

# NEW ZEALAND ROCK LOBSTER FISHERIES

- ❑ SIZE AND EXTENT
- ❑ VOLUME
- ❑ VALUE
- ❑ SCIENCE & RESEARCH
- ❑ ISSUES



# SPINY ROCK LOBSTER AND THE RED KING CRAB

- Crustacea, decapoda (10 legs)
- Very similar morphology
- Both are ideally suited to 'live export'





### THE WORLD

POLITICAL OUTLINE

1:60 000 000 Pacific Central

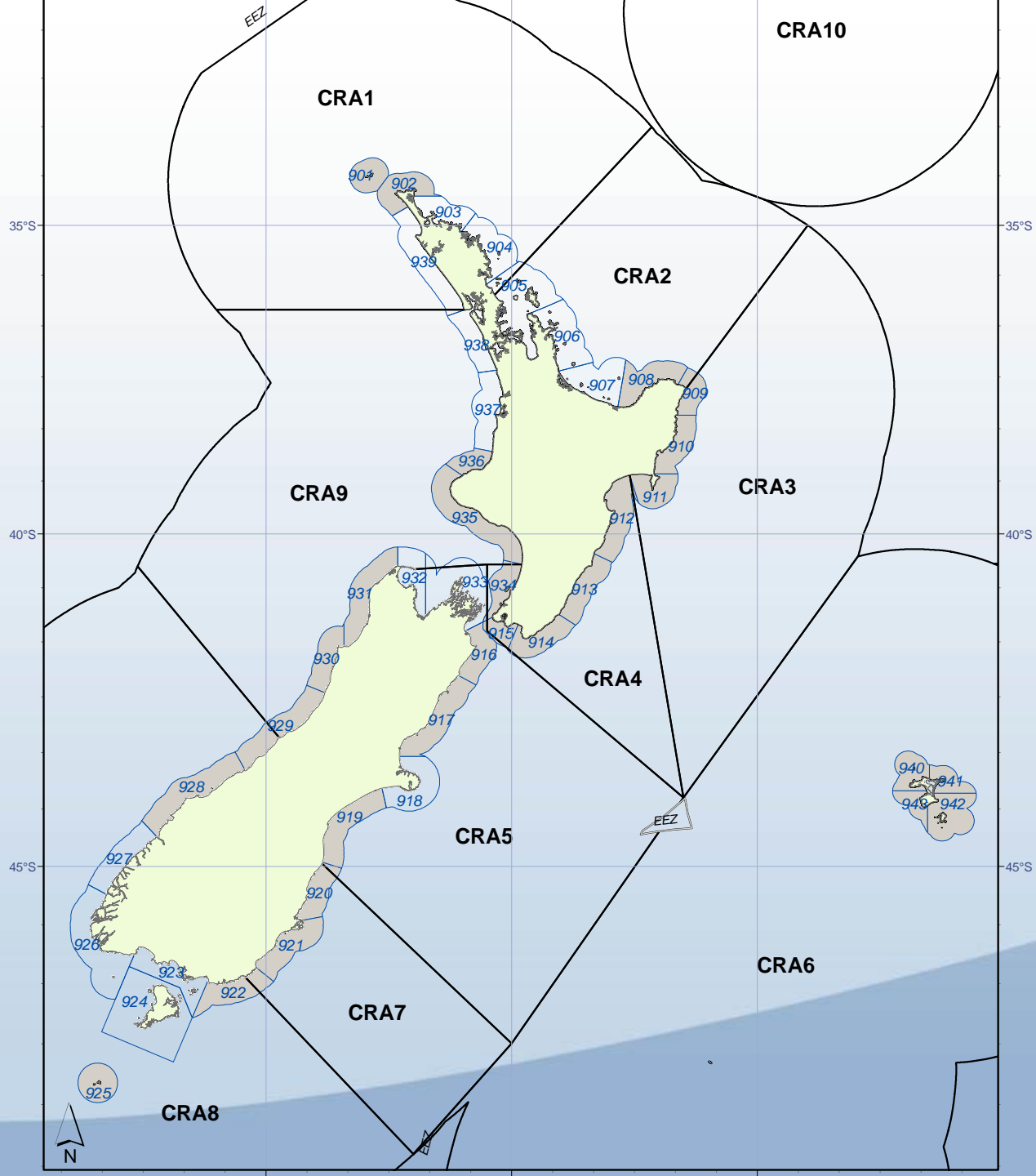
Country	Capitals	Pop. (Millions)
1. USA	Washington	260
2. USSR	Moscow	250
3. China	Beijing	1100
4. India	New Delhi	800
5. Brazil	Brazilia	150
6. Japan	Tokyo	120
7. France	Paris	60
8. Germany	Berlin	50
9. Italy	Rome	50
10. Canada	Ottawa	30
11. Mexico	Mexico City	30
12. Australia	Canberra	18
13. South Africa	Pretoria	15
14. Argentina	Buenos Aires	15
15. Russia	Moscow	15
16. Spain	Madrid	40
17. UK	London	55
18. Poland	Warsaw	35
19. Czech Republic	Prague	10
20. Slovakia	Bratislava	5
21. Hungary	Budapest	10
22. Austria	Vienna	8
23. Switzerland	Bern	7
24. Germany	Berlin	80
25. France	Paris	60
26. Italy	Rome	55
27. Spain	Madrid	40
28. Portugal	Lisbon	10
29. Greece	Athens	10
30. Turkey	Ankara	60
31. India	New Delhi	800
32. China	Beijing	1100
33. Japan	Tokyo	120
34. South Korea	Seoul	40
35. North Korea	Pyongyang	20
36. Philippines	Manila	70
37. Indonesia	Jakarta	180
38. Thailand	Bangkok	50
39. Vietnam	Hanoi	70
40. Laos	Vientiane	5
41. Cambodia	Phnom Penh	10
42. Myanmar	Nay Pyi Taw	50
43. Singapore	Singapore	3
44. Malaysia	Kuala Lumpur	15
45. Brunei	Bandar Seri Begawan	0.5
46. Australia	Canberra	18
47. New Zealand	Wellington	3
48. South Africa	Pretoria	15
49. Argentina	Buenos Aires	15
50. Chile	Santiago	10
51. Peru	Lima	25
52. Colombia	Bogota	30
53. Venezuela	Caracas	20
54. Ecuador	Quito	10
55. Bolivia	Sucre	8
56. Paraguay	Asuncion	5
57. Uruguay	Montevideo	3
58. Brazil	Brazilia	150
59. Mexico	Mexico City	30
60. Central America	Various	Various
61. Caribbean	Various	Various

**International Phonetic Alphabet**

**Map Scale**

1:60 000 000 Pacific Central

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# SOME TERMINOLOGY

- **ITQ** – 100 million quota shares for each stock
- **ACE** – **A**nnual **C**atch **E**ntitlement generated by each quota share – green weight equivalent
- **TACC** – Total Allowable Commercial Catch



# NZ ROCK LOBSTER – COMMERCIAL FISHERIES 2011

Available CRA Quota (All NZ) = 2981 t.

Total Commercial Catch (All NZ) = 2,640 t.

