

# New Zealand Orange Roughy

Orange roughy is a slow-growing fish that can live for up to 130 years. It is found in deep water around New Zealand at depths of 750 to 1,500 metres. Orange roughy grow to 50 centimetres long and weigh about three and a half kilograms when fully grown. They mature late, reaching adulthood when they are between 25 and 35 years old.

Orange roughy fishing in New Zealand takes place over areas of flat seabed and on the slopes of underwater hills and mountains. Most catch is taken between late June and early August when orange roughy come together in large schools to breed.

## History of the orange roughy fisheries

The oldest and largest orange roughy fishery in the world operates on the Chatham Rise, to the east of New Zealand's South Island. Fishing for orange roughy began here in the late 1970s, with the largest catches taken in the late 1980s.

In the early years of fishing for orange roughy, catch limits were set considerably higher than they are today because there were so many fish. The management strategy at the time was to "fish down" the orange roughy population to a level which would

ensure that, as long as the population remained near this level, orange roughy fisheries would be healthy and sustainable in the future.

This was difficult to achieve with accuracy and in some orange roughy fisheries there was too much fishing in the early years.

To fix this, a range of steps have been taken to ensure that our orange roughy fisheries are no longer overfished. Measures included closing three orange roughy fisheries to allow the numbers of fish to increase at the maximum possible rate, and reducing the catch limits in the remaining fisheries. Recent research has shown that the number of fish in the orange roughy stock on the Challenger Plateau, off the South Island's north-west coast, has increased since the fishery was closed in 2000. The fishery was therefore re-opened, with a modest catch limit, in 2010.



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### How do we manage orange roughy fish stocks?

New Zealand has carried out scientific research on orange roughy for more than 25 years. All research is carefully reviewed by expert scientists, with active participation by fisheries managers and representatives of environmental and commercial fishing interests, to ensure it is as reliable as possible.

The primary use for this research is to set annual catch limits to ensure fishers do not catch too much orange roughy in any one year. If the scientific research shows there has been an increase in the numbers of orange roughy, catch limits are increased. If fish numbers are calculated to have reduced, then catch limits are also reduced.

### How do we manage the impact that orange roughy fishing has on the marine environment?

Fishing, like any human activity, almost always has an impact on the environment. The Ministry of Fisheries monitors orange roughy fishing to ensure this impact stays within acceptable levels. If this is not the case the Ministry works closely with the fishing industry to alter fishing practices so that impacts are reduced.

Fishers sometimes catch fish other than the species they are targeting – this is called bycatch. Orange roughy fishing catches only a small amount of bycatch, with 96 percent of the catch consisting of either orange roughy or other valuable species such as oreo. The less valuable fish species managed under the quota management system (QMS) must still be kept by the fisher and can be turned into fishmeal which is used to feed farmed fish.

Orange roughy fishing boats catch few seabirds or marine mammals. The larger orange roughy fishing boats are



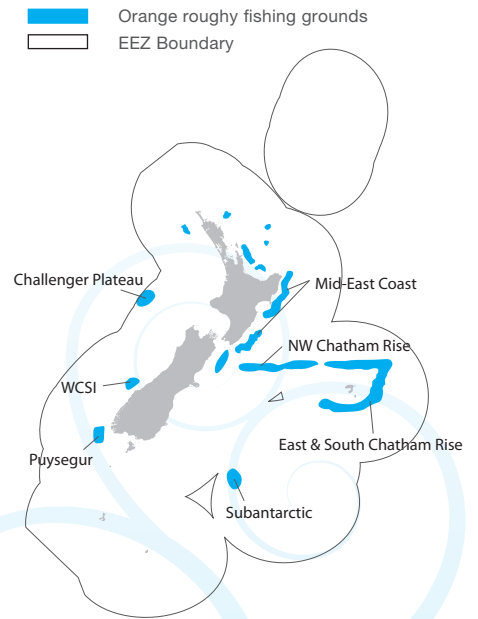
legally required to use bird scaring devices to keep birds away from the fishing gear, where they are in danger of getting caught. Fishing boats must also be careful when they put fish waste into the sea because this attracts marine mammals and seabirds to the fishing gear.

Orange roughy is fished by bottom trawling, a fishing method that can damage corals and other marine animals that live on the seabed. Current fishing activity is largely limited to areas that have been fished before and this helps to minimise additional damage that may occur.

More than 90 percent of New Zealand’s offshore waters have never been bottom trawled or dredged. In addition, large areas of the seabed have now been completely closed to bottom trawling of any kind. These closed areas, called benthic protection areas, form one of the largest closures of marine space to bottom trawling within any exclusive economic zone (EEZ) in the world.

More about how New Zealand manages the impacts of bottom trawling can be found in the information sheet “Protecting New Zealand’s Seabed from the Impacts of Bottom Trawling”.

Main orange roughy fishing grounds



#### Did you know:

- Orange roughy can live for over 100 years.
- New Zealand has the largest and oldest orange roughy fishery in the world.
- In 2010 orange roughy exports generated \$49 million for the New Zealand economy.

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Te Tautiaki i nga tini a Tangaroa

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This information provides a high-level overview of an aspect of the New Zealand fisheries management regime. To find out more about how New Zealand’s fisheries are managed to enable sustainable seafood for future generations go to: [www.fish.govt.nz](http://www.fish.govt.nz)