



INCORPORATING



**SOUTH AFRICAN ASSOCIATION FOR MARINE BIOLOGICAL RESEARCH**

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## PROTECTION OF MUSSEL BEDS AT UMDLOTI

Rock mussels are an important coastal asset in KwaZulu-Natal, not only as a part of ecosystems but also as a valuable resource for harvesting and food security. Over the years, conservation of mussel beds has relied mainly on the sale of permits and limiting daily bag levels. However, severe deterioration of mussel beds and other marine life in the 1980s justified the need for better protection of certain key mussel sites. This was especially the case for Umdlotti Beach where, following consultation with residents, a specific area was closed for the collection of mussels, rock lobsters, crabs, mole crabs and redbait in 1998.

The Oceanographic Research Institute (ORI) has monitored the mussels at Umdlotti since the 1980s and documented the recovery of the mussel beds. Over the past 12 years the mussel cover has more than doubled on the monitored reefs. Mussel cover is much higher at Umdlotti than on nearby exploited reefs and Umdlotti mussel beds are considered to be an important source of mussel spat for reseeded other reefs along the KZN coast.

Mussel beds are an integral part of the marine ecosystem at Umdlotti. Mussels remove food particles from the water column by filter feeding. This improves water clarity, regulates phytoplankton blooms and promotes the growth of macro algae fed on by herbivores. Mussel beds also provide living space, protection and food for many marine organisms, including rock lobsters, octopus and fish such as Natal stumpnose, musselcracker, pompano and blacktail. The presence of mussel beds is known to increase the diversity and biomass of fish in an area; healthy mussel beds can thus improve fishing. The only other protected mussel beds along the KwaZulu-Natal North Coast are more than 200 kilometres north of Umdlotti, in the iSimangaliso Wetland Park.

Umdlotti Beach is also an important mussel nursery but also serves as a reference site against which the state of other exploited mussel beds can be measured.

The continued protection of this area is thus justified and necessary as part of the overall mussel conservation plan.

The Director: Oceanographic Research Institute  
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