

# Sightings of marine mammals in New Zealand waters by government fisheries observers

Project INT2022-06



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# Introduction

- The NZ Marine Mammal Database hosts all sightings from researchers and the public
- 21 507 sightings to date of 57 taxa
- Sightings from government fisheries observers have never been included
- This project aimed at collating all sightings from observers, and prepare the data to include them to the database
- An online application was developed to review the data internally



## Data sources

- NOMAD devices in inshore fisheries, from 2009
- Seabird counts at the back of fishing vessels, from 2009
- Incidental captures, from 1990



## Data preparation

- Corrections of typos
- Completion of date/time and location, from our fisheries database (includes COD + warehou)
- Regularisation of counts to avoid multiple sightings of the same animals (maximum count every two hours for seabird counts, every day for NOMAD devices)
- Only presence, no standardisation by absences



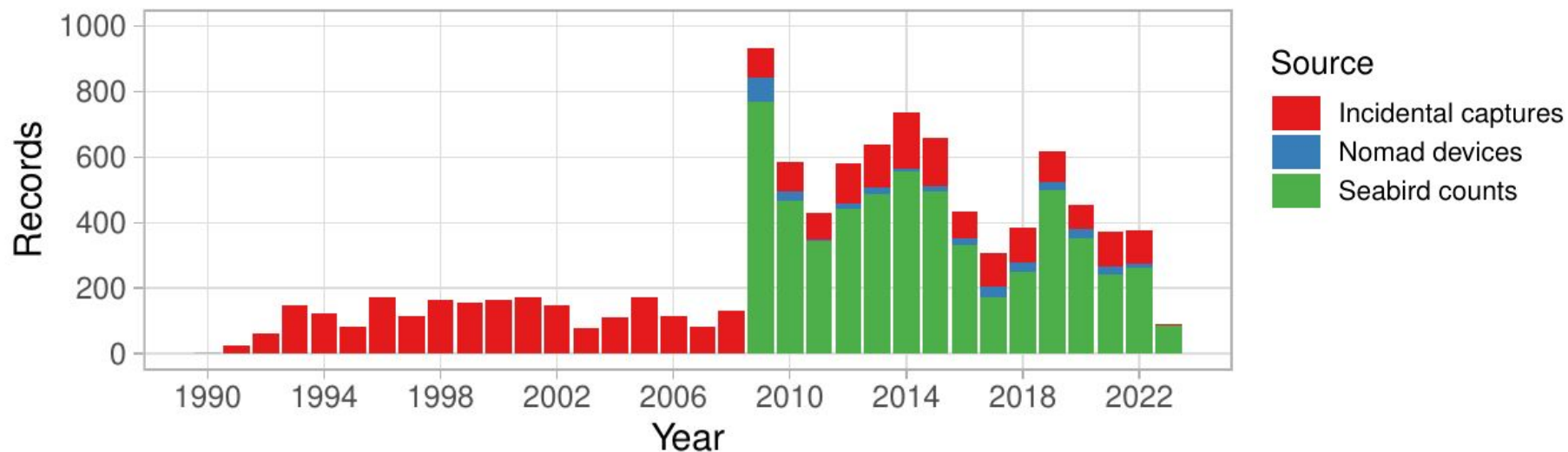
## Results

- 13 815 new unique sightings of 105 817 animals
- 32 taxa (26 species or subspecies)
- Pinnipeds: 9 812 sightings of 29 553 individuals
- Dolphins: 3 591 sightings of 75 182 individuals
- Whales: 413 sightings of 1 082 individuals
- 56% of all sightings are of NZ fur seals, 12% NZ sea lions, 11% common dolphins, 5% Hector's dolphins, 3% dusky dolphins