Fleet numbers (*estimated*) = 270

Catch Value 2011 (*estimated*) = NZ\$240m

1,134,591,513 NOK

# NZ ROCK LOBSTER – COMMERCIAL FISHERIES 2011

## QUOTA TRADE PRICE

HIGH	NZ\$565,000/t	2,670,519 NOK/tonne
LOW	NZ\$298,000/t	1,408,521 NOK/tonne

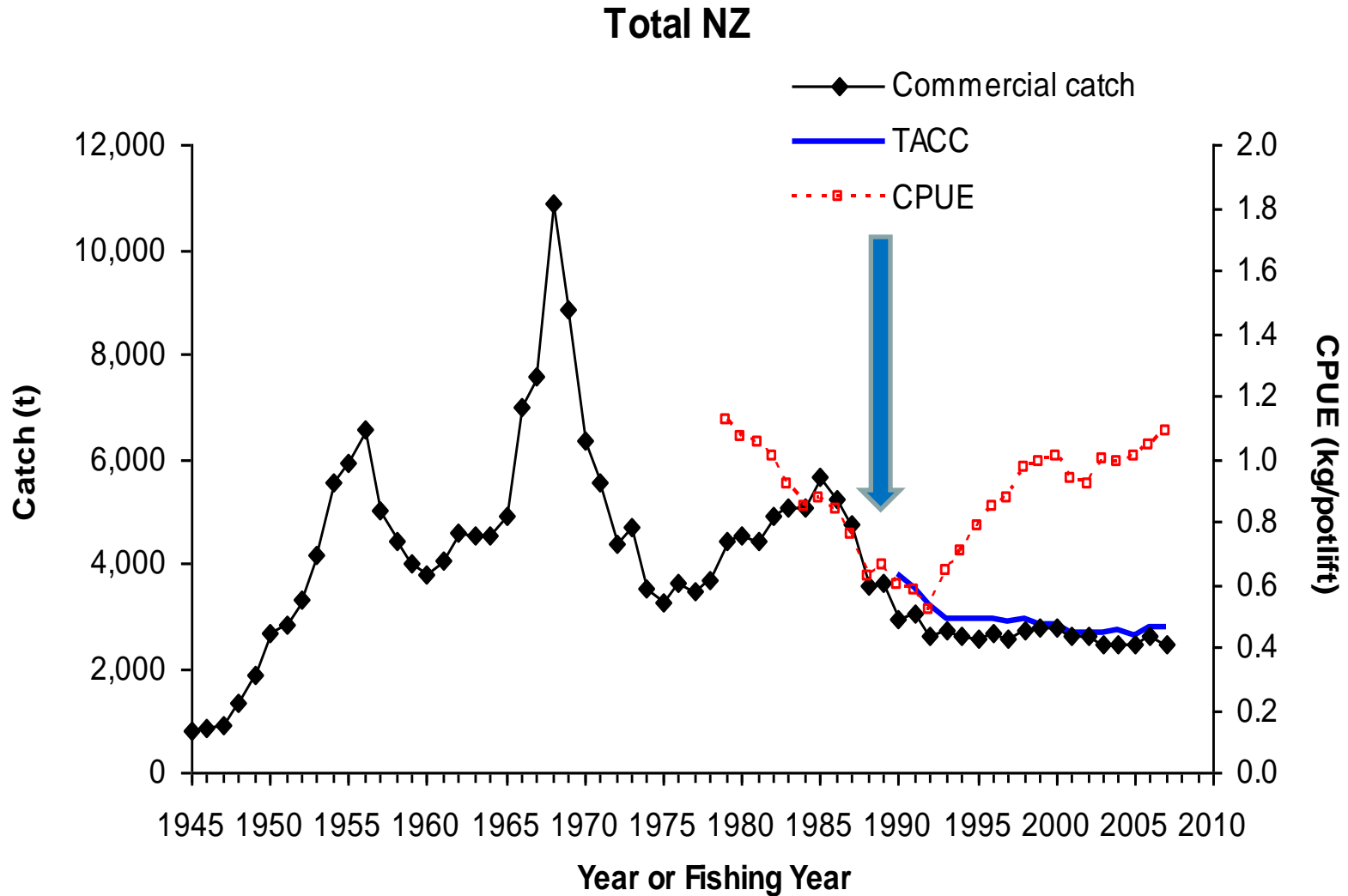
## ACE (QUOTA LEASE)

HIGH AV	NZ\$ 52,000/t	245,776 NOK/tonne
LOW AV	NZ\$ 32,500/t	153,610 NOK/tonne

MANAGEMENT LEVY = NZ\$850/t 4,032 NOK/tonne

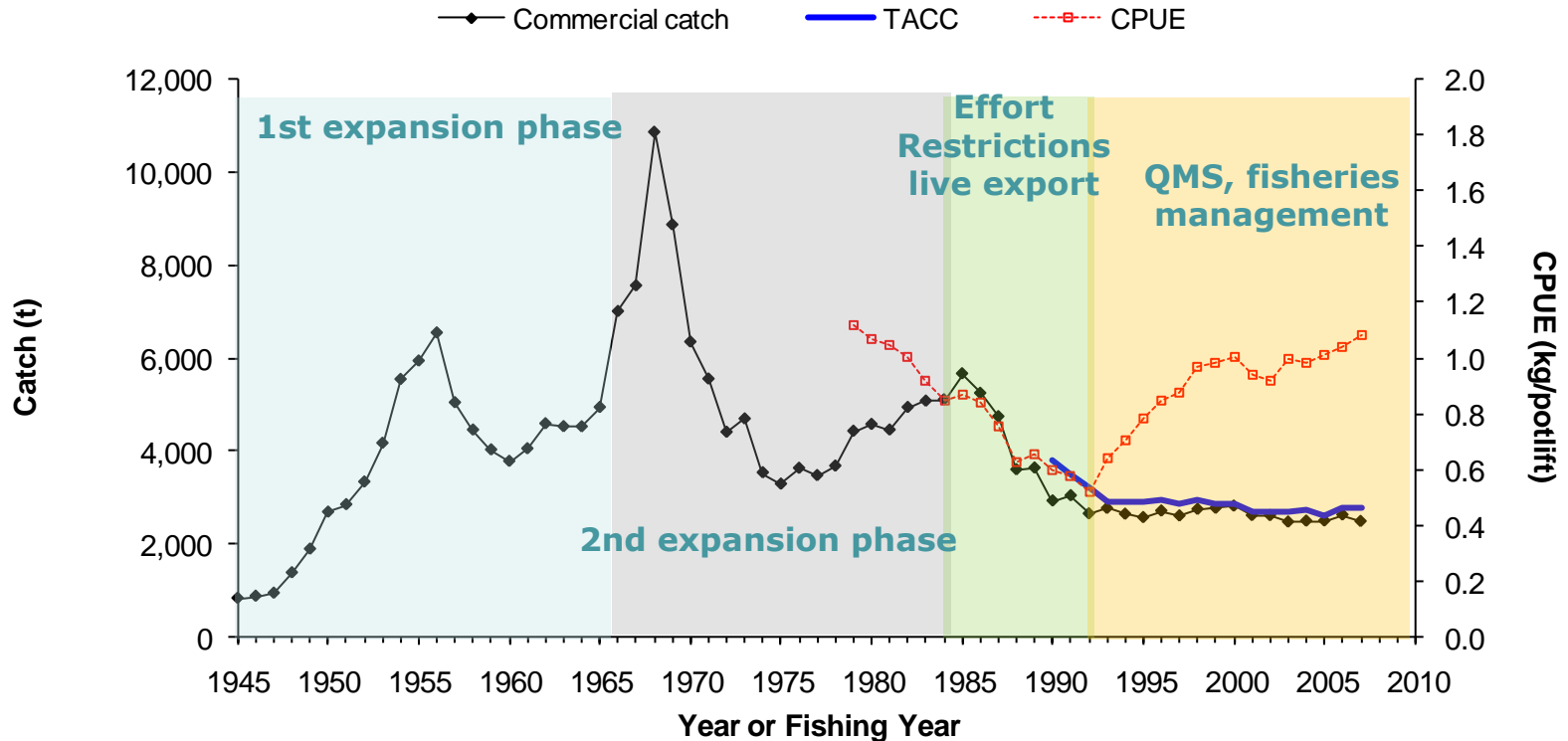
INDUSTRY LEVY = NZ\$600/t 2,836 NOK/tonne

