



“Adaptation of Transport Networks to Climate Change”

Alexandroupolis, Greece 25-26 June 2012

Capt L.B Barbeau

Port Master

Mauritius Ports Authority

Sensitivity of Port Louis Harbour

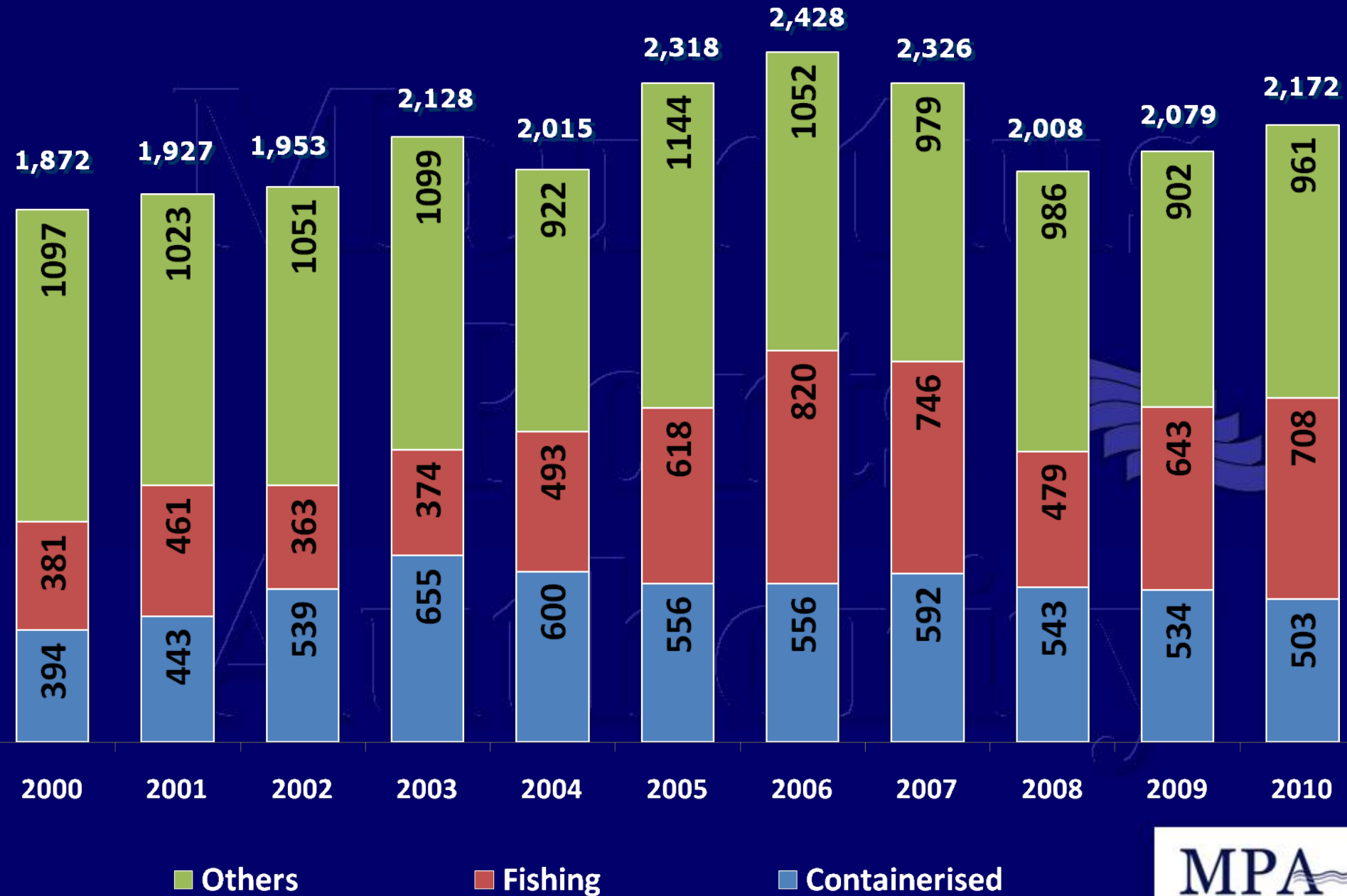
1. Strategically located at the crossroad of main maritime routes b/w Far East & Africa and Europe & Australia
2. Country's only maritime gateway for External trade (99%)
3. Contribute 2% to the country's GDP
4. Vital connection for Indian Ocean islands & peripheral regions



