

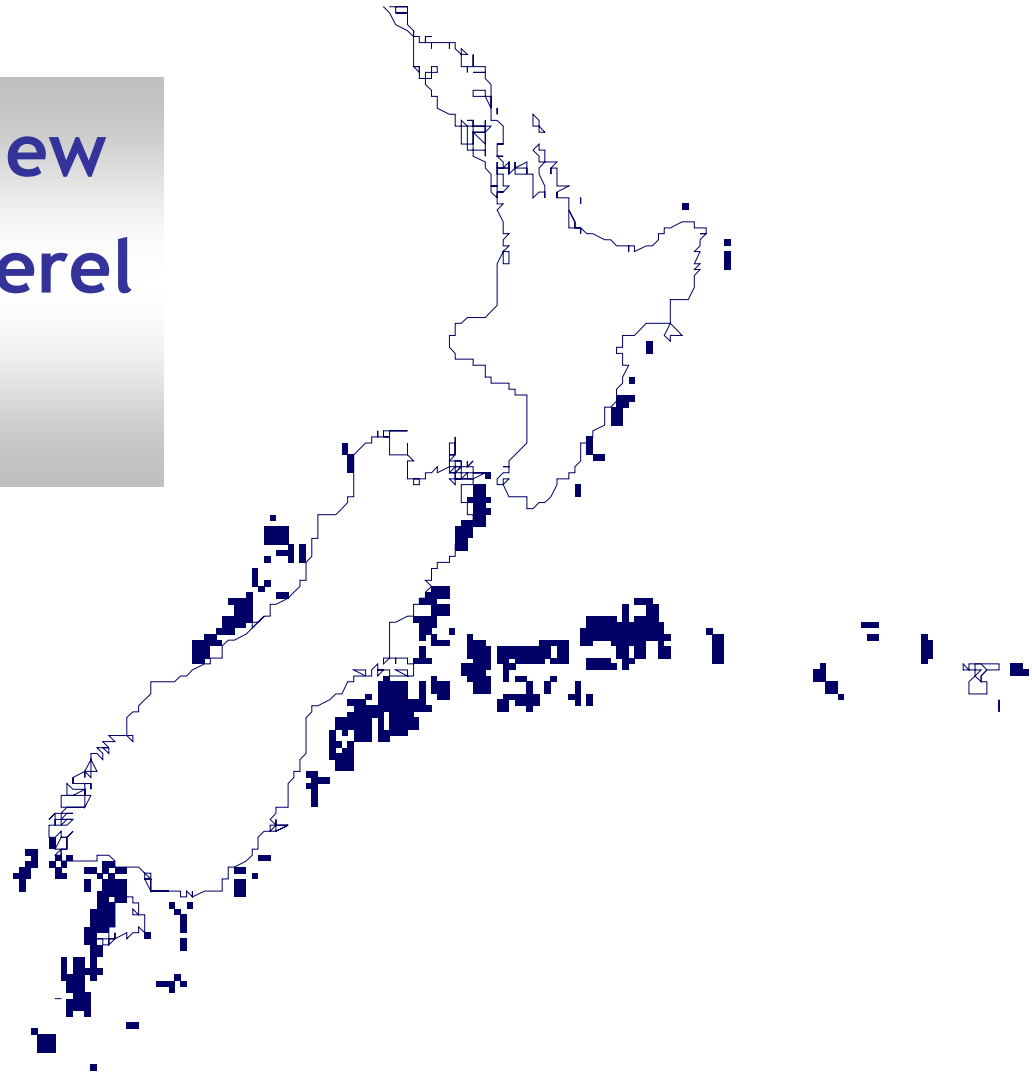


Ministry of  
**Fisheries**  
Te Tautiaki i nga tini a Tangaroa

Chilean Jack Mackerel  
Workshop

[newzealand.govt.nz](http://newzealand.govt.nz)

