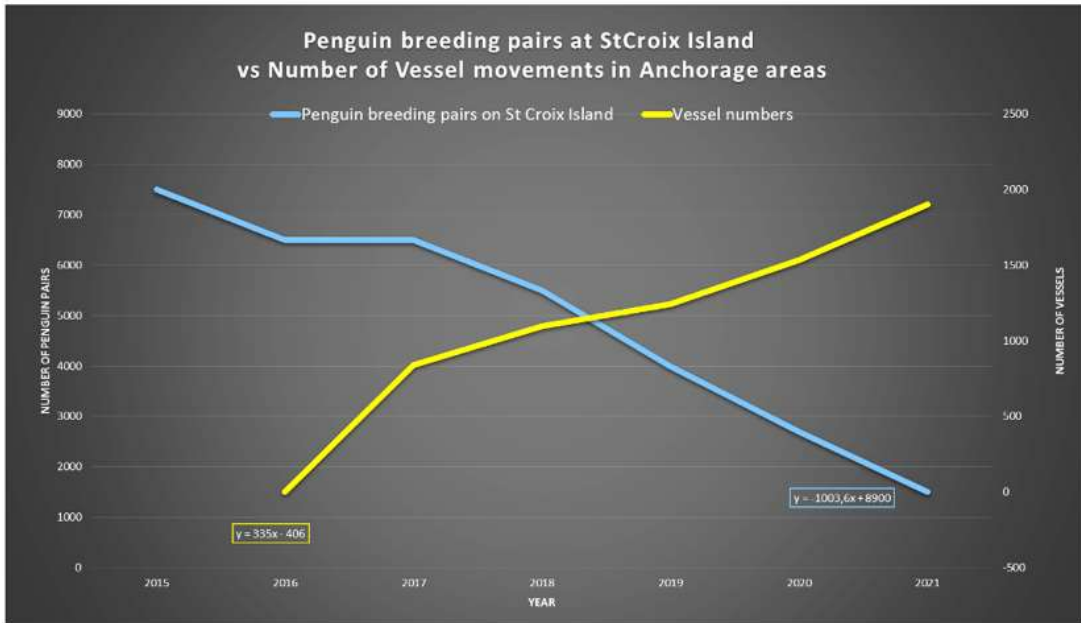


Figure 2: Penguin breeding pairs at St Croix Island plotted against the number of vessel movement across the Anchorage areas.

Raggy Charters Eco Cruises has recorded thousands of penguins on St Croix Island over the years. (Photograph 1 - 2002) However, a tourist cruise visit on 18 March 2022 only managed to spot one single penguin on the island. This is the first occasion in thirty years of taking visitors to the island that virtually no penguins were seen (Photograph 2).



Photograph 1: Penguins on St Croix island in 2002



St Croix Island, 21st March 2022

Photograph 2: Penguins on St Croix Island in 2022

Refuelling vessel movements

Two refuelling anchorage sites have been in use to date, both close to the MPA and within the natural food foraging areas of seabirds and cetaceans.

Heavy fuel oil transfers have increased from a rate of 800 transfers per annum (2016) by a single licensed operator to more than 1200 per annum (2020) with three licensed operators. The number of vessels aggregated in the bay, either awaiting bunkering or port entry, at times exceeds 20 container, bulk carriers or other cargo vessels. In addition are the number of refuelling barge vessels (7) plus the bulk store mothership.

According to published capacity study recommendations, a proposal is to increase the number of operators to four with a max number of transfer barge vessels limited to 10 vessels. Anchorage sites are proposed to increase from two to 16 sites. These proposals are aimed at **increasing the total number of fuel transfers substantially**. It is estimated that the number of vessels aggregated in such an environmentally sensitive area of the bay will increase proportionately with further environmental impact.

Vessel traffic movements, moving to and from fuelling sites, or service/refuelling barge vessels traversing the area, or collecting replenishment from the bulk supply mothership, as well as a vessel queue of arrivals, represent a massive interference in the natural marine environment. The number of vessels aggregated continually in a sensitive area of the bay represents a sized community of human activity with inherent bilge (read sea water leakage and sludge) and waste water (read raw sewerage) discharge and deck runoff of cleaning chemicals and other pollutants.

Emissions released to the atmosphere from the running of the vessel engines, combined with the moisture in the atmosphere, are deposited in the water in and around the anchorage areas. Contaminants such as sulphur and nitrogen oxides, metals and specifically black carbon (soot) are atmospheric contaminants from the fuel combustion process. Noise and vibratory impacts from such an aggregation of mechanical machinery will be substantial and harmful to the marine ecosystem.

There **has not been any environmental impact assessment** from vessel movement and vessel aggregation at anchor.