Feeder/ Regional Services



Evolution of Vessel Calls





- **World Trade**

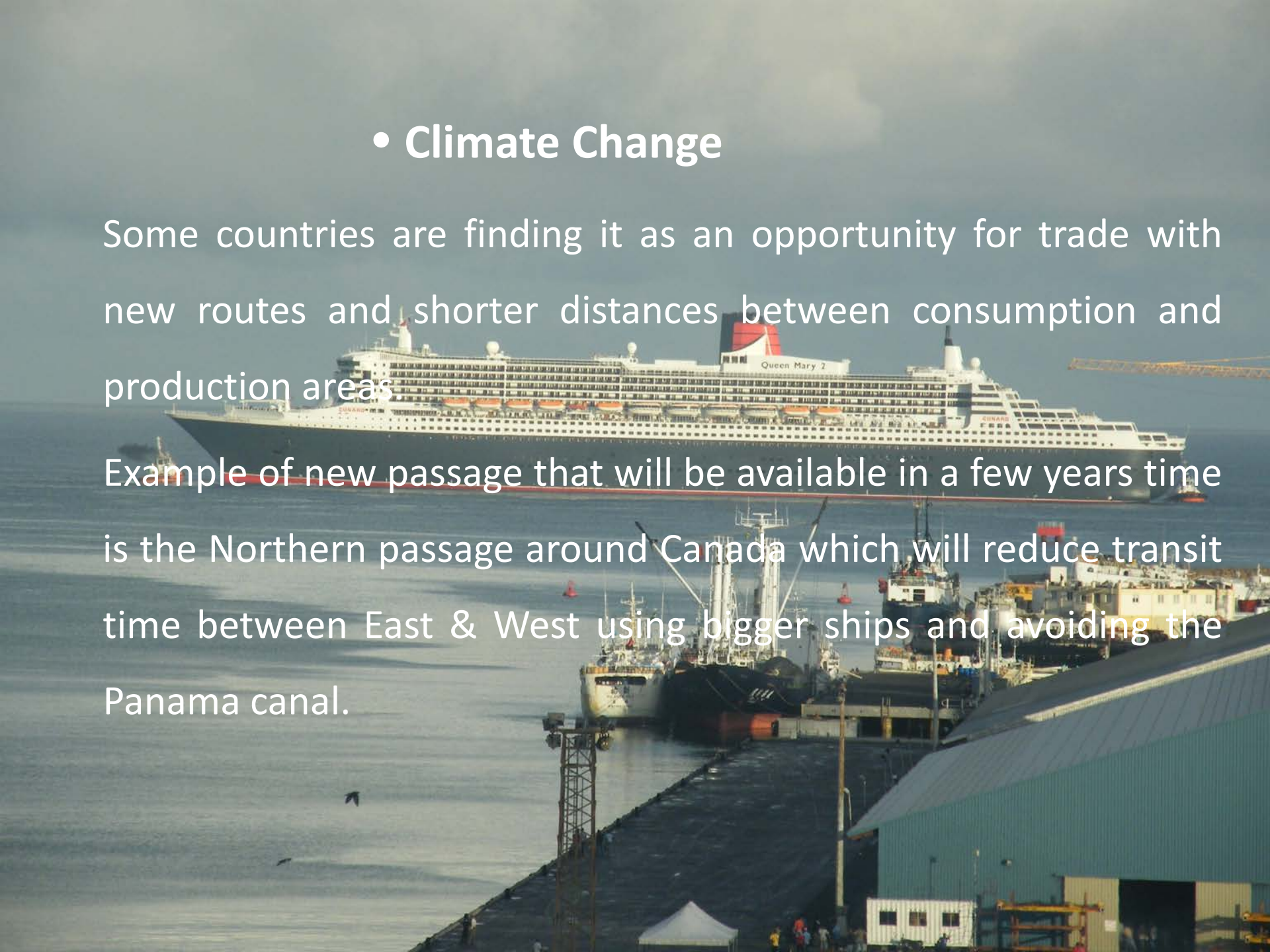
The maritime industry has been among the first industry to have effectively contributed in the globalization of the economy and trade with the help of the container system which has revolutionized the transport system due to its door to door capacity and adaptation to the road and rail system..

