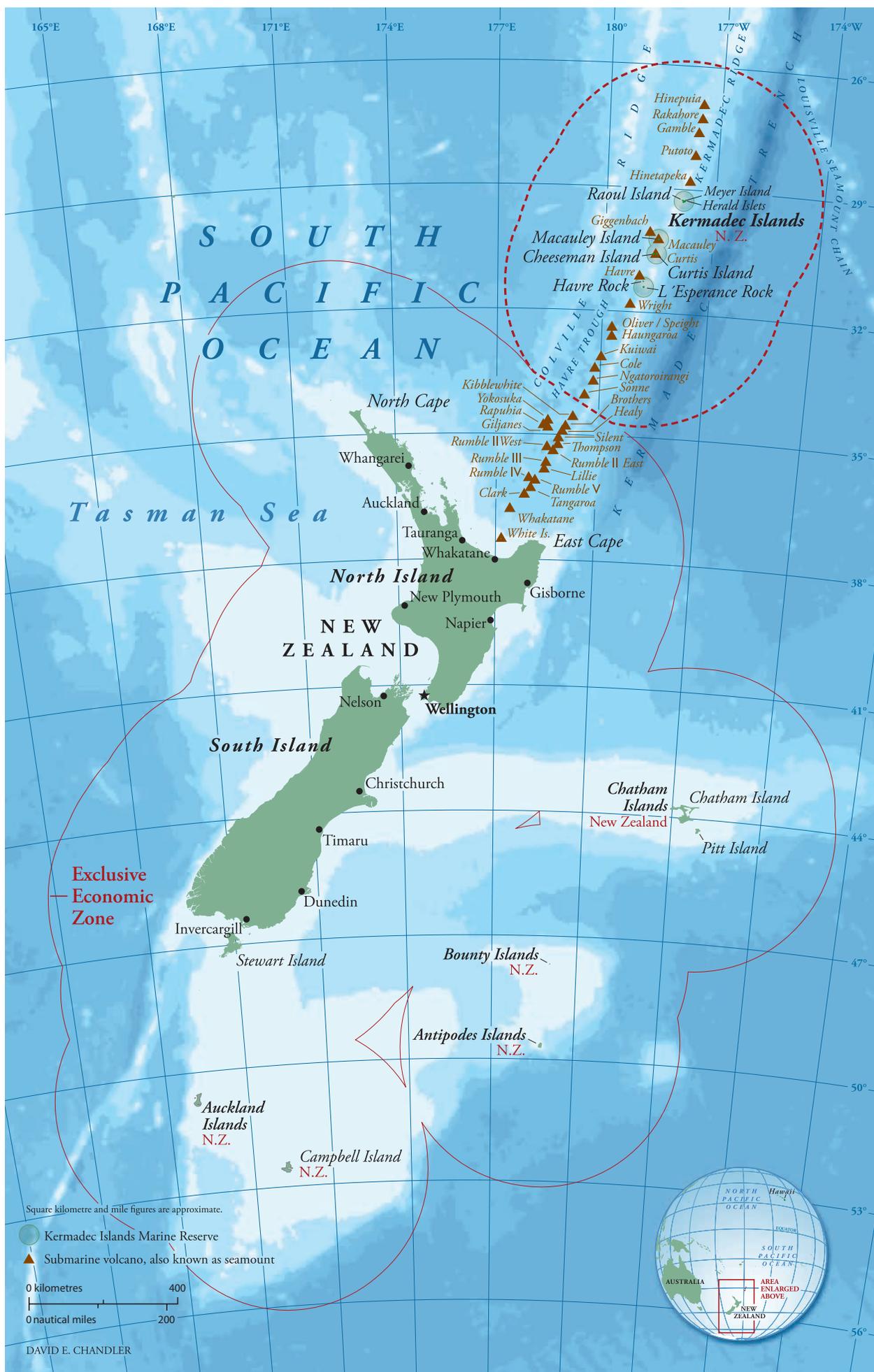


# DEEP

PROTECTING AND CONSERVING ONE OF THE EARTH'S MOST IMPORTANT  
AND UNSPOILED MARINE ENVIRONMENTS - THE KERMADECS

# THE KERMADECS



## THE AMBITION

To have the entire 620,000 square kilometers of the Kermadec region protected. A Kermadec Ocean Sanctuary will be the single biggest marine reserve in the world, a fitting declaration for what National Geographic calls “one of the last pristine sites in our oceans”.

