Wide-scale changes in land-breeding top predator populations in the BCLME: A need for regional cooperative monitoring and management

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Land-breeding top predators contribute in monitoring changes in marine resource, environment and ecosystem changes. Aerial surveys have been used to estimates population status of some top predators i.e. Cape fur seals and Cape over time. This time series on aerial censuses of Cape fur seal colonies, covering four decades (1972–2009) and three countries (South Africa, Namibia, and Angola), have been useful tool in assessing spatio-temporal changes in population numbers. Trends in the population of Cape fur seals and some seabirds (Cape gannet) have been estimated from counts of pups and birds sitting on nests on aerial photographs of colonies taken since1972 until present to determine trends in the overall population over time.

Recent trans-boundary aerial photographic surveys on both seal and seabirds showed the northwards extension of the seal breeding population into southern Angola and the eastward shift in most seabirds in the Agulhas ecosystem.

A 74% increase in the number of breeding colonies was recorded from 23 in 1973 to 40 in 2009. There was also a significant northward shift in the distribution of the breeding population and was extended by *ca.* 680 km (from Cape Cross to Baia dos Tigres in Angola) whereas the eastward range of the breeding population remained constant throughout the time series. There was also a noticeable shift on seabirds where most of the seabirds declined tremendously in the west coast and eastward shift was recorded to the east coast. The number of gannets in East coast (Bird Island Algoa bay) were estimated to be about 100 000 breeding pairs whilst a decline was recorded at west coast islands. The availability of prey such as horse mackerel *Trachurus trachurus capensis* for top predators as well as fisheries in North Namibia–Angola is assumed to correspond with the directionality of the shift in the Cape fur seal and Cape cormorant breeding population in the Northern BCC region.