# THE BIG PICTURE #1



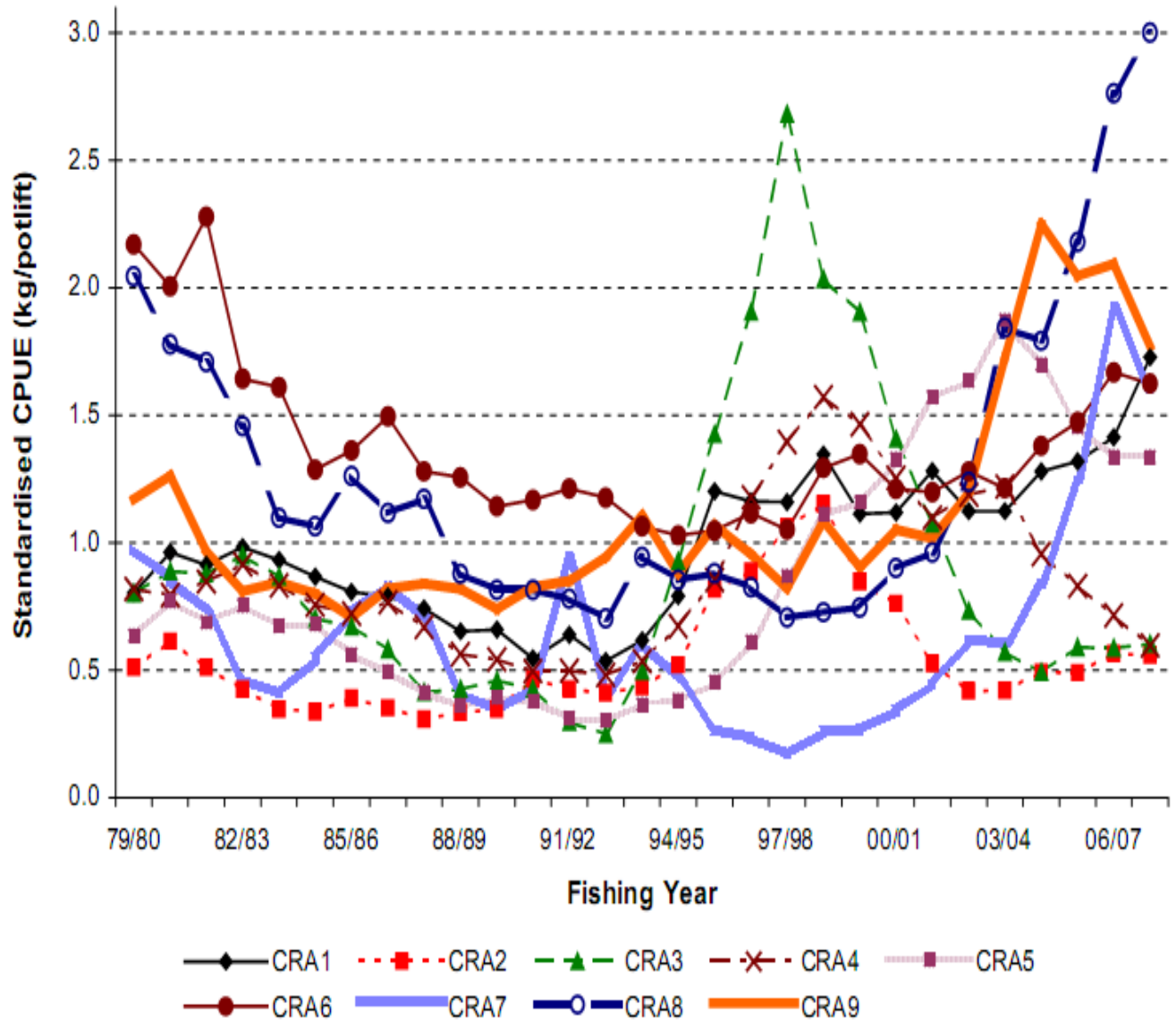


# EXPANSION AND DEVELOPMENT



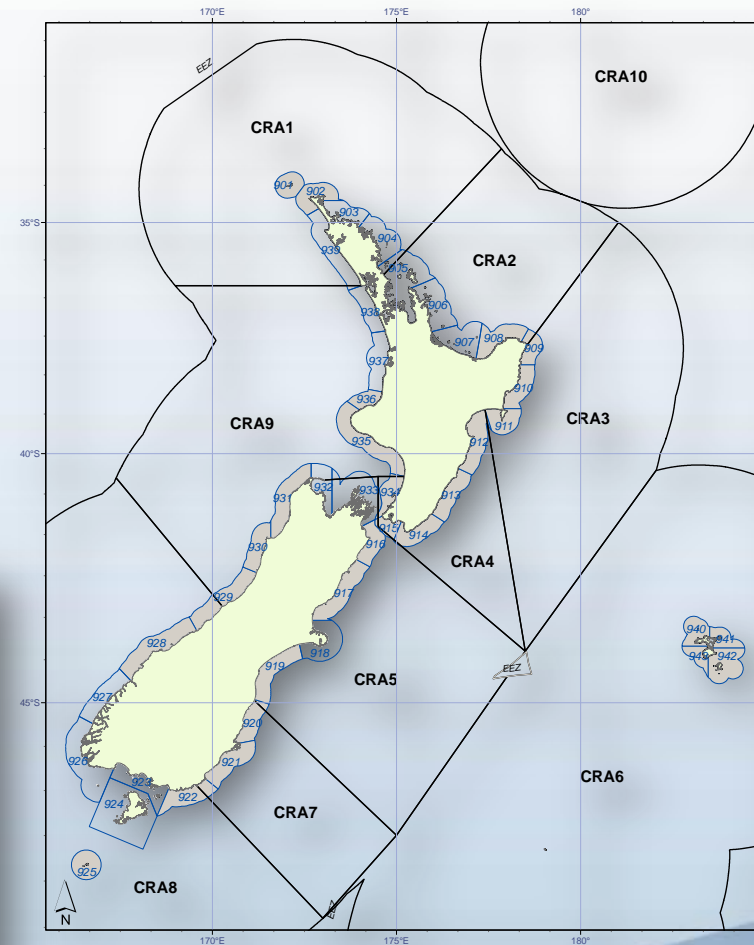
- Boom and bust cycles
- Introduction of rock lobster into QMS in 1990