Today almost 90 % of the raw materials and finished goods are traded around the world are moved through the maritime industry.

- **Climate Change**

Some countries are finding it as an opportunity for trade with new routes and shorter distances between consumption and production areas

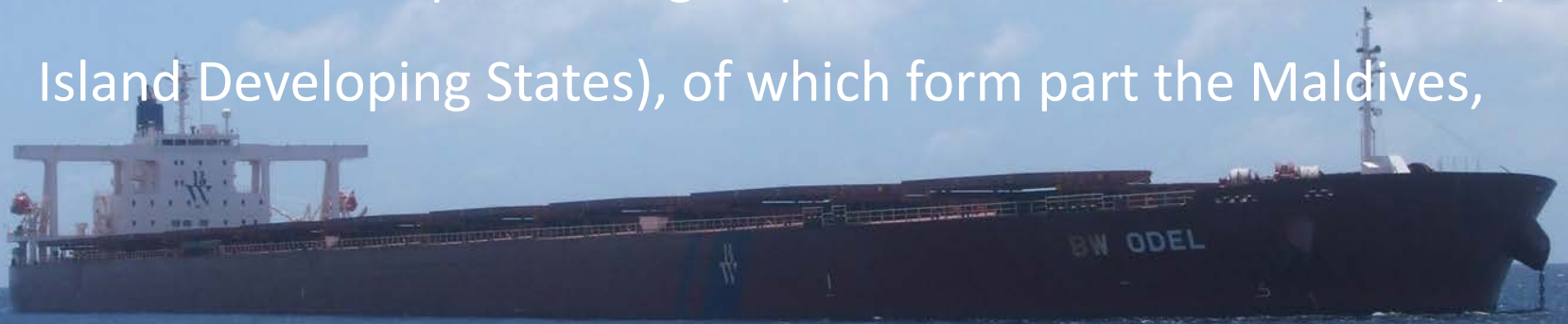
Example of new passage that will be available in a few years time is the Northern passage around Canada which will reduce transit time between East & West using bigger ships and avoiding the Panama canal.



The advantages of one is actually against another.

Mauritius form part of a group of nations called the SIDS (Small Island Developing States), of which form part the Maldives,

Seychells islands of the Indian Ocean and those of the Pacific Ocean and the Caribbean region.

