

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

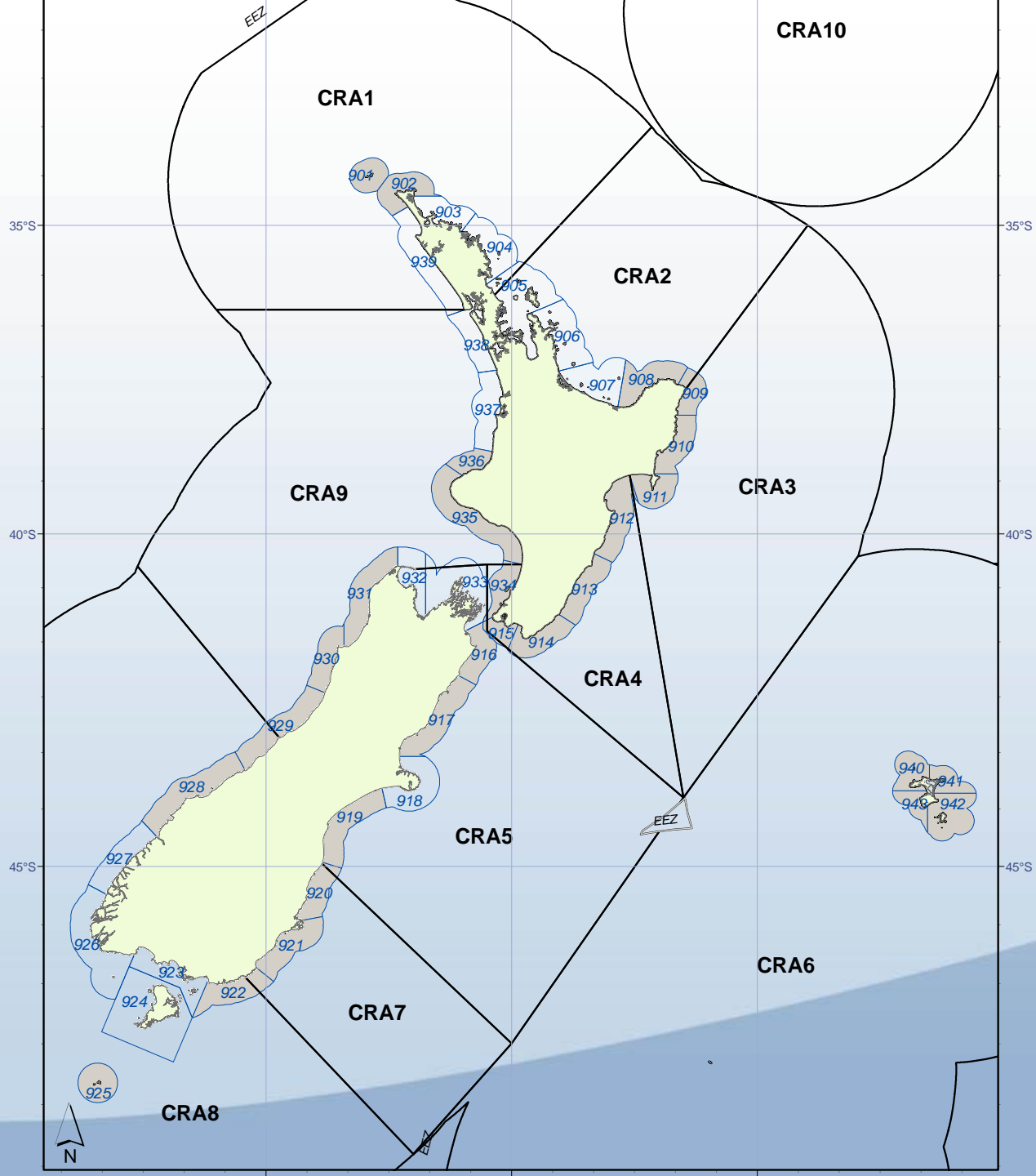
Country	Cap. City	Area (sq. km)	Pop. (millions)
1. Canada	Ottawa	9 984 670	31.2
2. USA	Washington	9 826 670	265.5
3. Mexico	Mexico City	2 000 000	92.0
4. Brazil	Brasilia	8 511 963	158.7
5. Argentina	Buenos Aires	2 780 170	35.0
6. Chile	Santiago	756 950	12.5
7. Peru	Lima	1 285 216	25.0
8. Colombia	Bogota	1 141 700	32.0
9. Venezuela	Caracas	916 440	23.0
10. Ecuador	Quito	283 560	11.0
11. Cuba	Havana	110 860	11.0
12. Haiti	Port-au-Prince	77 816	6.0
13. Dominican Rep.	Santo Domingo	76 192	6.0
14. Jamaica	Kingston	10 991	2.0
15. Barbados	Bridgetown	430	0.2
16. Guyana	Georgetown	215 000	0.7
17. Suriname	Paramaribo	163 270	0.4
18. French Guiana	Kayenne	84 490	0.2
19. Greenland	Narsarsuaq	2 175 600	0.1
20. Iceland	Reykjavik	103 000	0.2
21. Norway	Oslo	385 203	4.2
22. Sweden	Stockholm	449 964	8.5
23. Finland	Helsinki	303 842	5.0
24. Denmark	Copenhagen	43 094	5.0
25. Netherlands	Amsterdam	41 526	15.5
26. Belgium	Brussels	30 528	10.0
27. Luxembourg	Luxembourg	2 586	0.4
28. Germany	Berlin	357 021	82.0
29. France	Paris	643 801	60.0
30. United Kingdom	London	244 819	56.0
31. Ireland	Dublin	70 276	3.5
32. Portugal	Lisbon	92 090	10.0
33. Spain	Madrid	505 992	40.0
34. Italy	Rome	301 330	58.0
35. Greece	Athens	131 991	11.0
36. Turkey	Ankara	783 562	60.0
37. Bulgaria	Sofia	110 914	8.0
38. Romania	Bucharest	237 500	22.0
39. Hungary	Budapest	101 318	10.0
40. Czech Rep.	Prague	78 866	10.0
41. Slovakia	Bratislava	48 846	5.0
42. Poland	Warsaw	312 685	38.0
43. Austria	Vienna	83 858	8.0
44. Switzerland	Bern	41 284	7.0
45. Liechtenstein	Vaduz	160	0.3
46. Slovenia	Ljubljana	20 273	2.0
47. Croatia	Zagreb	56 542	4.5
48. Serbia	Belgrade	77 614	7.0
49. Montenegro	Podgorica	13 811	0.6
50. Bosnia and Herzegovina	Sarajevo	51 129	3.5
51. Albania	Tirane	28 748	3.0
52. Macedonia	Skopje	20 710	2.0
53. Bulgaria	Sofia	110 914	8.0
54. Greece	Athens	131 991	11.0
55. Turkey	Ankara	783 562	60.0
56. Russia	Moscow	17 098 246	142.0
57. Ukraine	Kyiv	603 628	46.0
58. Belarus	Minsk	207 600	9.0
59. Lithuania	Vilnius	62 689	3.0
60. Latvia	Riga	64 589	2.5
61. Estonia	Tallinn	45 026	1.3
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Scale 1:60 000 000 Pacific Central