## Overview of the New Zealand Jack Mackerel Fishery



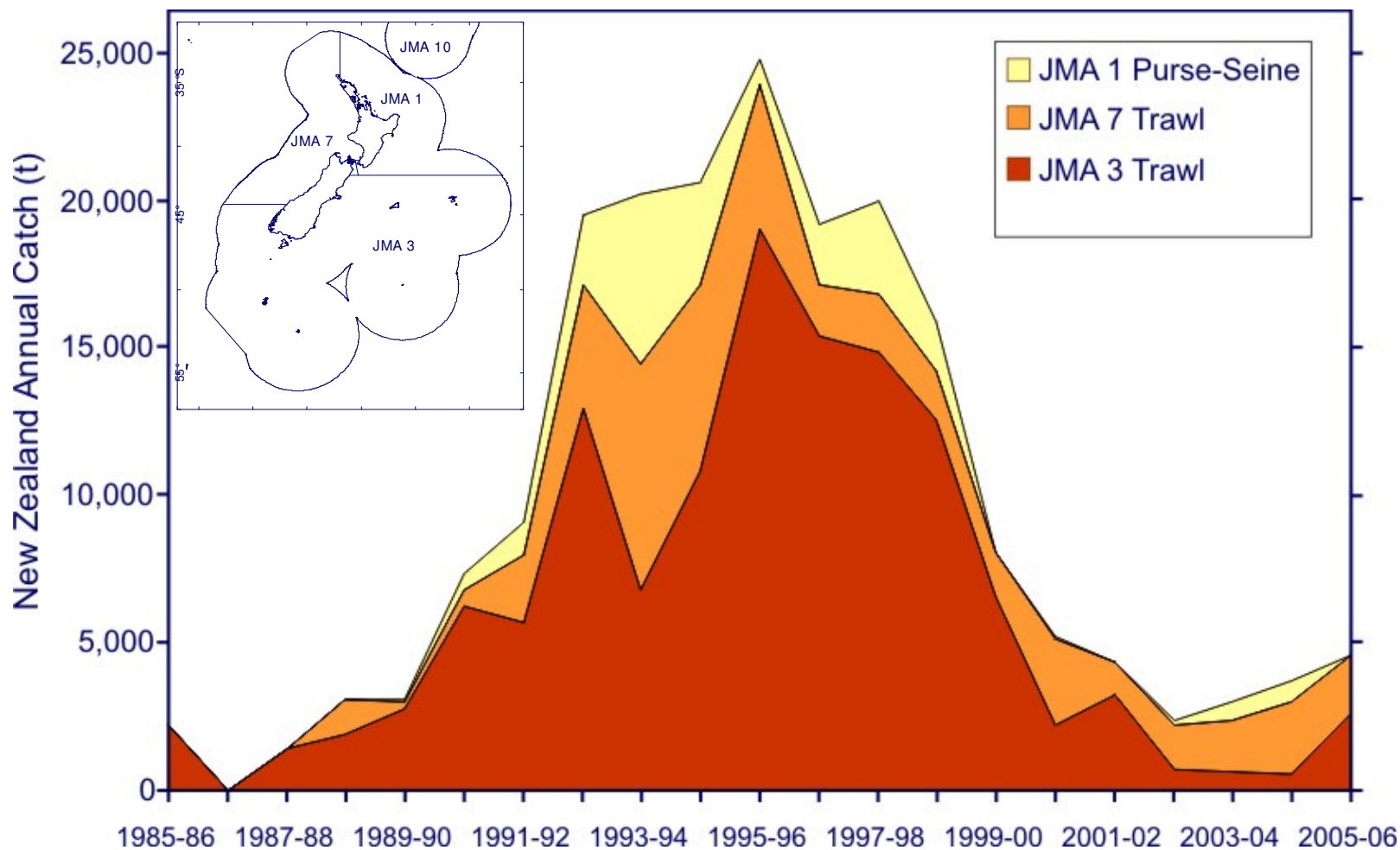


## The New Zealand Jack Mackerel Fishery

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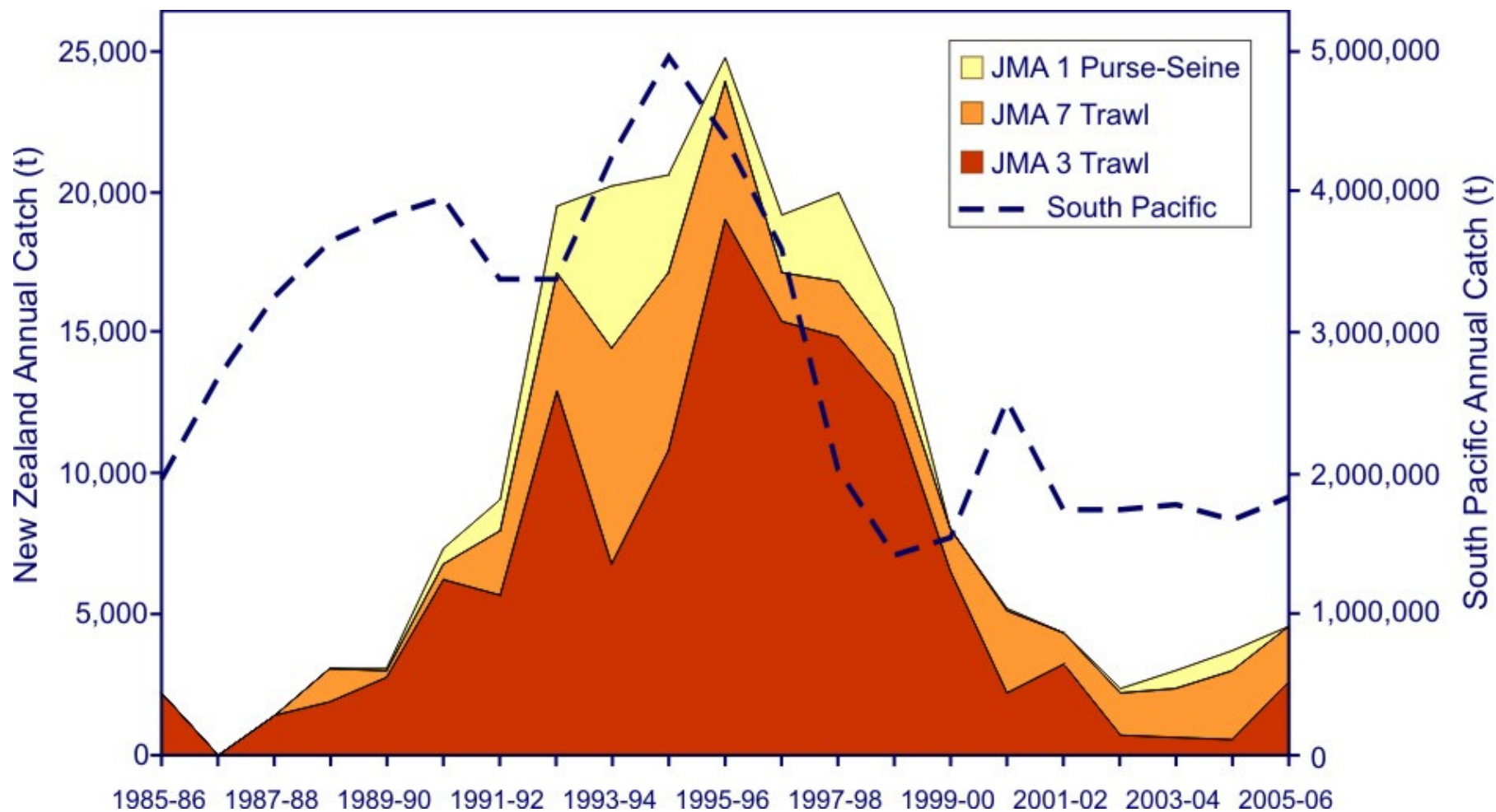
- The fishery catches three species, *Trachurus declivis*, *T. novaezelandiae* and *T. murphyi*, all within the EEZ.
- Species composition is estimated from scientific observer data (for larger trawlers) and landings sampling data (for inshore purse-seiners).
- The contribution by *T. murphyi* increased from 0% before 1985 to a peak of 65% in 1995-96, and then declined steadily to <10% by 2002-03.
- *T. murphyi* first appeared in the eastern end of the New Zealand EEZ, expanded westwards as catches increased, and then contracted eastwards as catches declined.

