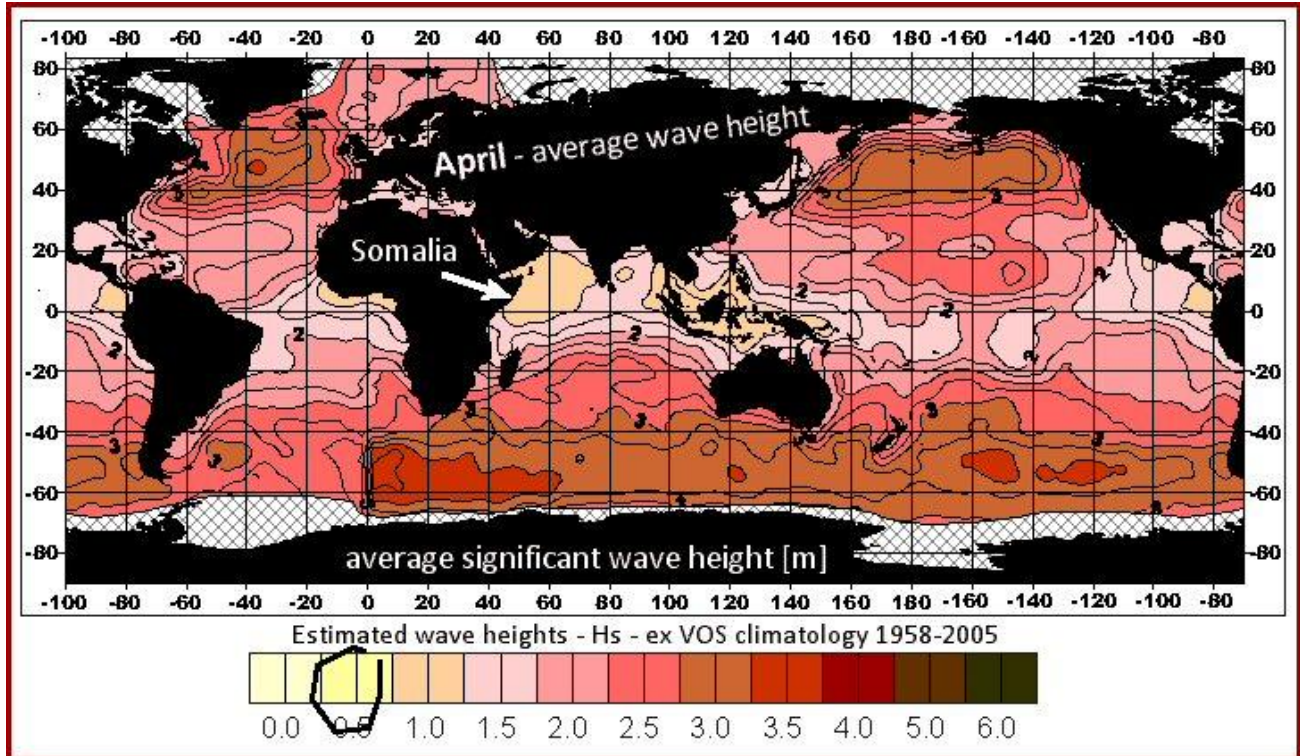


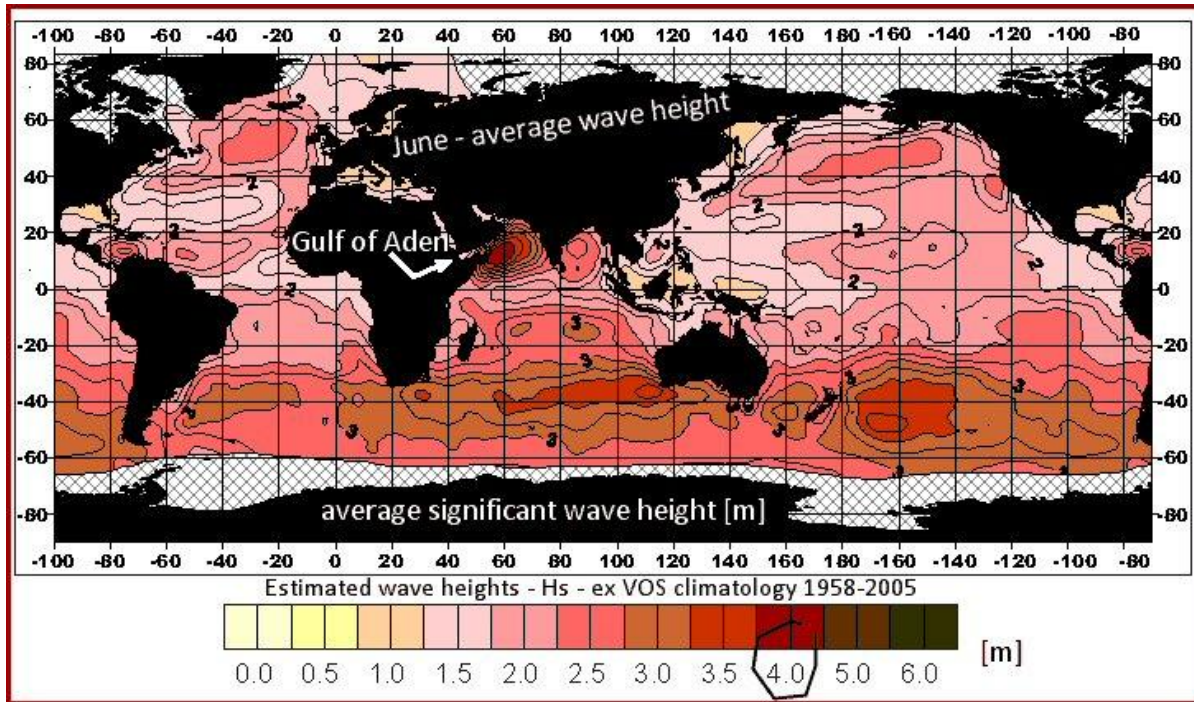
Piracy off the Horn of Africa – Metocean Influences

In today's Terra Daily section 'Disaster Management News' it was reported that the current spate of ship hijackings by Somalia-based pirates is largely related to seasonal wave conditions. Since the beginning of April at least 10 ships have been hijacked and this trend is expected to continue for at least another few weeks whilst the annual lull in sea state remains at its lowest :



Note that these are monthly *average* wave heights – i.e. throughout the month of April significant wave height averages around 0.5m east of the Gulf of Aden and off the coast of Somalia, these conditions extending well offshore. Although these are *estimates* of wave height from voluntary observing ships, VOS data holdings are by far the largest source of such data – particularly along the trade routes (e.g. Suez Canal – Red Sea – Gulf of Aden). The Southern African Data Centre for Oceanography (SADCO) in Stellenbosch, for example, has voluntary observing ship data going back well over 150 years.

Compare the dramatic changes which take place in these ocean areas as the year progresses :



Remember this is *average* sea state. The US Navy marine climatology tables for the Indian Ocean (also derived from VOS data) indicate that waves of *over 8m* occur to the east of the entrance to the Gulf of Aden, in the month of June. The dominant wave direction is SW'ly.

The reason for this upsurge in sea state is the onset of the Southwest Monsoon in June. Over the sea areas to the northeast of Somalia gales are experienced on 1 day in 3.

Scaling a moving ladder up a sheer metal wall of up to 15m in a heavy swell and/ or gale force winds is by no means an easy task. The boat from which the boarder is alighting may be moving up and down by well over 5m relative to ship being boarded. Mistiming can result in serious injury or worse. At many major ports there are offshore supply services – launches which take cargo out to passing ships (weather permitting). A representative of the shipping agency sometimes has to board the vessel via rope ladder to have papers signed, deliver documents etc. There are also crew changes, although these usually make use of a basket and lifting gear on the ship.

In the above case the ship's Master will obviously align his vessel to make the boarding agent's ascent as easy as possible (consider offshore Cape Town with the remains of a heavy SW'ly swell and the SE'er already on the increase). However, a ship being pursued by would-be hijackers (usually in speed boats) is hardly likely to take such action!

Soon the sea will be on the side of the mariner, rounding the Horn of Africa. Roll on Southwest Monsoon.