Alarming lack of action from Environmental Affairs Minister Creecy

Correspondence with DEA Minister Barbara Creecy in August 2021 concerning penguin island protection and buffer zone protection zones added to pelagic seine net commercial licencing elicited a response from the minister dated 15 October 2021, wherein she provided assurances and confirmed:

- *“a moratorium by SAMSA/TNPA to hold all new applications for offshore refuelling licences until such time as a comprehensive risk assessment has been conducted and relevant environmental concerns have been addressed;*
- *that NEMA EIA regulations do not apply to offshore refuelling operations as none of the listed activities are triggered. (In effect this means that an EIA is required for a terrestrial petrol filling station with storage exceeding 1000 m³ but not for a maritime floating storage comprising millions of litres of dangerous and toxic substances.)*
- *The three authorities have agreed a short, medium and long term action plan to plug the gaps in current authorisation, management and legal regimes.”*

Algoa Bay Conservation was alarmed to learn, via public announcement 28 January 2022, that SAMSA has decided to lift the moratorium on awarding additional licences with effect from 1 April 2022. The SAMSA announcement refers to a Capacity Holding Study (with no EIA assessment) as well as an Environmental Risk Assessment Study having been finalised as the reasons for the lifting of the moratorium. The environmental risk assessment study referred to by SAMSA has in fact not been commissioned and thus is not available to address the concerns that have been raised..

It is therefore clear that **environmental concerns or harmful impact** considerations of marine refuelling operations, as presently being undertaken in Algoa Bay, are **not a priority** consideration by the SA State agencies involved, and who mandated to be protect the marine environment.

The financial impact of offshore refuelling

Estimates that have been conducted using available information indicate a minimum increase in vessel movements and fuel transfers in the order of 40% if the moratorium is lifted. The value of bunker fuel transfers will be growing from presently R5.0 billion to R8,7 billion per annum (at oil prices Dec 2021) with **most of the benefits flowing to international oil suppliers**. Many transfer vessels are on charter and most of the crews are not local.

We have called for a socio-economic evaluation of the offshore refuelling project, whereby the beneficiaries of the funds flow are identified, which has not been forthcoming. The industry appears at first glance to be very substantial, but the local benefit is questionable and the environmental cost (impact) is potentially a recipe for disaster.

Social impact of a polluted Algoa Bay.

The environmental degradation in and around the St Croix Island represents the scenario of “Dead Man’s Chest”, where the Marine Health is dying and the Marine Wealth is poor. (Diagram 1) Penguins are indicative species, and with such a drastic decline in numbers that we are witnessing, signifies a very impacted and unfavourable environment. **It indicates that something is very wrong in the ecosystem.** This is an unsustainable situation, with the penguin population on St Croix Island facing extinction within the next few years. Minister Creecy is failing to ensure the protection of our natural heritage for our future generations.

Diagram 2 shows the complex socio-ecological space of Algoa Bay. We have to decide if the economic benefits outweighs the ecological degradation and if we are prepared to accept the current situation as the best use of the Bay’s assets.

Marine eco-tourism has grown because of the unspoilt nature of the Bay. Estimates place a value on eco-tourism with a healthy Algoa Bay as in excess of R6 billion per annum. Visitors are not going to visit Algoa Bay to see and smell numbers of vessels at anchor taking on bunker fuels. In addition, the commercial and recreational fishery rely heavily on a healthy MPA to secure the effective spawning of and nursery for many of the marine species



Diagram 1. Depiction of the Marine Sustainability Matrix (Vermeulen, Lombard, Clifford-Holmes and Sharler, 2022)



Diagram 2: Newspaper snippets indicating the complex social ecological space that exists in Algoa Bay (Vermeulen, Lombard, Clifford-Holmes and Sharler, 2022)

Objective of this document

Algoa Bay Conservation are aware of the poor understanding of the offshore refuelling sector by the general public, who may believe it brings riches to the city. They see the vessels anchored offshore and may not be aware that the flow of funds is passing the city by and ending up with international oil interests. This perception is perpetuated by the absence of transparency in the regulatory, environmental risk, and economic benefit of this virtual enterprise.

The objective of this document is to provide an understanding of some of the issues and an awareness of the environmental risks and the concerning signs that are evident. Organisations and groups that rely on a healthy Algoa Bay and are invested in the tourism sector, the commercial fishing sector, marine and offshore sporting activities, or those just interested in preserving a marine environment not polluted or contaminated by industrial pollution, are called on to take notice.

Thank you

ALGOA BAY CONSERVATION March 2022

For more info: <https://www.raggycharters.co.za/page/sts-bunkering-vs-endangered-african-penguin>