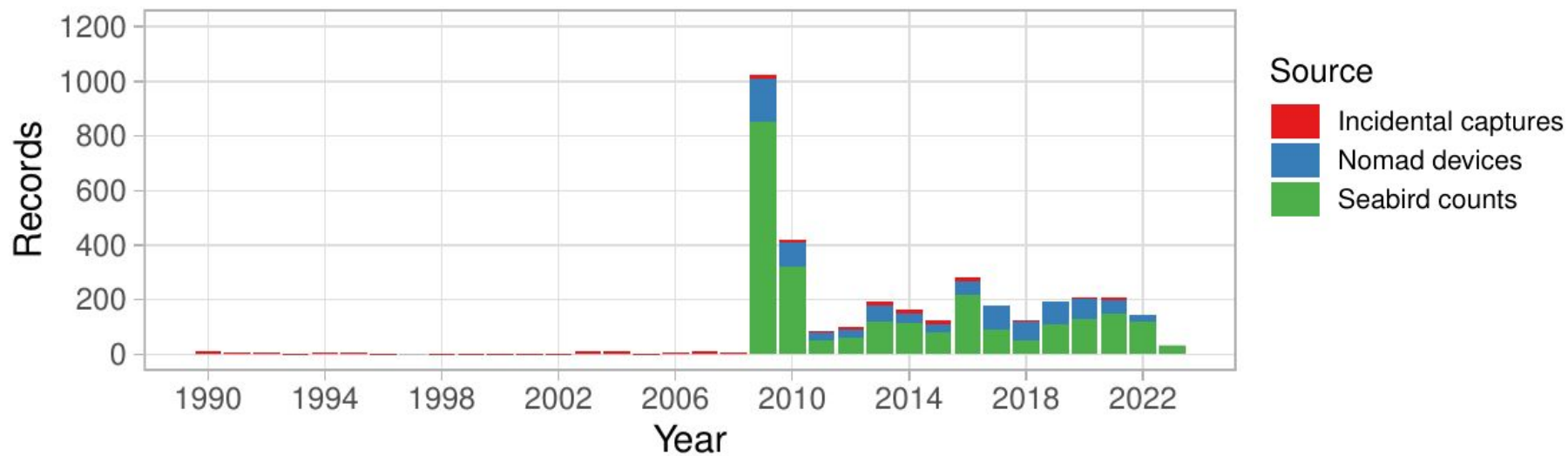
## Results

### (a) Pinnipeds



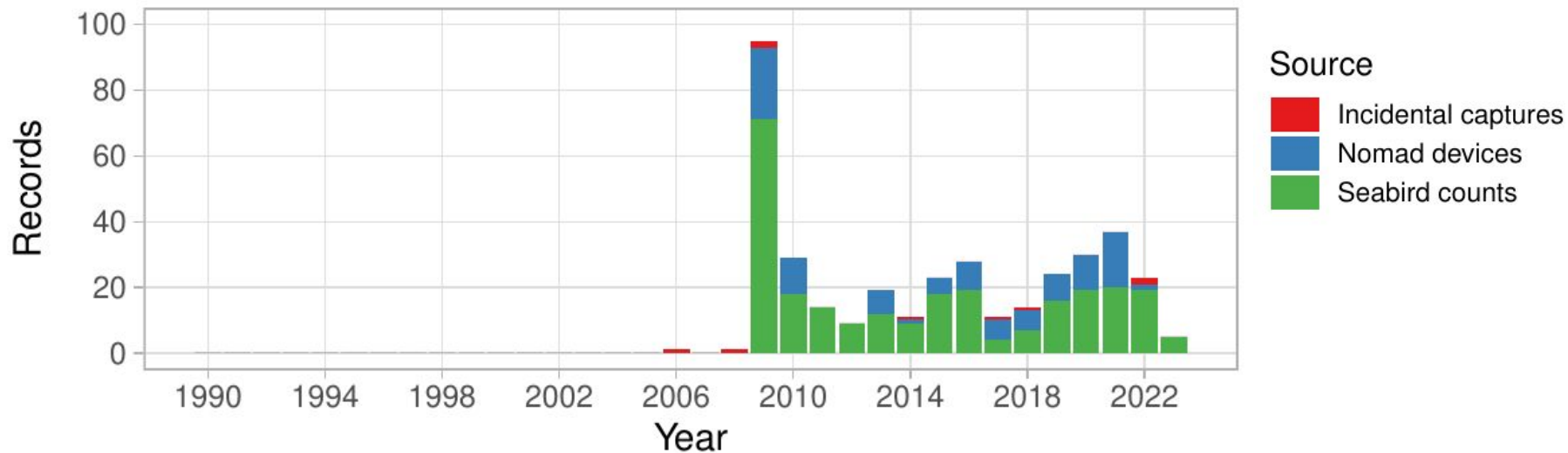
## Results

### (b) Dolphins



## Results

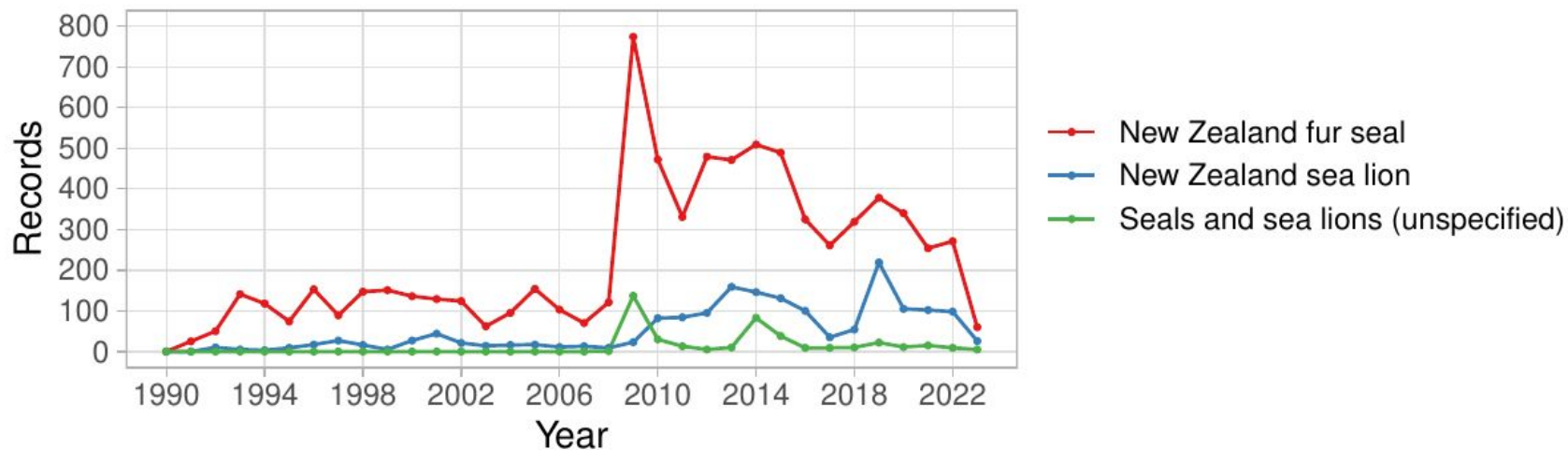
### (c) Whales





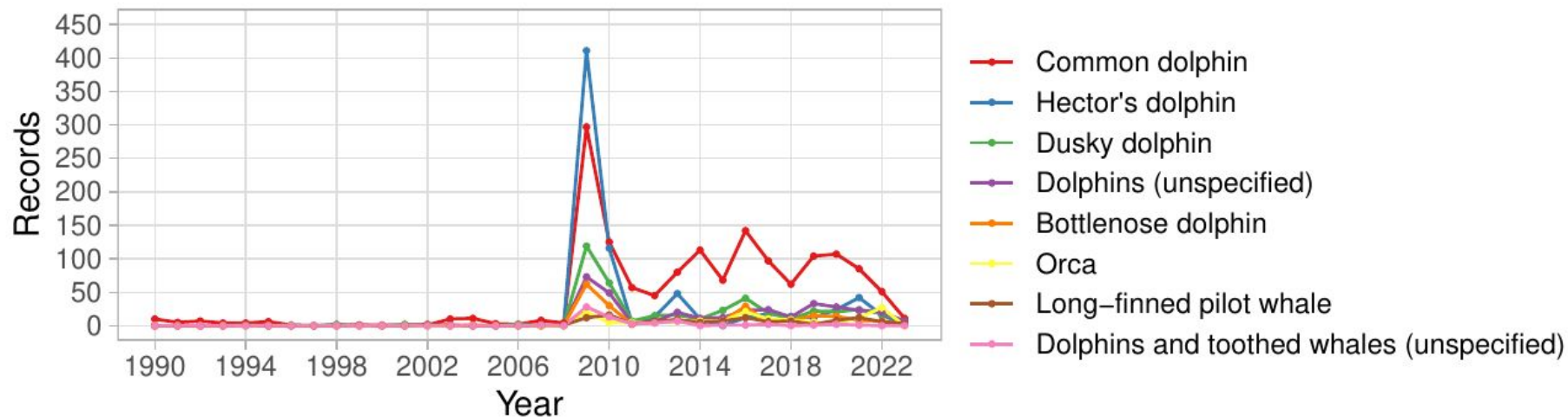
