



# Sea Conditions Guide: Southern Africa

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## **Subtropical climate highly influenced by the relation between three oceans**

Southern Africa is a very strategic area for the maritime industry. Several important ports are located on the Southern Africa region and most of them are important for shipping routes regarding bunkering, sheltering, maintenance and are hubs for import/export at one of the richest economies in Africa.

This region has a subtropical climate with temperatures driven by the sea temperatures which are strongly influenced by two main currents, Agulhas to the east/south and Benguela to the west. Those currents are result of the interaction between three oceans; the warm Indian Ocean, deep cold


waters from the Southern Ocean or also called Antarctic Ocean and finally the South Atlantic Ocean.

Therefore, the area has sort of three different climates which from the west to the east change from mild and drier to warmer and rainier.

## **Roaring Forties vs South Atlantic High**

The western/southern belt of this area with Cape of Good Hope being very well known by the worldwide mariners is hugely influenced by the relation between the Roaring Forties to the south and the South Atlantic High to the west/northwest.

Despite the mild climate across this area the deep Lows over the Forties often bring storms and gale winds caused by strong cold fronts. This happens usually during the winter (June-September).



During the summer (December-March) weather is dry, often with clear skies but wind speeds tend to be even higher (frequent and persistent gales) due to the tight pressure pattern over the coastal areas caused by the South Atlantic High-Pressure ridge compressed by the relatively high continental slope.

This is highly observed along the areas surrounding Cape Town where those persistent strong winds are locally known by Cape Doctor or South-Easter and wind enhancement is experienced due to funnelling between Table Mountain and Hottentots-Holland mountains. This local phenomenon also produces a well-known cloud band over Table Mountain which is due to the warm and moist air from False Bay being blown, lifted and cooled throughout the Mountain leading to condensation. The wind side over Cape Town is dry with clear skies and blows away part of Cape Town's pollution and that's why is called Cape Doctor by locals.

To the Eastern side surrounding Durban the most dangerous weather feature is associated to a strong and deep low-pressure trough which extends from the Forties up to the Eastern South Africa and often with a Coastal Stormy Low located around Eastern Cape. This Low often has potential for creating the popular named feature called Southerly Buster with winds shifting from near calm to gales within a really short period of time.

## **Agulhas Current and Freak Waves**

The Agulhas Current is southwards current that flows along the Southwestern Indian Ocean due to ocean recirculation and strong eddies over the Mozambique Channel. This current is often used by mariners when sailing westwards to improve the speed.

However, there is a particular dangerous feature along this current which is linked to low-pressure systems deepening as moving across this warm current leading to explosive cyclogenesis over the area. The seas that follow these systems, when counter direction the current (often associated with southerly gales over the sea) can be quite unpredictable and causing freak waves to form that can threaten all sort of ships.