## New Zealand Estimated Catch of *Trachurus murphyi*: 1985-86 to 2005-06



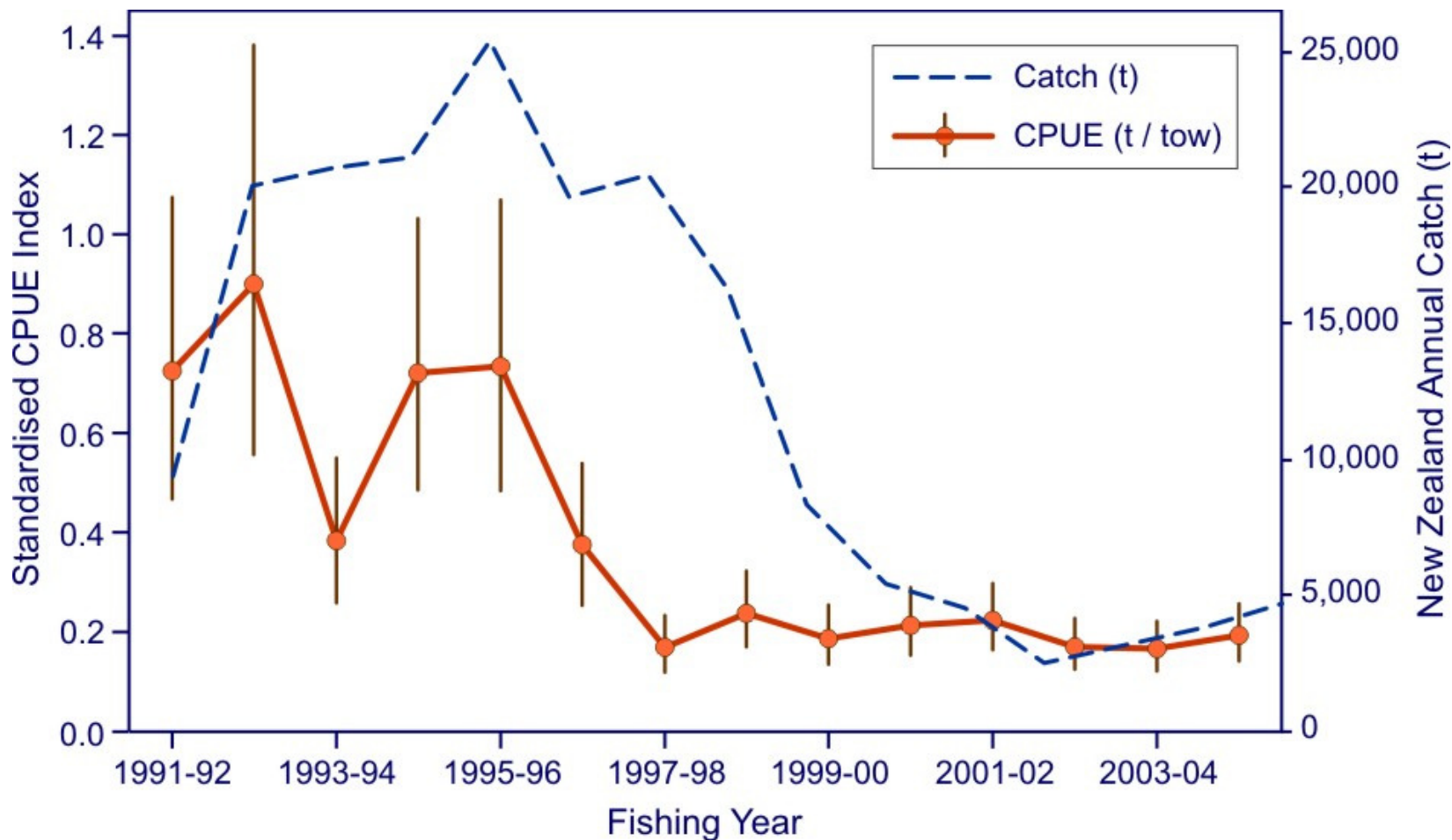
Increase and subsequent decline in New Zealand total *T. murphyi* catch over 1985-86 to 2005-06.