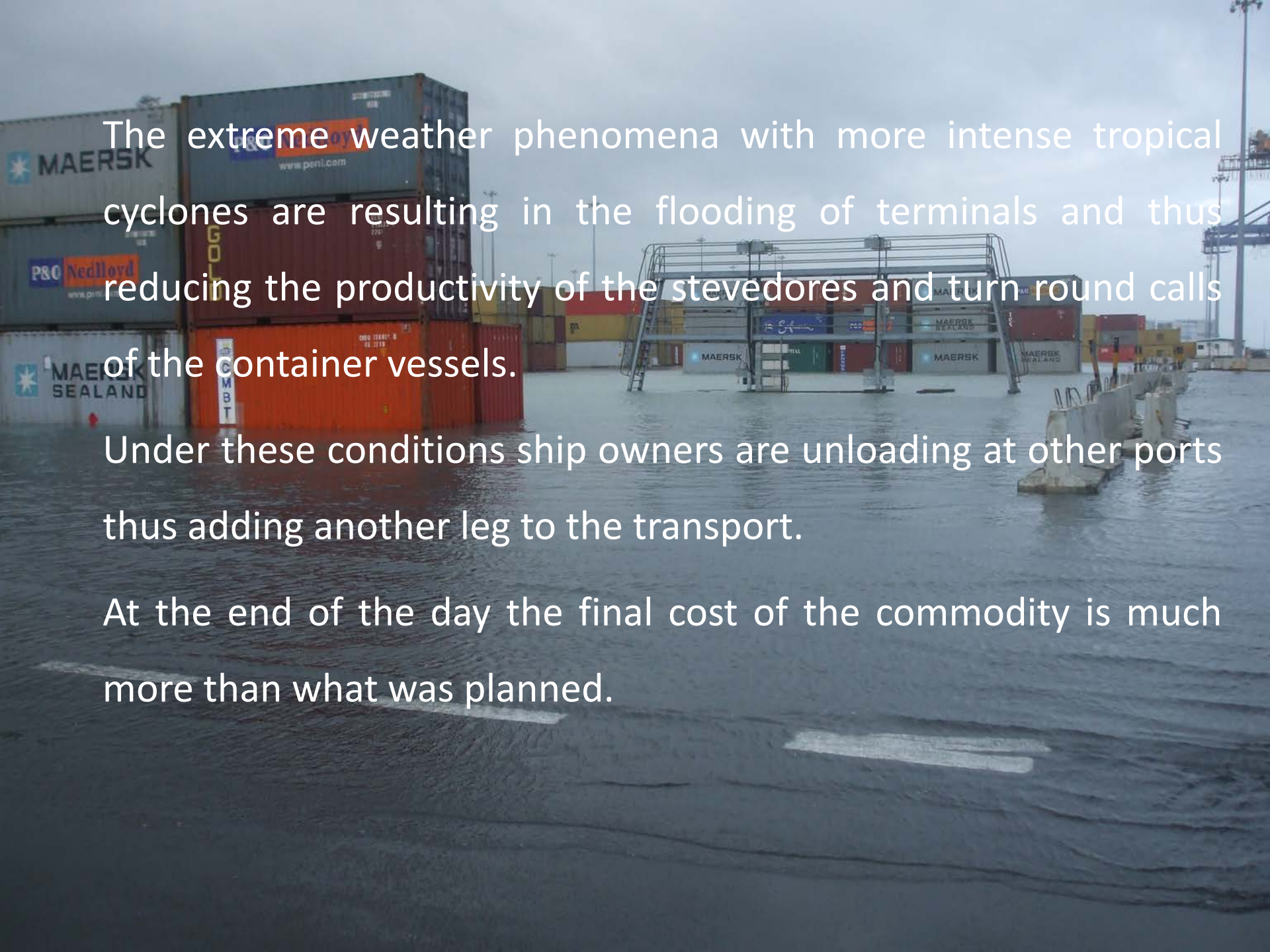


Climatic conditions

Areas are subjected to revolving tropical storm mainly during the summer months with more extreme conditions in certain regions than others.

Influence of the El Nino and the La Nina is suspected for the above two conditions.





The extreme weather phenomena with more intense tropical cyclones are resulting in the flooding of terminals and thus reducing the productivity of the stevedores and turn round calls of the container vessels.