# THE BIG PICTURE #2

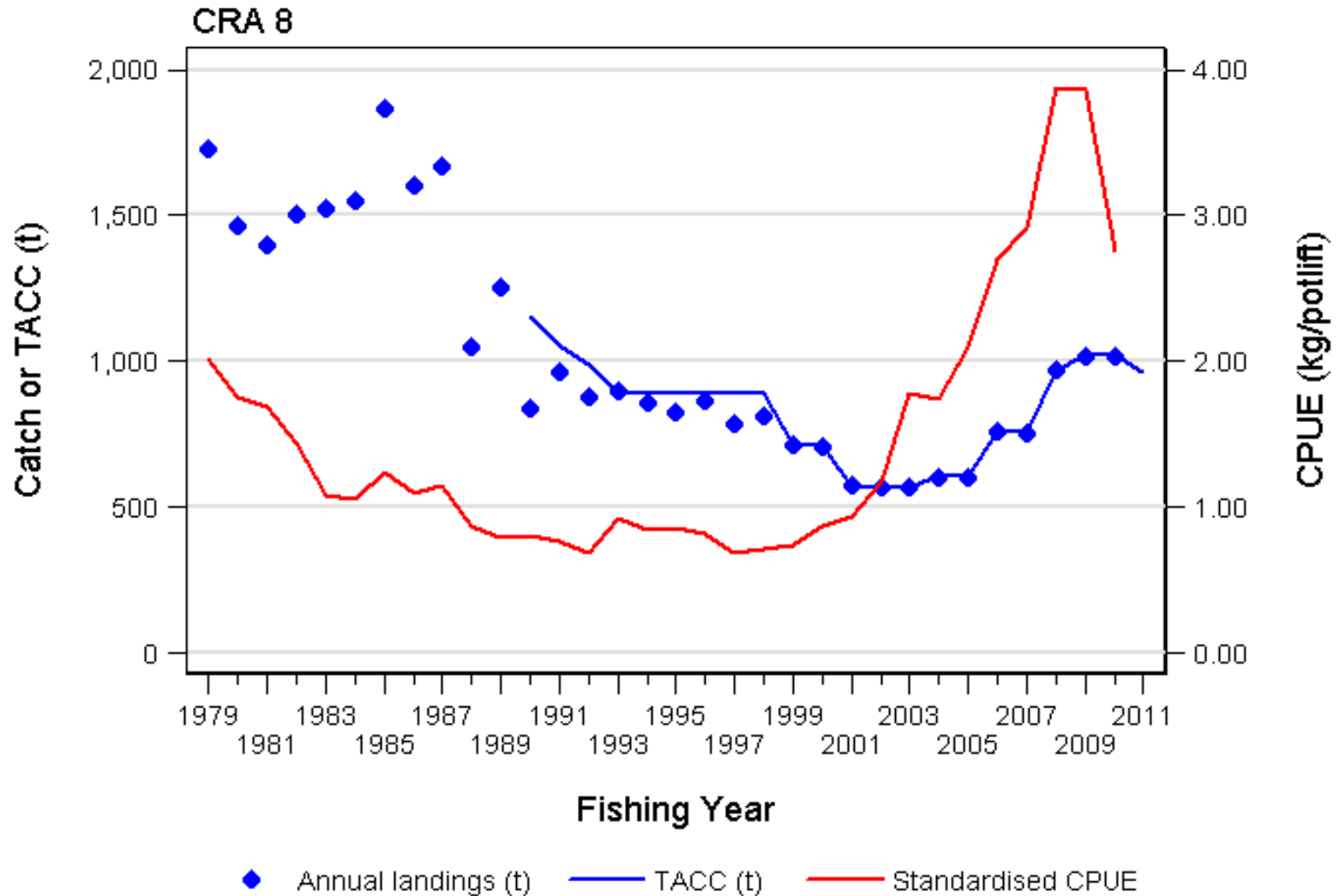


# FISHERIES MANAGEMENT

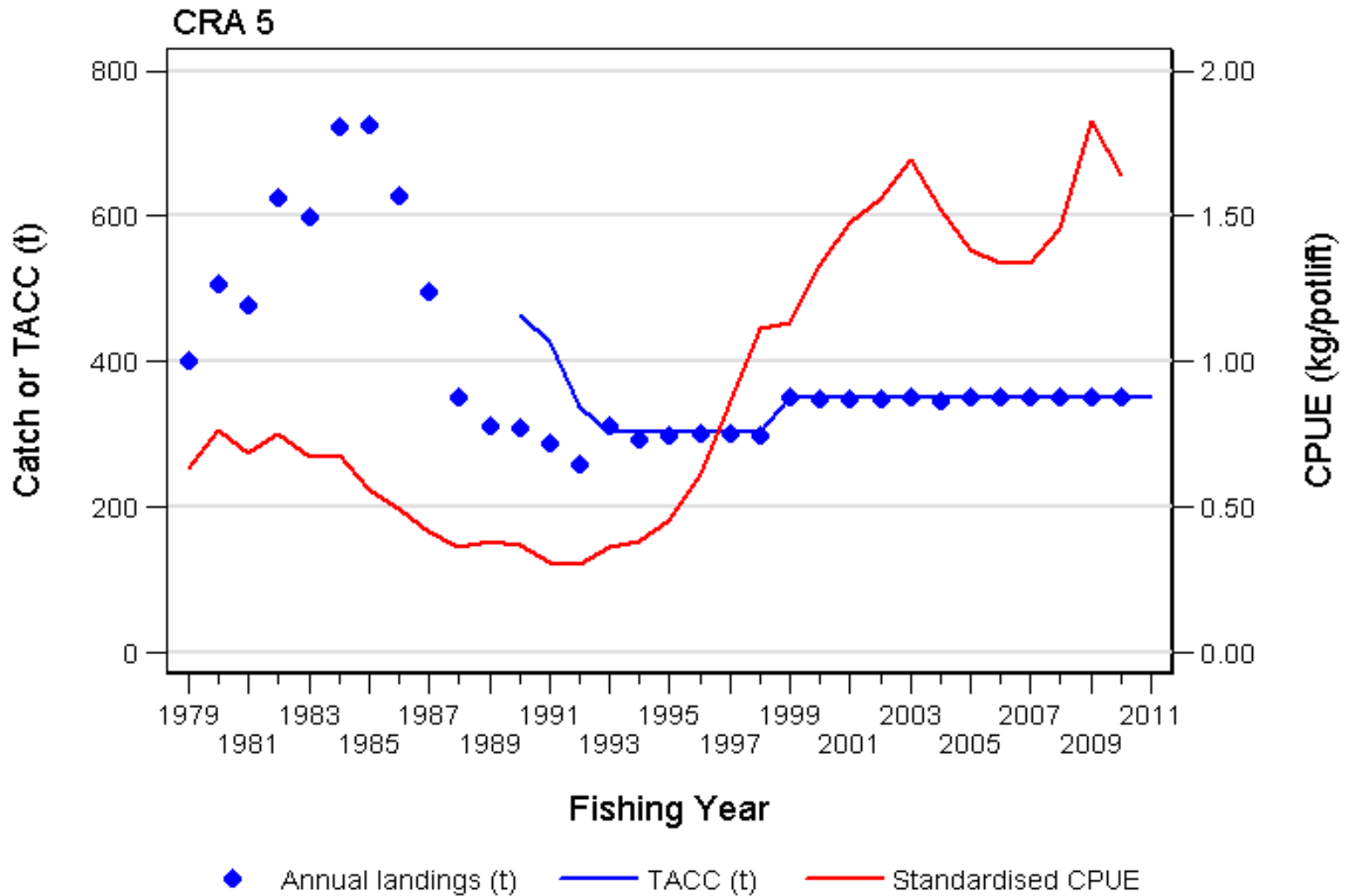
- Catch restrictions  
size, season, with eggs, soft
- Extensive stock monitoring  
(fisherman participation)
- Investment from fishers in  
science and management