## New Zealand Estimated Catch of *Trachurus murphyi*: 1985-86 to 2005-06



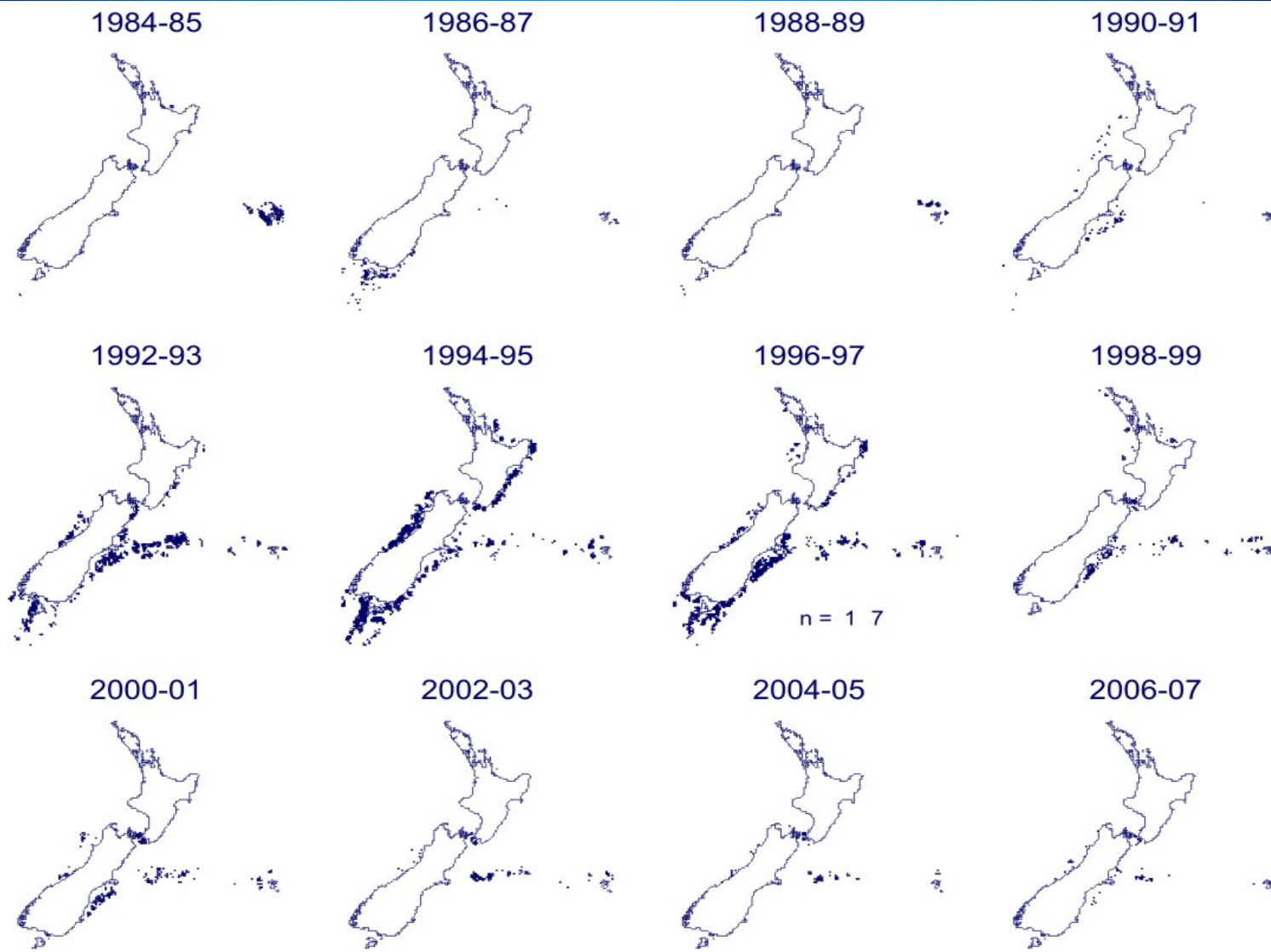
New Zealand *T. murphyi* catch history compared to the total South Pacific catch.