## Results

### (a) Pinnipeds



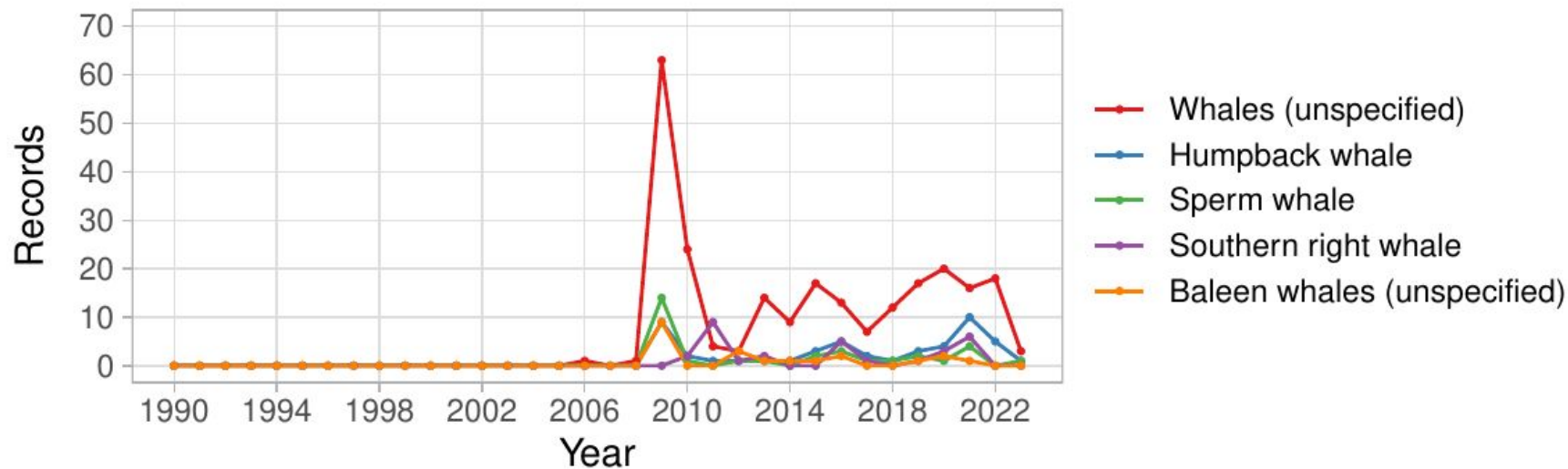
## Results

### (b) Dolphins

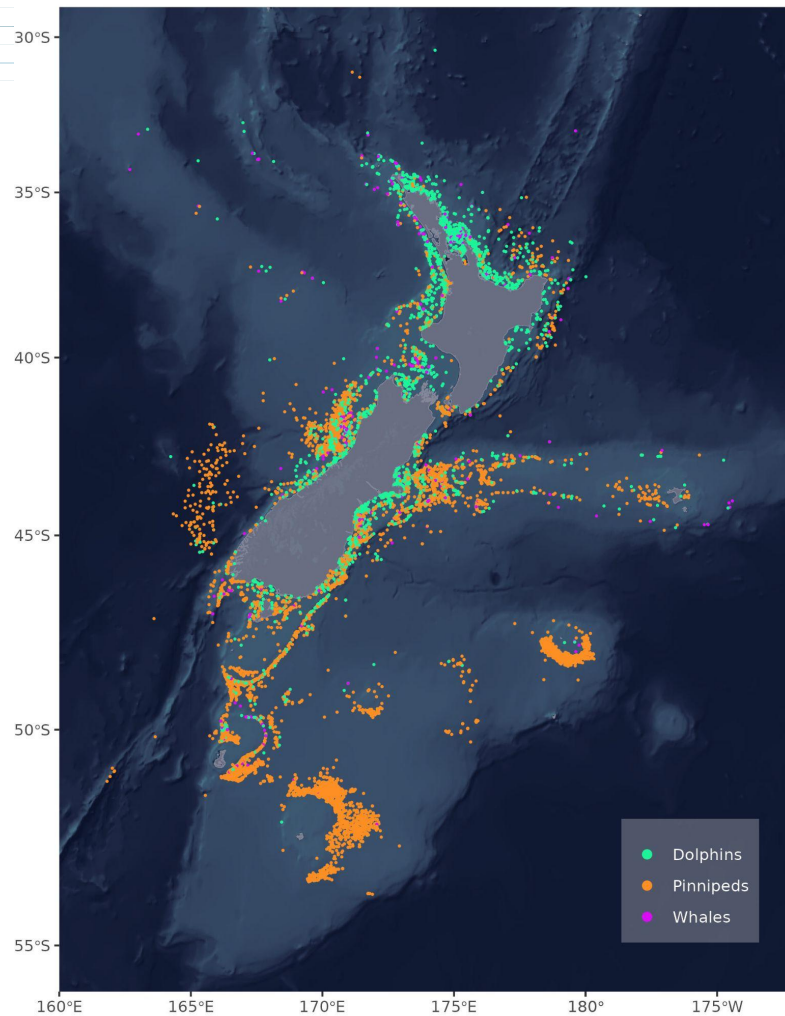


## Results

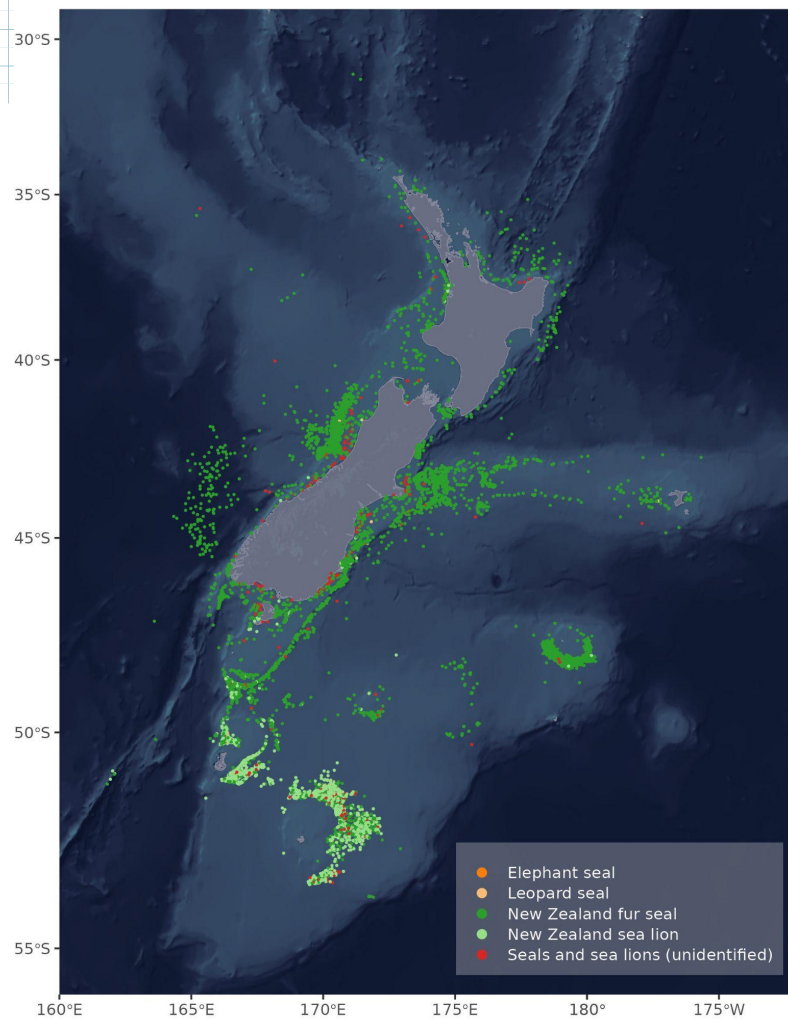
### (c) Whales



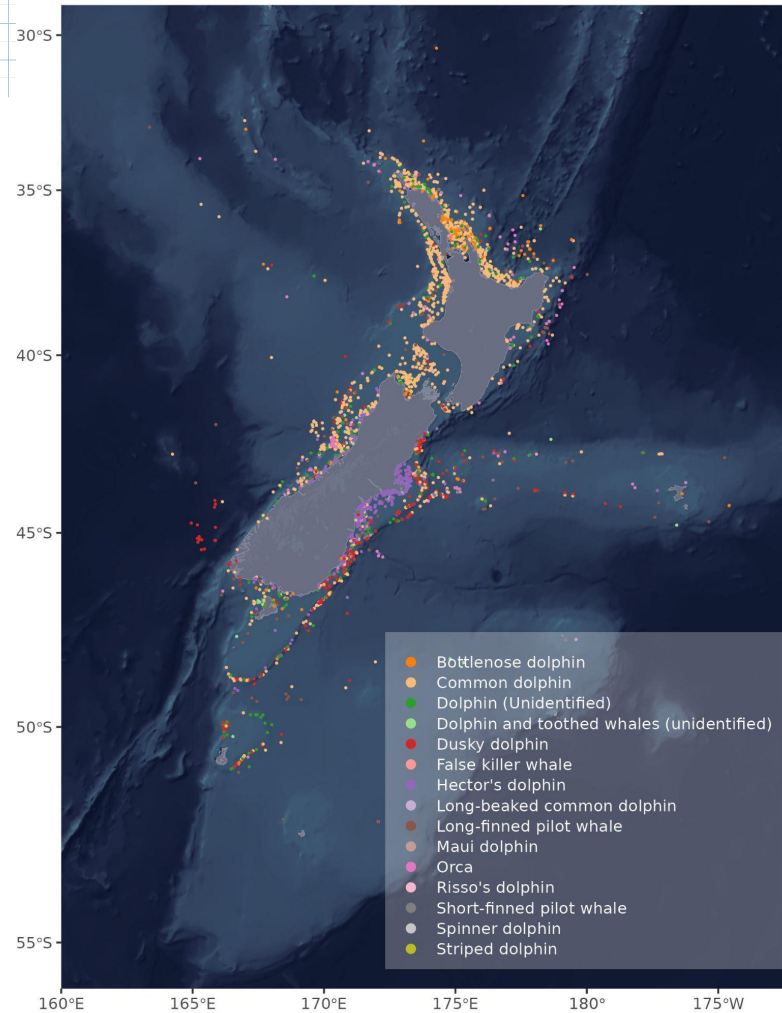
## By family



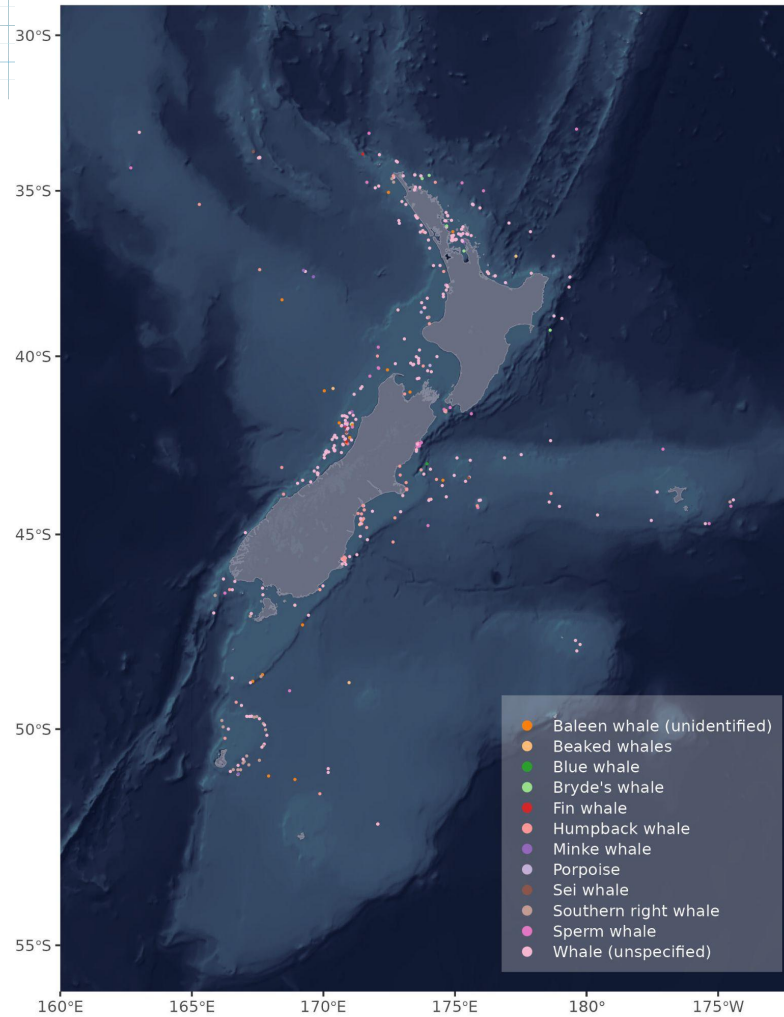