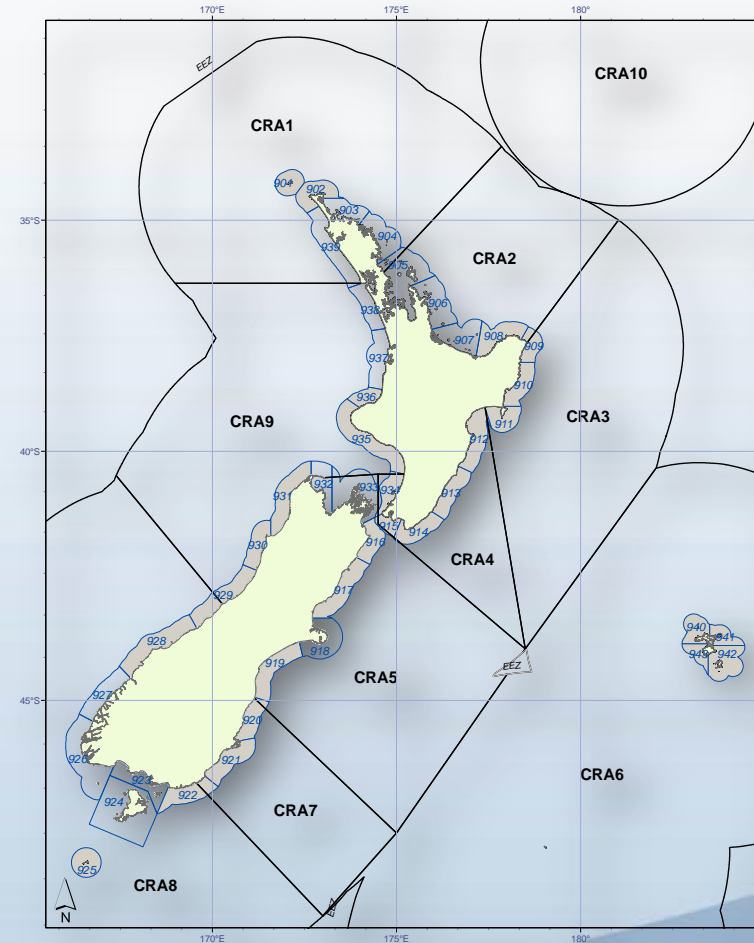
# SELECTED STOCKS – CRA 8



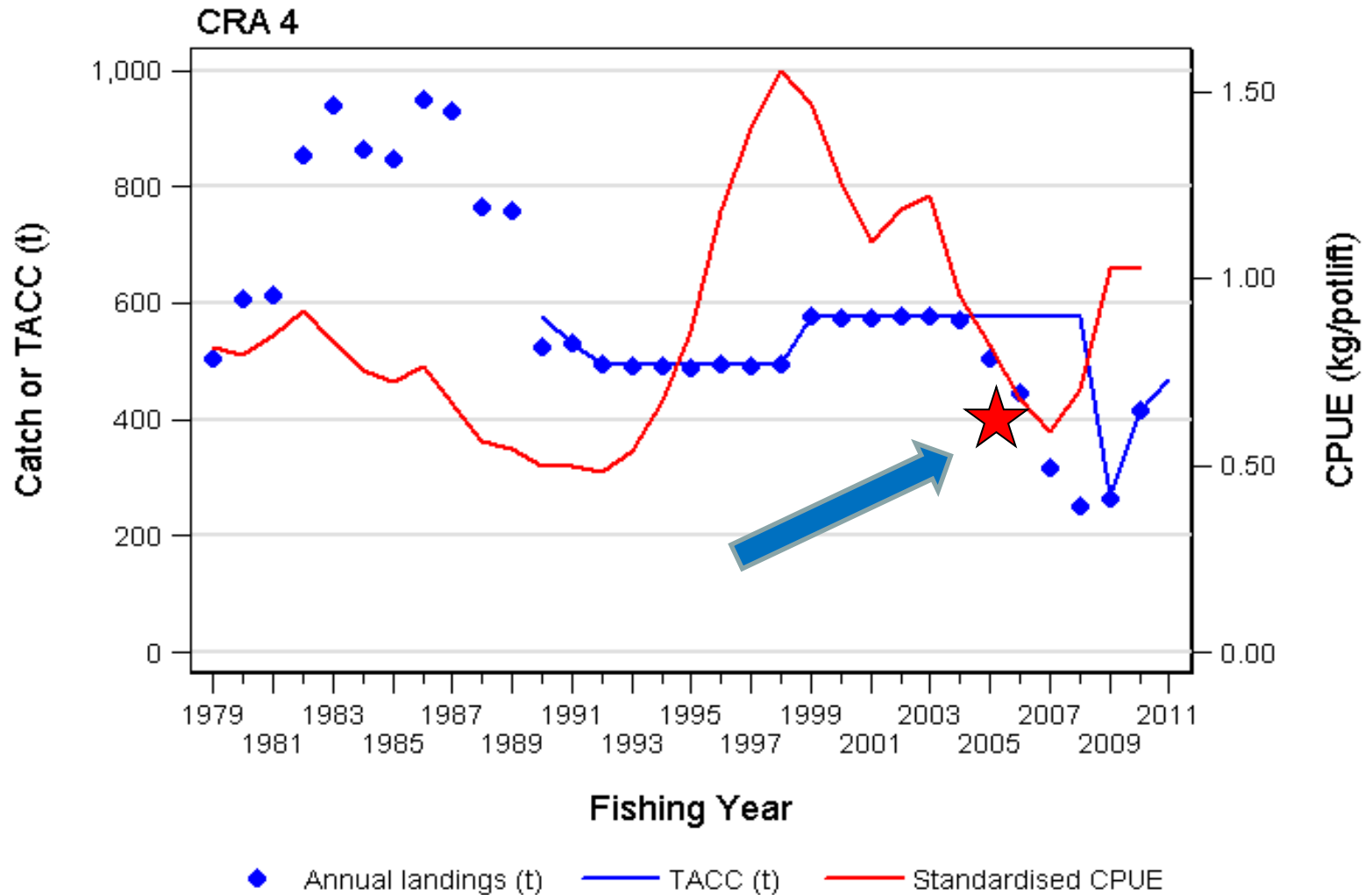
# SELECTED STOCKS – CRA 5



# FISHERIES MANAGEMENT AREAS



# SELECTED STOCKS – CRA 4



# SCIENCE & RESEARCH

**NZ RLIC as Fisheries Research Provider to Minister for Primary Industries since 1997. Current contract is 3 years to March 2013, for stock monitoring and stock assessment. New contract in preparation.**

**Industry Logbook Programme**

**Industry tag, release and recapture information**

**Product quality assurance and technology developments**

**INDUSTRY RESEARCH SPEND 6,600,000 NOK**



# STOCK MONITORING AND STOCK ASSESSMENT COLLABORATIONS

**NZ RLIC Ltd**

**NIWA**

***Latitude37 - Simon Anderson***

**CRA 2 Rock Lobster Company**

**CRA 5 Industry Association**

**CRA 8 Management Committee**

**Nokome Bentley, *Trophia***

**Paul Breen, *Breen Consulting Ltd***

**Vivian Haist, *Haist Consulting***

**Therese Kendrick, *Trophia***

**Paul Starr, *Starrfish***

# INDUSTRY SCIENCE TEAM



# VESSEL LOGBOOKS

- DATE
- SKIPPER
- LOCATION
- DEPTH
- SOAK TIME
- SIZE
- SEX
- MATURITY
- INJURY
- RETAINED
- DISCARDED
- INCIDENTAL CATCH
- POT TYPE