## New Zealand *Trachurus murphyi* CPUE Trend: 1991-92 to 2004-05

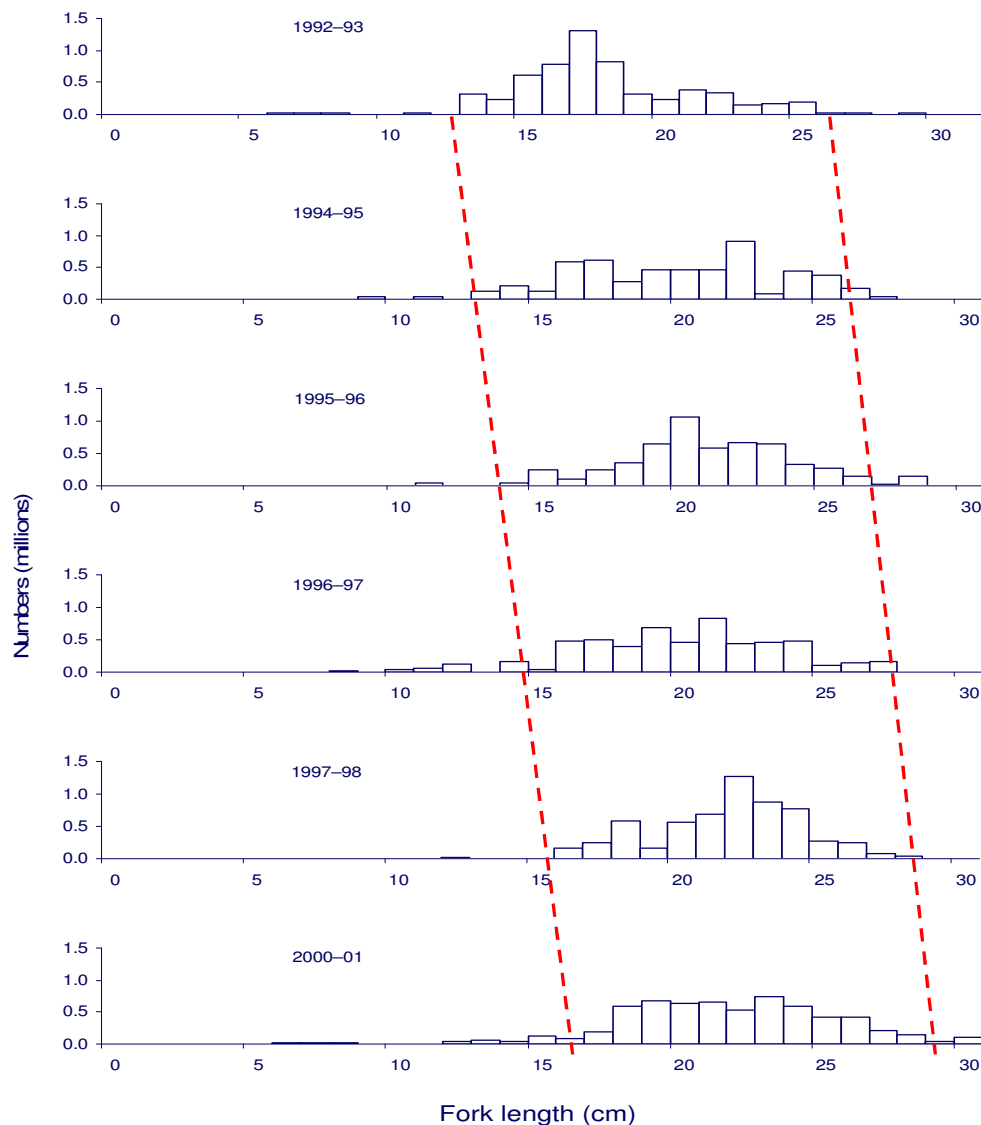


Annual *T. murphyi* catch (t) and standardised CPUE (t / tow) for the targeted trawl fishery.

# New Zealand *T. murphyi* Catch Distributions: 1984-85 to 2006-07



## New Zealand *T. murphyi* Age-Frequency Distributions: 1984-85 to 2006-07



*Trachurus murphyi* caught in New Zealand waters are generally large (40 - 60 cm), and the fish appear to have been ageing steadily over time, with occasional appearance of younger fish in some years.

## Stock Structure Hypotheses

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- Catch & CPUE increases and westward expansion of distribution from 1985 to 1996 all indicate a substantial invasion of New Zealand waters from the east, coinciding with the increase and expansion of catches in the eastern South Pacific.
- Lack of substantial local reproduction, sporadic appearance of 5-10 year old fish and sustained catches in the east all indicate that New Zealand *T. murphyi* are not a separate stock, but continue to be supplemented by a larger stock to the east.
- New Zealand catch data cannot indicate whether this larger stock might be a single jack mackerel stock across the South Pacific, or SW Pacific stock which has become established in the SW Pacific area.
- However, there does seem to be close coincidence between catch and CPUE trends observed in the New Zealand region, and in the eastern South Pacific, off South America.