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Map No. 70 000 000



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

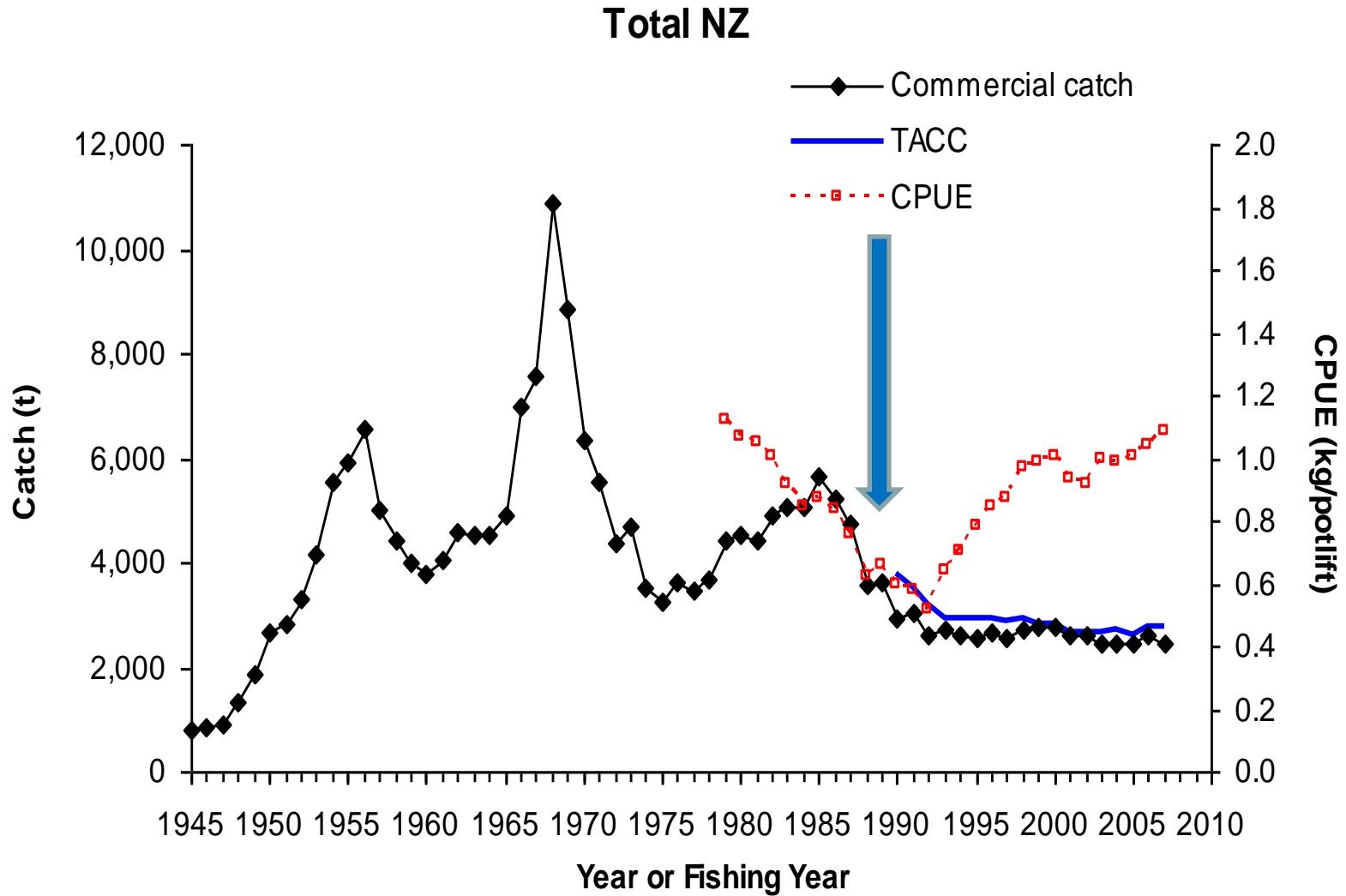
ACE (QUOTA LEASE)