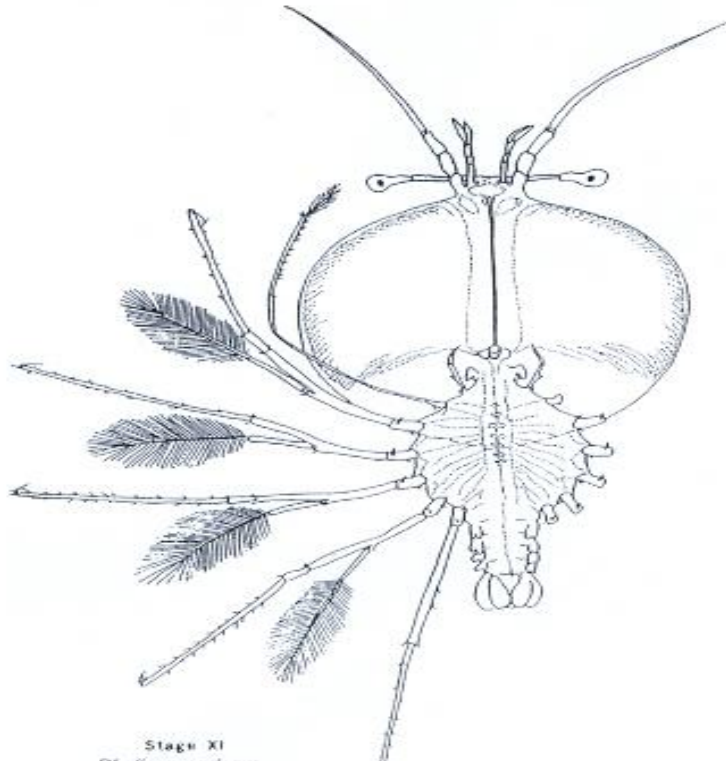


# TAGGING PROGRAMME

- ❑ SEX
- ❑ SIZE AT RELEASE
- ❑ SIZE AT RECAPTURE
- ❑ CONDITION
- ❑ LOCATION
- ❑ TIME AT LIBERTY



- ❑ GROWTH DATA FOR USE IN AGE-STRUCTURED STOCK ASSESSMENT MODELS



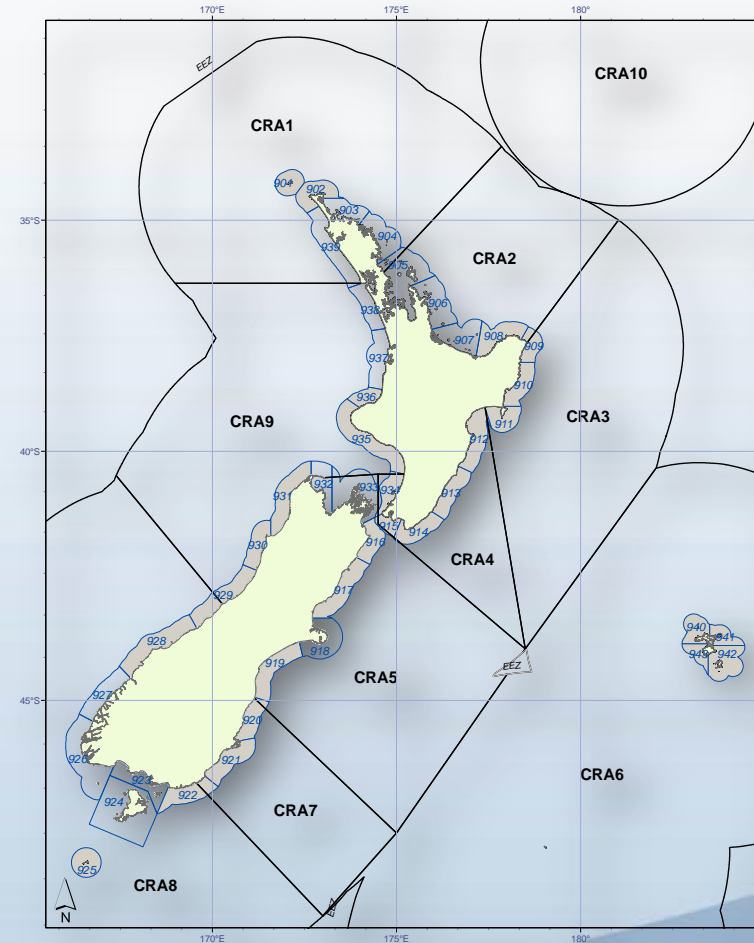
# 2011 Puerulus Settlement

Rock Lobster Recruitment

Jeff Forman NIWA  
Andy McKenzie NIWA  
Dean Stotter NIWA



# FISHERIES MANAGEMENT AREAS



# ADDING VALUE

## INVESTING IN TECHNOLOGY

More data for the dollar

Less data entry error

Reduced data entry costs

More timely data access

## ERNIE

### Electronic Recording of Nature, Investigation of Environment

The NZ RLIC has made significant progress to fully develop, including field testing of real time data entry and download, an electronic device and operating procedures for use in fisheries stock assessment research. The project is intent on providing new functionality and technical improvements to existing hardware and software technologies to improve the quality and quantity of fisheries research data and of fisheries management decision making. NZ RLIC Executive Officer and Research Programme Manager, Daryl Sykes, outlines the project.



Digital calipers, GPS position - first, accurate recording with ERNIE. Photo: T. Burslem

#### Information

The management of NZ rock lobster fisheries is contingent upon a credible time series of biological information derived from monitoring of the fisheries, from catch, effort and landing data provided by commercial fishermen, and from statutory catch and processing reports made by commercial

and customary fishermen. This information is essential to the annual rock lobster stock assessment process which informs fisheries management decisions.

Fisheries stock monitoring entails trained technicians in two-person teams on board fishing vessels manually recording information about rock lobster length, sex, maturity, injury index, as well as weather and sea conditions, water depth, method of capture etc. This is a time-consuming and laborious process and the need to record data accurately is made all the more difficult by the unstable working platform and the conditions encountered on the deck of a working fishing vessel.

The manual records are subsequently compiled for electronic data entry. There are two error checking procedures that comprise part of the elaborate standards and specifications for data entry and data base management set by the Ministry of Fisheries. The electronic data entry process is time-consuming, and therefore expensive.

#### Innovation

The NZ RLIC has researched extensively to find hardware and software components

that can be innovatively combined and modified to produce a specialised technology for fisheries research.

The concept developed by the NZ RLIC is a rugged, purpose built, waterproof, handheld computer, using software technology adapted from the forestry industry but incorporating a novel feature which enables direct downloads to the existing research data base.

The device has the capability to add slave components (e.g.: electronic calipers, electronic scales, bar code readers, GPS/GIS) which enhance reporting accuracy and efficiency and significantly reduce operator error.

#### Inspiration

Enter Southland rock lobster fishermen, now retired, Ernie Cove. Ernie was a good fisherman, a stalwart of the CRA E industry, an active representative for that industry over many years, an advocate, and an innovator. Work done by Ernie Cove and Fiordland fishermen, Mark Psychers, proved the effectiveness of modified escape gaps in rock lobster pots and resulted in a rewrite of escapement regulations.

