

Vital signs



Wading birds

Seven species, including banded dotterel and wrybill, in the Firth of Thames have displayed declining trends in numbers since 1960. Habitat changes including mangrove growth have led to major distribution shifts.

New Zealand Dotterel

Shellfish

Cockles In decline at Whangateau, Umupuia/Duder's Beach, Cheltenham beach.
Mussel beds Eliminated by dredging in Tamaki Strait, Firth of Thames.

Fisheries

Snapper stocks down to around 11% of biomass by 1995* but are thought to be rebuilding, along with kahawai. Rare and threatened fish species, fish diversity, fish size and productivity declined in the Firth of Thames (a major nursery) between 1995 and 2000. Negative trends in size and productivity also in central gulf between Kawau and Waiheke.



*Snapper stocks were last surveyed in 1995.

Seabirds

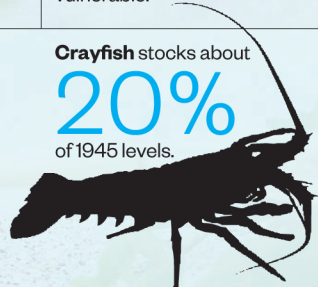
23 species breed in the region; gulf islands an important refuge. NZ fairy tern is critically endangered; black petrel, Cook's petrel and flesh-footed shearwater vulnerable.



Black petrel

Crayfish stocks about

20%
of 1945 levels.

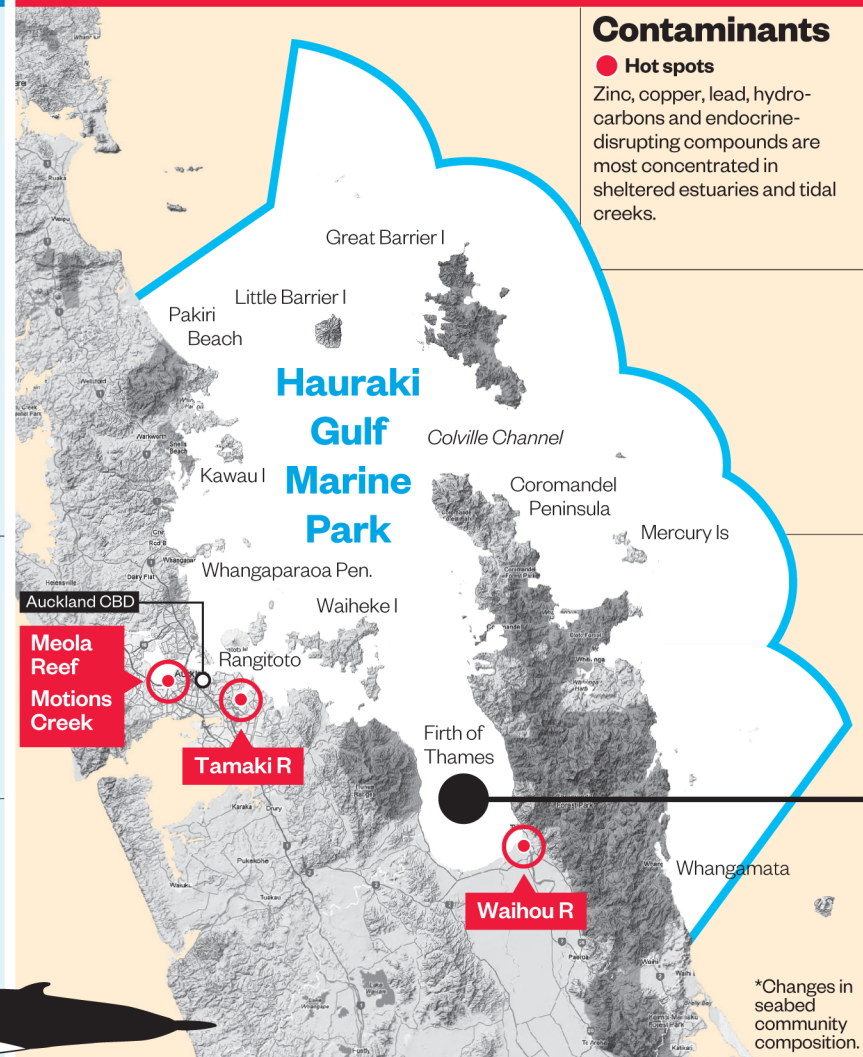


Bryde's Whales

Highly threatened resident population is vulnerable to ship strike and mussel line entanglement. Commercial fishing could also affect food sources.



Threats



Contaminants

Hot spots
Zinc, copper, lead, hydrocarbons and endocrine-disrupting compounds are most concentrated in sheltered estuaries and tidal creeks.

Fishing

Bottom trawling accounts for 40% of the total take in outer gulf, with potentially significant habitat effects. Status of 9 of the top 15 fish species caught in the gulf is unknown. Overfishing of tarakihi and trevally is suspected.

Litter

Between 420,000 and 450,000 litres of litter a year is collected by volunteers. Plastic is the worst pollutant. It fouls beaches, entangles marine life and is often ingested.

Sediment*

Mud and fine sand have increased in the Firth of Thames. Estuary infilling and mangrove expansion change the abundance and diversity of species.

Nutrients

Nitrogen is linked to increase in dairy cows and fertiliser use in Waikato and Hauraki Plains. There is nitrogen from wastewater treatment plants at Rosedale and Army Bay

*Changes in seabed community composition.

70+

finfish species commercially caught in the gulf

Invasive marine species

139

have been recorded, many in the Port of Auckland.

Recent arrivals

- **Mediterranean fanworm**
Forms dense mats, competing for food and space with native species.
- **Clubbed sea squirt**
A threat to mussel farming.
- **Undaria**
A seaweed which out-competes native species.
- **Japanese mud crab**



A predator of small cockles, pipi, scallops and mussels.