



# Port Biological Baseline Surveys

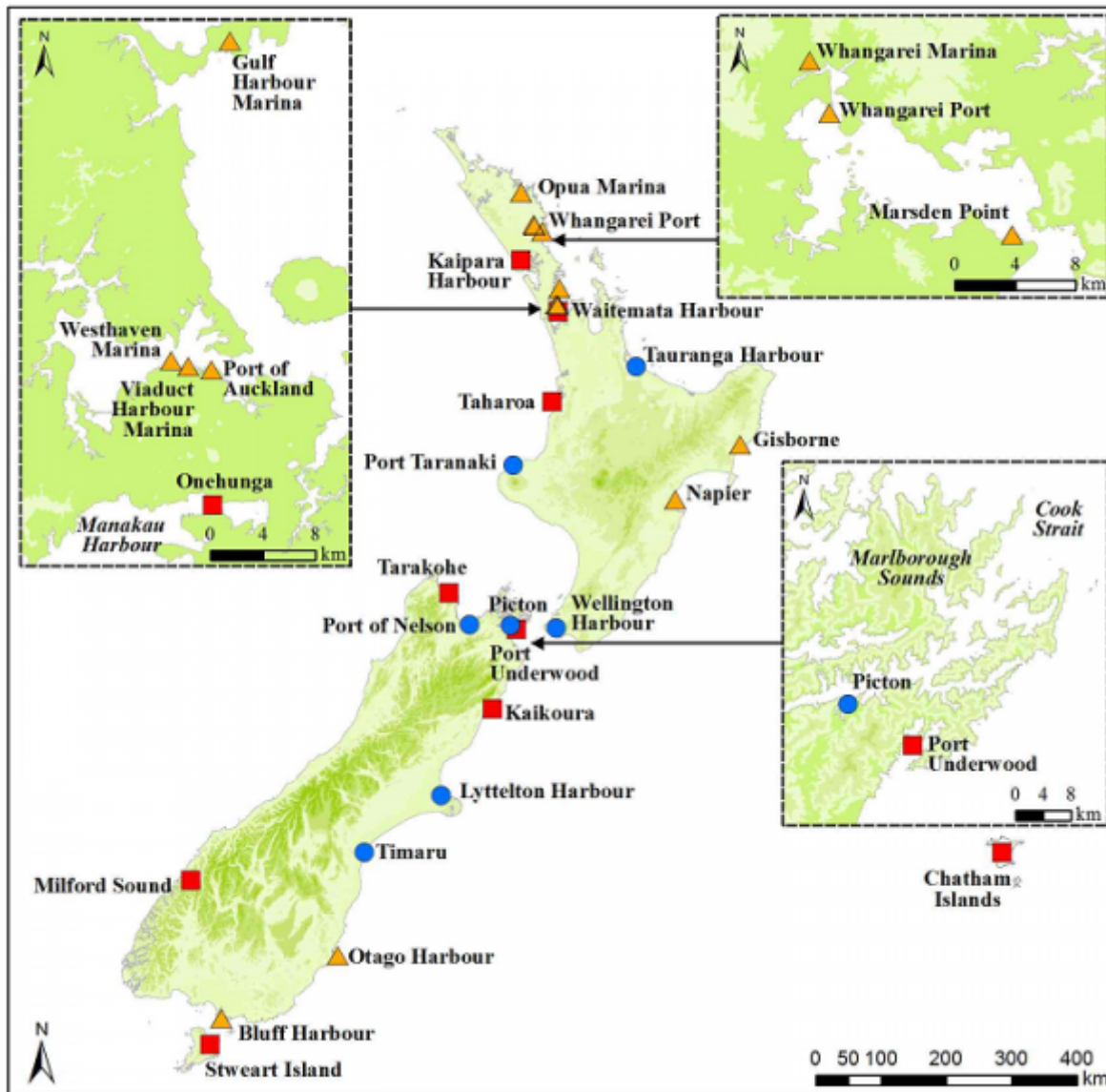


Port Biological Baseline Surveys (PBBS) are standardized surveys of the native and non-native marine biodiversity within shipping ports. They provide a baseline for monitoring changes in the numbers of non-native species in port environments.

In 2001, the New Zealand Government initiated a nationwide programme of biological surveys in international shipping ports and marinas throughout New Zealand - places where any new species are most likely to appear first. The purpose of the surveys was to gather baseline information on marine biodiversity within the ports, with a particular emphasis on establishing what non-native species were already present in New Zealand and where.

Forty-three separate PBBSs were completed between 2001 and 2007 (Figure 1). They included:

- repeat surveys of 13 international shipping ports and 3 marinas of first entry for cruising yachts and
- single surveys of an additional 9 secondary ("domestic") ports and 2 marinas.



Commercial shipping ports and marinas in New Zealand where Port Biological Baseline Surveys (PBBS) were undertaken. Locations surveyed in 2001/2002 and re-surveyed in 2004/2005 are indicated by blue circles. Locations surveyed in 2002/2003 and resurveyed in 2005/2006 are shown as orange triangles. The red squares are locations that were surveyed only once between 2006 and 2007.

## How were the surveys done?

The New Zealand surveys were based on protocols developed in Australia by the CSIRO Centre for Research on Introduced Marine Pests (CRIMP) for surveys of non-native marine species and which have been used in more than 15 countries world wide.

## What was found?

More than 60,000 samples and over 2,900 species were recorded during the surveys. These included 109 non-native species, 24 of which had not previously been recorded in New Zealand. In addition, a further 104 species were identified that were potentially new to science.