## THE ENVIRONMENT

The area has a remarkable diversity of marine habitats. Its islands, more than 50 submarine volcanoes and extensive marine trench (the second deepest on earth) form outstanding examples of major stages in Earth’s evolution. A third of all known New Zealand fish and a third of all our sharks and rays originate from the Kermadec Ridge. The area is also an important foraging ground and migratory pathway for whales, marine fish, turtles and seabirds. It is one of the few places left in the world that allows us to truly imagine what the planet was like before large scale human impact.

## GLOBAL CITIZENSHIP

The protection of the exclusive economic zone (EEZ) surrounding the Kermadec Islands as an ocean sanctuary would represent a major contribution by New Zealand towards the long term survival of unique, vulnerable and endangered species, and to deep sea exploration and research.

With a total marine area of 4.3 million square kilometres, New Zealand has the fifth largest EEZ in the world – 15 times the New Zealand land mass. Less than 1 percent of New Zealand’s ocean area is in no-take protection. New Zealand’s brand as a clean and green destination is likely to gain a significant boost from the establishment of a Kermadec Ocean Sanctuary within its EEZ. Pew-commissioned polling in the United States and China indicates that consumers and travellers attach significant value to a country seen as protecting its ocean environment

## A UNIQUE LEGACY

A Kermadec Ocean Sanctuary, extending from the existing 12 nautical mile marine reserve out to the EEZ boundary, would – at 620,000 square kilometres – be the world’s largest highly protected area. The proposed Sanctuary would encompass the 50+ associated seamounts along the Kermadec Arc, and a major section of the Kermadec-Tonga Trench.

The US National Geographic Society, Sylvia Earle’s Mission Blue, international scientists, international conservation NGOs, and the Pew Environment Group have all identified the Kermadec Islands, associated seamounts and seas as a world class, unspoiled, marine site.

A Kermadec Ocean Sanctuary would be at a scale even greater than those established by President George W. Bush surrounding the Northwestern Hawaiian Islands (2006) and the Mariana Trench (2009) and by the UK Government in the Chagos Archipelago (2010).

## AFFECTED ACTIVITIES

Because the area is so remote and the ocean is so deep, there are few current activities that would be adversely affected by the establishment of a Kermadec Ocean Sanctuary, with fisheries and minerals exploitation as the two most likely.

In the most recent fishing year the estimated value of the catch from the proposed Sanctuary area was approximately \$90,000 (for quota species that can be caught in numerous other areas of New Zealand’s EEZ), suggesting protection of the Kermadec region will not significantly impact New Zealand fishing interests.

The Kermadec ocean area has low potential for oil and gas reserves but there is interest in assessing the prospects for mining the seafloor sulphides along the Kermadec arc. Only one exploration permit has been issued by NZ Crown Minerals for the area within the proposed reserve.

Pew Environment Group’s Kermadec team has been in dialogue with the New Zealand Government, industry (fishing, mining, oil and gas, tourism), science agencies and the conservation community about the creation of a Kermadec Ocean Sanctuary. To date there has been generally positive support for the proposal, the exception being concern expressed by the mining sector (geologists, Crown Minerals and industry representatives) that protection of the Kermadec region will “lock away” mineral wealth. However, while there is likely to be significant mineral potential in the Kermadec region, the remoteness of the region, and high costs of mounting operations in very deep waters affected by tropical cyclones (95% of the proposed Sanctuary waters are deeper than 1,000 meters), combined with undeveloped and untested technology and on-going public concerns about deep sea mining, suggest that the Kermadec region is not an attractive deep-sea mining prospect. As one expert in the mining sector said: *“Clearly there are areas that we can agree deserve to be protected, whatever the economic potential. Perhaps parts of the Kermadecs fall into this category; certainly on dry land national parks do.”* CHRIS BAKER, STRATERRA

