



# FACTSHEET

## What we know about Maui's and Hector's dolphins

### A unique New Zealand taonga

Hector's and Maui's dolphins live only in New Zealand's shallow coastal waters – nowhere else in the world.

They are among the world's rarest and smallest cetaceans. Full-grown adults are the size of a small child – about 1.4 metres tall and 50 kilograms in weight.

Hector's and Maui's are easily recognised by their distinctive black facial markings, short stocky bodies and their unique dorsal fin shaped like a Mickey Mouse ear.

### Rare and endangered

Hector's dolphins are listed on the World Conservation Union's (IUCN) Red List as 'endangered', and are among the most rare of the world's 32 marine dolphin species.

Five peer-reviewed scientific research papers conclude the dolphins' numbers are decreasing. Scientists agree that Hector's dolphin numbers were between 21,000 and 29,000 in the early 1970s, compared with an estimated 7270 today. That's less than one-third of the 1970s' population. Maui's dolphins are even more rare – in fact, they are the world's most rare marine dolphin with an entire population estimated at just 111 individuals. Maui's dolphins are considered 'critically endangered' by the IUCN. There are only two worse classifications – 'extinct' and 'extinct in the wild'.

### Where Hector's dolphins live

Although once wide ranging, Hector's dolphins (*Cephalorhynchus hectori hectori*) are now only found in distinct and geographically isolated groups around the South Island. At least three groups are known – one on the South Island's west coast, one on its east coast and the third on the south coast.

The west coast population is the largest, estimated at 5400. The east coast population, thought to be about 1790, is the basis of a thriving dolphin-tourism industry at Banks Peninsula, near Christchurch. The smallest population, fewer than a hundred animals, lives along the south coast, west of Invercargill.

In summer months, Hector's dolphins range within about 9 kilometres of shore, moving further out in winter – up to 27.5 kilometres from land.

### Where Maui's dolphins live

Maui's dolphin (*Cephalorhynchus hectori maui*) were recognised as a distinct subspecies in 2002, following genetic research by New Zealand marine scientist, Dr Alan Baker. Dr Baker identified genetic and skeletal differences, as well as a slightly different body form.

Maui's live in shallow coastal waters along the North Island's western shores. Most sightings are between Manukau Harbour and Raglan Harbour.

Maui's tend to stick closer to shore than Hector's do, making them more at risk from fishing nets. Aerial surveys in 2005 showed that, in winter, Maui's appear to be evenly distributed between the shoreline and about 7.5 kilometres offshore. However, in summer more sightings were closer to shore.

### Ecology

Hector's and Maui's dolphins live in small groups in inshore coastal waters up to 100 metres deep. This includes harbours, river mouths, estuaries and shallow bays.

The dolphins live about 20 years.

Females begin to breed when aged 7-9 years, and wait until each calf is fully independent before giving birth again.

They have just one calf every 2-3 years and one female might have just four calves in her 20-year life span.

With such a low growth rate – 2% – a population of 100 Maui's would grow to 102 (at the most) in one year – which is why any human-induced deaths have such a devastating impact.

Maui's dolphins breed just fast enough to replace the number of dolphins that die naturally and are struggling to recover from human-induced deaths, such as being drowned in set nets.

### **Behaviour**

Feeding takes up a lot of the Maui's time. Maui's dolphins spend most of their time making short dives (90 seconds or so) to find fish on the sea floor. They also find fish and squid in mid water and sometimes feed near the surface.

They also play, chase each other, blow bubbles, fight and jump.

### **Are they healthy animals?**

Like dolphin populations all over the world, Hector's and Maui's dolphins have diseases and parasites.

One bacterium (*Brucella*) has been found in every dolphin species examined so far, including Hector's. It's a bit like the common cold in humans.

In the past, diseases and parasites were not a major problem for Hector's dolphins – they have lived with them for millions of years. What has changed is that our actions (especially fishing) are depleting dolphin populations so they are now less resilient and less able to absorb the impacts of disease, climate change, pollution and habitat loss.

### **The threats**

Living close to shore is a problem for the dolphins. Becoming tangled in recreational and commercial gill nets and trawl nets is recognised by both the Ministry of Fisheries and the Department of Conservation as the biggest threat they face.

Other threats are being struck by boats, and having their habitat affected by pollution, coastal development and seabed mining.

Future threats may arise from climate change, overfishing, marine energy generation and aquaculture.

### **Deaths in fishing nets**

Fishing interests often claim dolphin by-catch is not an issue because official records report few deaths – an average of just two dolphins a year. However, official records are largely based on voluntary reports made by fishers – until the summer of 2008/2009, very few independent observers have been involved.

Experience for other by-catch species, such as sea lions, shows that voluntary reporting by fishers is less than accurate, with under-reporting of deaths and injuries.

In 2004, a report prepared for the Ministry of Fisheries, said fishing vessels with no government-funded fisheries observers on board consistently reported far fewer seabird catches than those that did have observers.

The same is true for Hector's dolphins, as shown by the National Institute of Water and Atmospheric Research (NIWA). NIWA used data from independent observations to develop a credible estimate of around 30 Hector's dolphin deaths a year in the Canterbury gill net fishery – 28 more than the fishing industry voluntarily reports, on average. A 2008 NIWA risk analysis, prepared for the Ministry of Fisheries, estimates the total New Zealand death rate at 110-150 Hector's and Maui's dolphins every year.

This figure is the most accurate scientific estimate available. Clearly the number voluntarily reported is the tip of the iceberg.

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