Ernie was one of the few working fisher



Ernie Cove - an inspiration for new technology. Photo: J. Cox

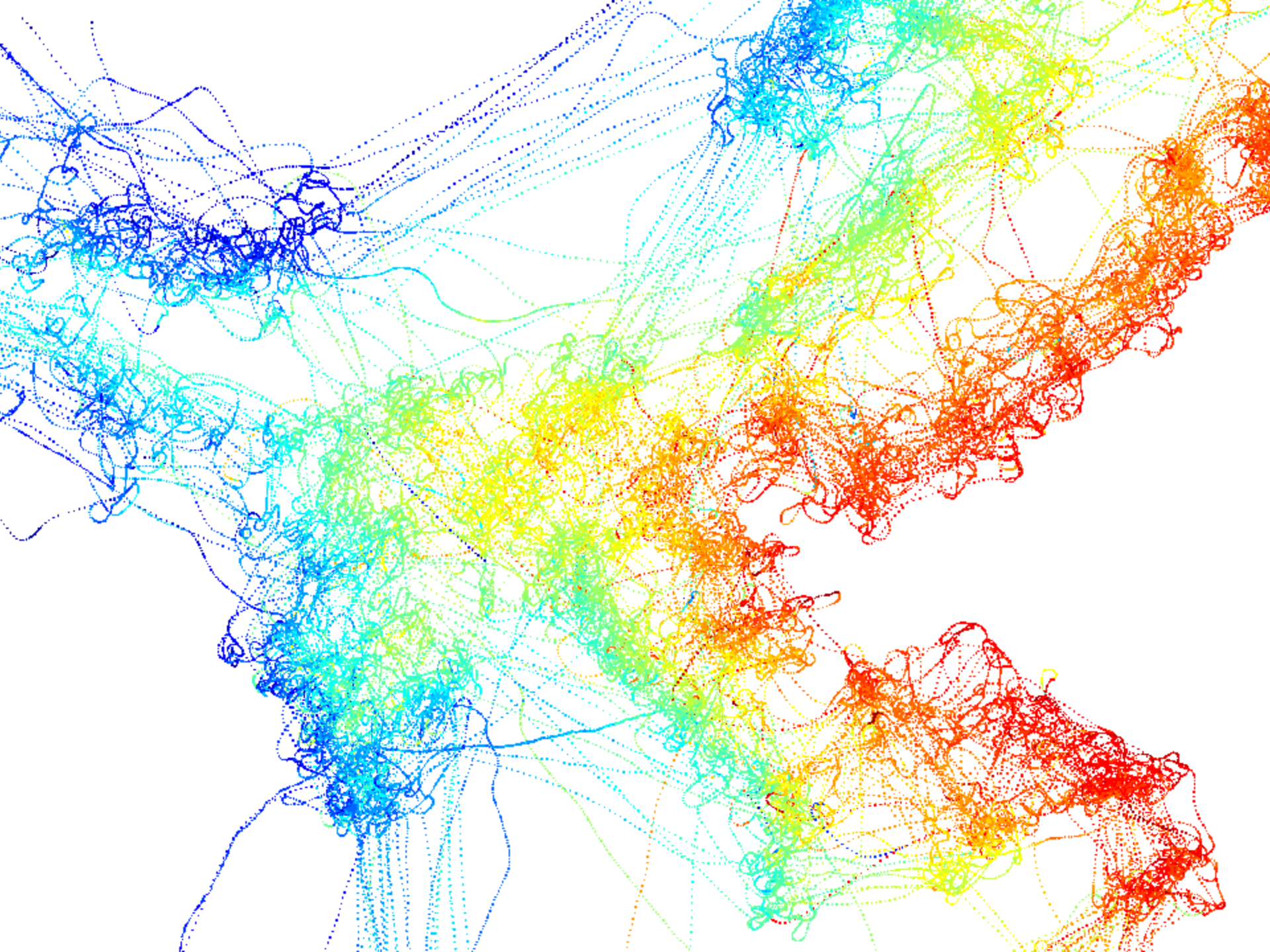


FOR INFORMATION ONLY  
PLEASE FIRST WEAT APPROVED  
FOR THE BOAT  
Before entering the water please  
check the "Weather" and "Tide" information on the  
"Weather" and "Tide" information on the  
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MADE IN NEW ZEALAND