One Muriwhenua iwi – Ngati Kuri – has made mention of the Kermadec islands and waters in their Treaty of Waitangi claim. In late 2010 the Trust Board gave its full support to the proposal for a Kermadec Ocean Sanctuary. In written correspondence the Chairman of Ngati Kuri Trust Board wrote:

*“[As you] explore options for the protection of the Kermadec region you will have the full support of Ngati Kuri. Achieving protection of the Kermadec region is consistent with the cultural and natural values that Ngati Kuri have traditionally associated with the islands and the vast seascapes within which they lie”.* ■

## FACTS ABOUT THE KERMADECS AND BIODIVERSITY



With a total marine area of 4,300,000 square kilometres, New Zealand has one of the world's largest Exclusive Economic Zones (EEZs) – 15 times the New Zealand land mass. The Kermadec region represents around 15% of this marine environment.



The Kermadec region is the only part of New Zealand where a mix of tropical, subtropical and temperate seabirds and marine species, including endemic sharks, seabirds, corals and marine invertebrates, come together and/or breed. The area is also an important foraging ground and migratory pathway for whales, marine fish, turtles and sea birds.



It is estimated as many as 35 species of dolphin and whale – including the blue whale, fin and sei whales – migrate through the Kermadec region on their seasonal journeys between the tropics and cooler waters around New Zealand. A survey in 2009 recorded more than 100 humpback whales off Raoul Island in a single day.

# 6m

Of about 350 species of seabirds worldwide, 39 are found in the Kermadec region, ranging from tiny storm petrels to large wandering albatrosses. Some are found only in this region, while others – many from mainland New Zealand and our subantarctic islands – forage for food or migrate through. Up to 6 million seabirds breed on the Kermadec Islands each year.



Three of the world's seven sea turtle species are found in the Kermadecs: hawksbill, leatherback and green. These species regularly wander through the region en route south from their mainly tropical habitats. All are considered endangered or critically endangered.

# 10000

↓ METRES

The seabed around the islands is extremely deep. Almost all of it descends to over 1,000 metres and more than a third of it to over 5,000 metres. And the Kermadec – Tonga trench plunges more than 10 kilometres beneath the ocean's surface – about five times deeper than the Grand Canyon.



Of the 1,339 species of fish known in the New Zealand EEZ, 431 of them (32%) occur along the Kermadec Ridge and Trench. But large areas of the Kermadecs – particularly those below depths of 600 metres – are virtually unexplored and it is highly likely that future surveys will reveal new and rare species.



The Census of Marine Life (the gold standard for measuring ocean biodiversity) published earlier this month, estimated there were more than 230,000 species in our oceans. But the 10-year global study by 360 scientists warned of mass extinctions.



The Kermadec region is unusual for its mix of tropical and temperate species of crustaceans (crayfish, crabs, prawns and shrimps). Altogether, 88 species of crustacean are known here, of which 17 are known only in the Kermadecs. Some are new to science and some are specialised for Kermadec habitats – for example, two species of 'vent crabs' have adapted to survive one of the harshest environments imaginable, including searing temperatures, high acidity and toxic chemicals.



The Kermadecs have a unique population of tiny sea anemone-like animals known as bryozoans. Of 256 species identified so far, at least 38 are endemic and many are new to science. Some are 'living fossils', present in the oceans since the time of the dinosaurs tens of millions of years ago.



# 50+

The Kermadec Arc is the longest under water volcanic arc on the planet. More than 50 submarine volcanoes extend along the 2,500 km collision zone between the Pacific and Australian tectonic plates. The largest volcanic islands of the Kermadec region – Raoul, Macauley, Curtis, Cheeseman and L'Esperance – are the only uninhabited subtropical island group in the Southern Hemisphere.

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