

New research to help Port of Cape Town prepare for extreme wind events

Transnet National Ports Authority has signed a memorandum of agreement (MoA) with the Council for Scientific and Industrial Research (CSIR)-hosted programme to address extreme wind disruption to operations for the integrated maritime transport logistics chain at the Port of Cape Town (PoCT). Other members of the MoA include the Alliance for Collaboration on Climate and Earth Systems Science (Access) and other research institutions.

The MoA between TNPA and the research consortium will provide researchers with access to data sources that are required for the study, and the TNPA will facilitate engagements with their key clients and stakeholders. The research team will work closely with TNPA and the port stakeholder over the next two years to find optimal ways of addressing the challenge.



Source: Supplied | In partnership and in agreement, the Transnet National Ports Authority has signed a memorandum of agreement with the Council for Scientific and Industrial Research-hosted programme, the Alliance for Collaboration on Climate and Earth Systems Science and other research institutions | In attendance from left to right are Magenthran Ruthenavelu, Benedict Isaacs, Rajesh Dana, Khuthadzo Khangale, Vuyo Ndai, Eugene Mabille, Phyllis Difeto and Neville Swejld .

In the last few years, the PoCT, lost on average, 1,200 hours per year of operational time due to extreme wind disruption.

Extreme wind gusts can result in terminal equipment becoming unsafe to operate, thereby impacting terminal operations. This sometimes leads to congestion inside and outside the port, resulting in vessels being at anchorage for extended periods. Several industries, including the time-sensitive fruit industry, are severely impacted by wind disruptions in the port.

Climate change impact

Climate specialists at the University of the Witwatersrand are studying the seasonal climate patterns that result in these extreme winds to establish whether there are trends and whether the wind is indeed intensifying with time, as well as how the wind patterns in the Cape Peninsula and the port are likely to change as a result of climate change.

Researchers at the University of KwaZulu-Natal and the University of Cape Town (UCT) are examining the current and future economic impact of these disruptions on specific value chains to estimate the financial losses and assess the

required investment into adaptation measures to deal with the problem. The CSIR and UCT are focusing on feasible engineering and operational adaptations to address the challenge.



Source: SkyPixels via [Wikimedia Commons](#)

Advocate Phyllis Difeto, TNPA managing executive for western region ports, who signed the MoA, says that the TNPA appreciates the increasing risk of environmental challenges to port operations and that, unless these are carefully understood and managed, they can add a burden to the smooth management of the ports, which are vital to the functioning of the country's economy. "Climate change presents a growing challenge to shipping and ports in that it impacts the state of both land and sea operations."

CSIR senior researcher and Access director Dr Neville Sweijd says extreme weather is really the way in which climate change manifests. He explains that these extreme events, which occur in South Africa and everywhere else, are projected to intensify as global warming and climate change manifest further, and this is how people will experience it in their lives and work.

Impact on exports

"The extreme wind problem in the PoCT is a classic example. It is not a new problem, but potentially a worsening one, and so it will increasingly have an impact on lives and livelihoods all around the Western Cape, especially for those people who are involved in the fruit export industry," says Sweijd. He explains that the project seeks to produce solutions that can be used to adapt to and manage extreme wind impacts. "We cannot turn the wind off, but we can learn to better work with it," he adds.

Stakeholders representing exporters and importers, freight management and producer associations met in June 2023 at a workshop to outline and scope precisely how businesses were impacted by port disruptions.

“Strategic partnerships are critical for a successful and integrated maritime transport logistics chain, and the TNPA continues to collaborate and partner with all stakeholders to optimise the value proposition of the port and the Western Region,” says Advocate Phyllis Difeto.

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