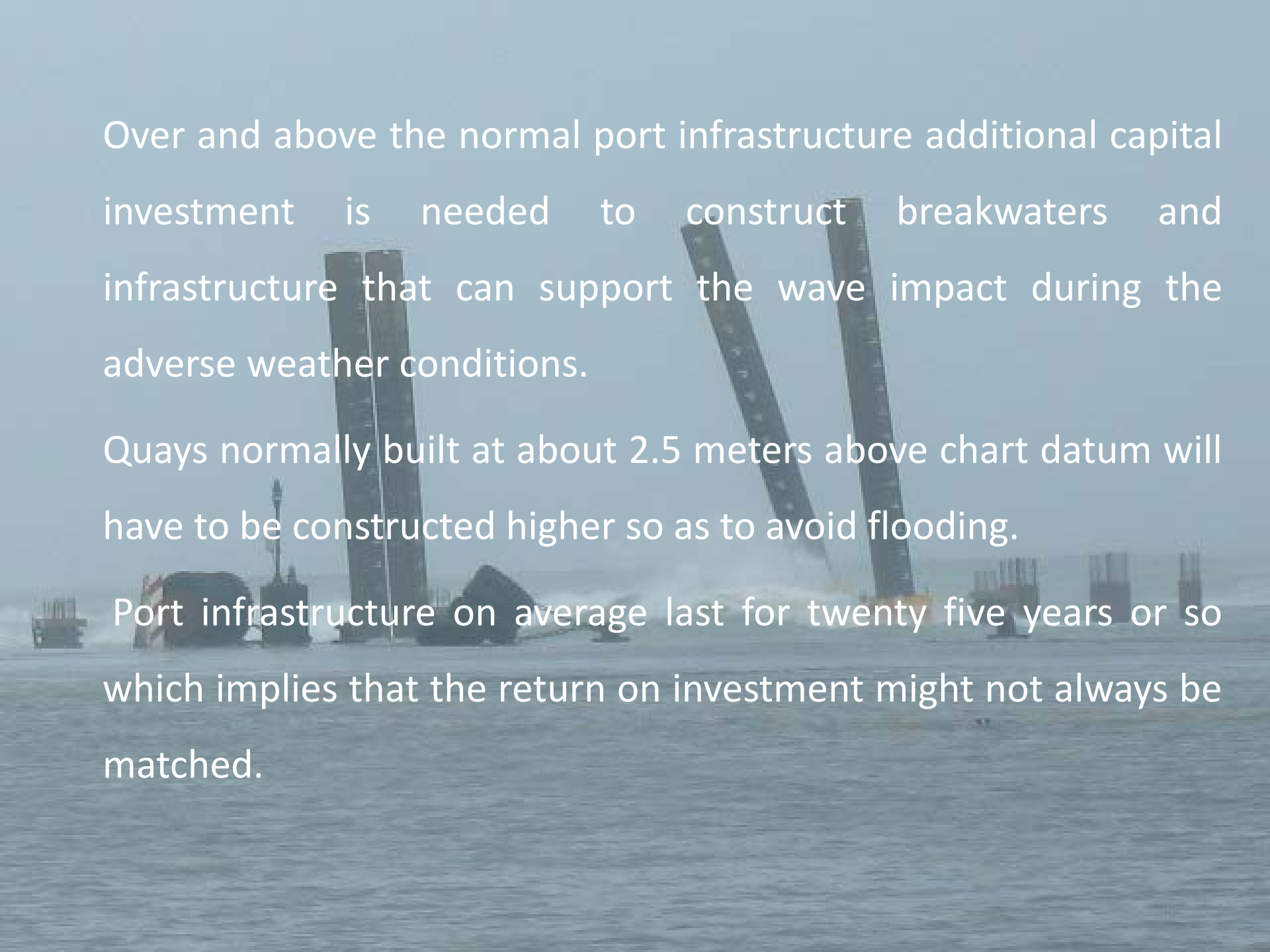
Under these conditions ship owners are unloading at other ports thus adding another leg to the transport.

At the end of the day the final cost of the commodity is much more than what was planned.



We have to adapt the construction with the climate change therefore planning is of prime importance and unfortunately SIDS usually forming part of the developing countries does not always have all the available technical data to determine the correct design of new quays and breakwater which by the way are very expensive.

Local expertise is once again not always available and we have to rely on friendly countries or international organization for help.



Over and above the normal port infrastructure additional capital investment is needed to construct breakwaters and infrastructure that can support the wave impact during the adverse weather conditions.

Quays normally built at about 2.5 meters above chart datum will have to be constructed higher so as to avoid flooding.

Port infrastructure on average last for twenty five years or so which implies that the return on investment might not always be matched.

SIDS are therefore the first one taking the toll of climate change given that:

(a) Rise in sea level.

(b) Erosion of the coast.

(c) National economy is very much dependant on the maritime industry.

(d) Heavy investment that will be needed in the construction in the most appropriate quay structures.



Strategies at International/national level

- SIDS have an urgent need for qualified technicians who will be always on hand to study change over a certain period of time.
- Consultants coming in and out of the country is not really the solution.
- Creation of green ports which will make use of solar, wave or wind energy for lighting, air-conditioning...etc.

The image shows two large cargo ships docked at a port. The ship on the left is black with a red hull and has the name 'NINAP' visible on its side. The ship on the right is also black with a red hull and has the name 'LIVING SW' visible. Both ships have yellow cranes on their decks. The background shows a clear blue sky and a body of water.

Challenges for Port Authorities

- Capacity building is of prime importance to:
- Have well trained officers in both technical and legal matters.
- Carry out inspections on ships and control their compliance to international norms.
- To develop hub and regional ports with mega carriers and smaller vessel working in tandem to serve a specific region.



- Way Forward

Need to focus on sustainable development for our future.

Need the help of developed countries and international organisations.

Be able to implement and enforce international conventions and regulations at national level.

Training of officers so as to meet the challenges.

Research and development to further improve the efficiency of ships engines.

Thank you