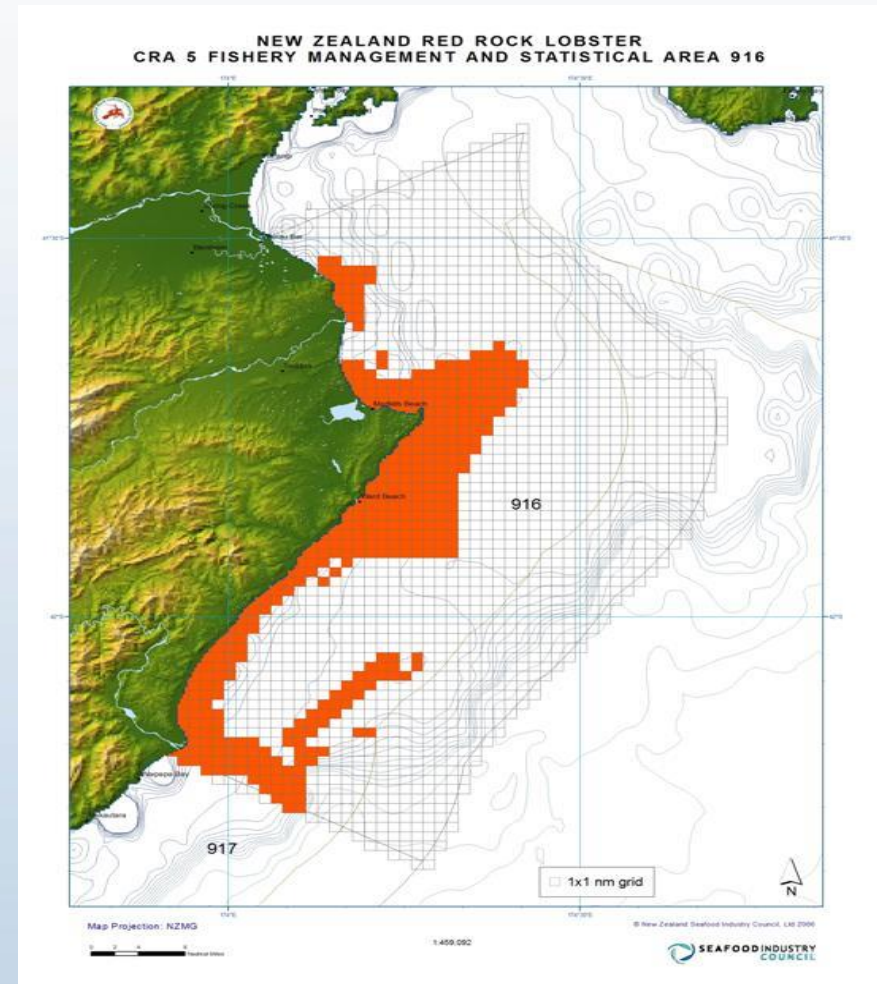
MAGNUM  
MADE IN NEW ZEALAND





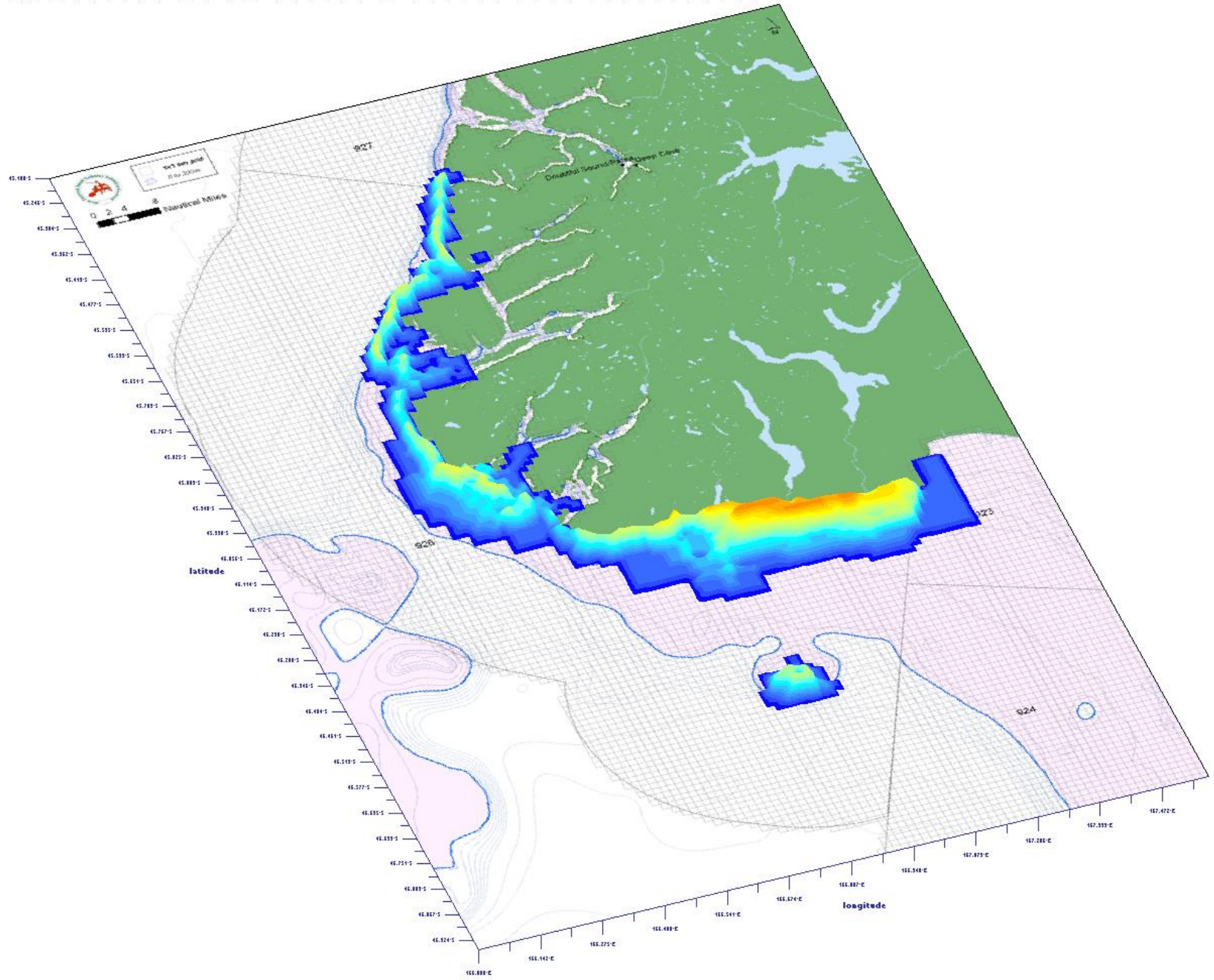
# WHERE, WHEN, HOW MUCH

- SPATIAL CLOSURES
- TIME CLOSURES
- Catch/ACE  
“Spreading”



surveys:1,2,3,4,5,6,7,8,9,10,11,12,13,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54

- 11-11
- 10-11
- 10-10
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- 2-2
- 1-2
- 1-1
- 0-1



# MANAGEMENT

Annual management planning process involving all stakeholders

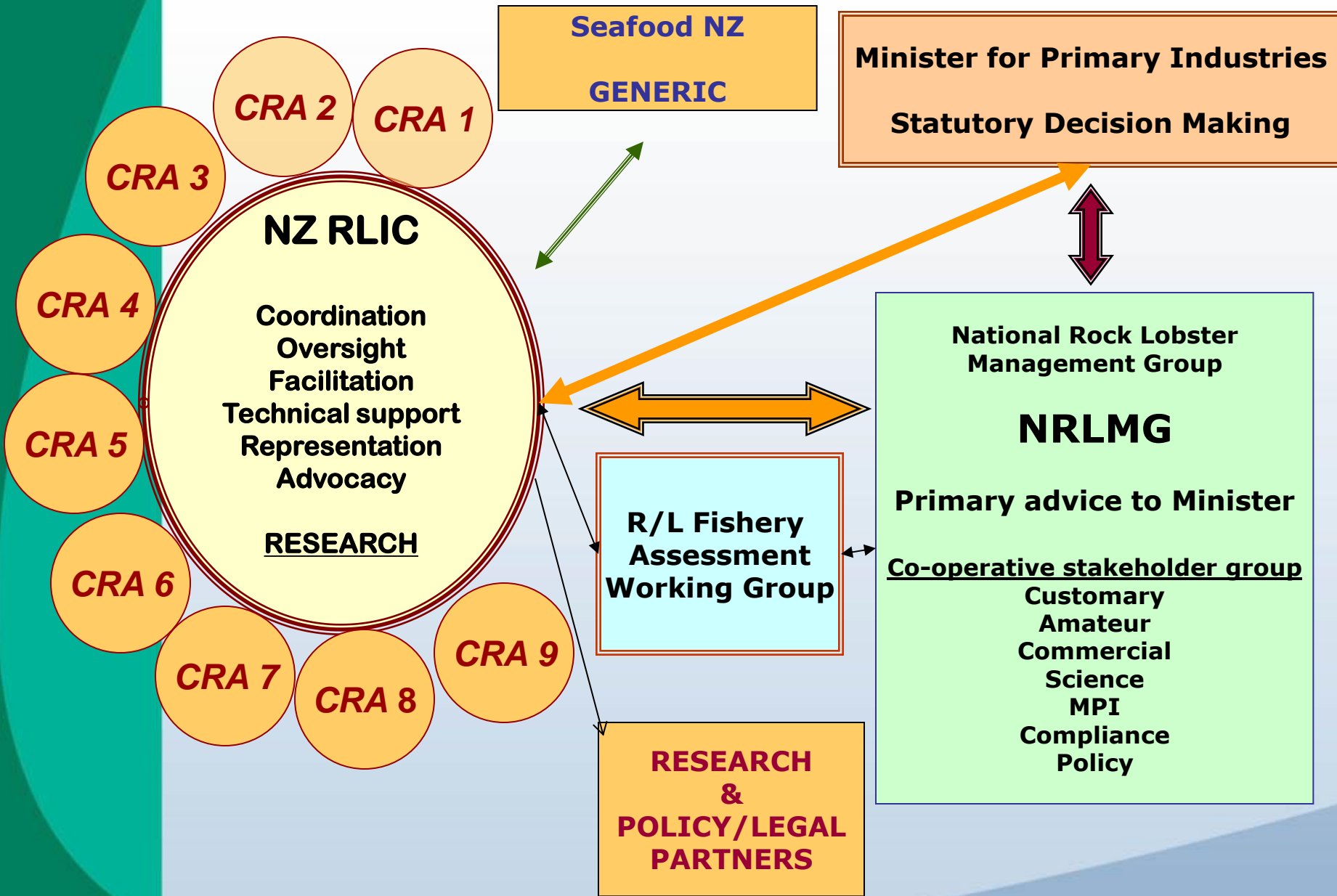
**NATIONAL ROCK LOBSTER MANAGEMENT GROUP (NRLMG)**

NRLMG - rock lobster research planning forum

NRLMG - primary source of management advice to Minister

NZ RLIC provides policy advice and analysis, industry perspective, practical experience of CRAMAC members, knowledge of fishing, stakeholder interactions, and market experience.

Industry able to coordinate development and implementation of harvest initiatives and/or Fishery Plans



# ISSUE #1

## SPATIAL ACCESS

MARINE PROTECTED AREA POLICY

CUSTOMARY FISHING

RECREATIONAL-ONLY ZONES

LINKED TO .....

## ISSUE #2

# FAILING CONFIDENCE IN AND POOR SUPPORT FOR NZ QMS

Internal as well as external

- Disconnect between owners of rights and users of those rights – the absentee landlords
- Duty of care and custodial attitude diminished
- Industry failure to educate and inform
- Out-gunned by the Eco-cults
- Nature of rights not upheld by decision makers

## ISSUE #3

# GLOBAL ECONOMICS

MARKET DEMAND

EXCHANGE RATES \$NZ/\$US

BUSINESS COSTS





# INDUSTRY RESPONSES

- ❑ INFORMATION & EDUCATION

- ❑ BUILD & MAINTAIN STOCK ABUNDANCE – *'the buffer'*

- ❑ POLITICAL LOBBY

- ❑ SECTOR RELATIONSHIPS

  - ❑ *COMPROMISE*

  - ❑ *CONCESSION*

**= SURVIVAL AND PROSPERITY.**

# KEEP THE CUSTOMER SATISFIED

FISHERMEN



FISHERMEN



FISHERMEN



Quota Share Owners



Takk for oppmerksomheten