# Pinnipeds



# Dolphins



# Whales





# Online application

Department of Conservation  
Te Papa Atawhai

## Marine mammals sightings

DRAGONFLY Data Science

© Wallpaper Flare

Help

### Hector's dolphin

ID: 21351  
Count: 3  
Date/time: 2019-05-30 14:15:00  
Trip: 5652  
Station: 37  
Method: Trawl  
Target: SCI  
Source: 5652 - MPI Worksheets.xlsx  
File row: 20

Original values:  
Station:  
Time: 1415

Method: All

Dates: 1990-03-19 to 2023-06-09

Zoom to selection

- Dolphins
  - Hector's dolphin
  - Maui dolphin
  - Common dolphin
  - Long-beaked common dolphin
  - Dusky dolphin
  - Dolphin (Unidentified)
  - Bottlenose dolphin
  - Orca
  - Pilot whale long-finned
  - False killer whale
  - Porpoise
  - Spinner dolphin
  - Striped dolphin
  - Risso's dolphin
- Seals and sea lions
- Whales





## Conclusions

- 13 815 new sightings to be added to the 21 507 existing sightings in the Marine Mammal Database
- 90% of new sightings dominated by NZ fur seals and four other species
- Majority (65%) of whale sightings not identified at the species level. Photographs would help with identification
- Making the data publicly available would be beneficial



# Thank you.