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

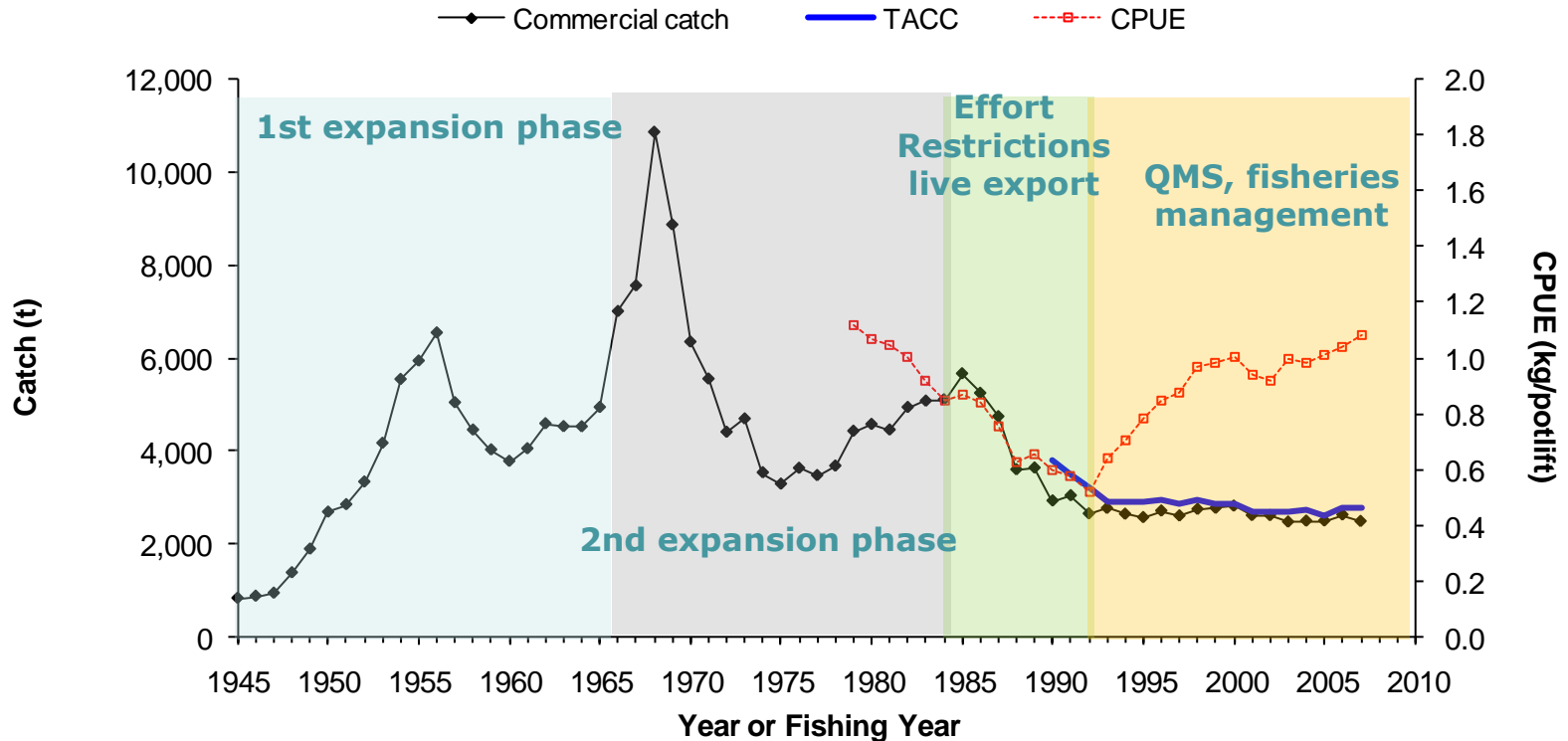
MANAGEMENT LEVY = NZ\$850/t 4,032 NOK/tonne

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

THE BIG PICTURE #1

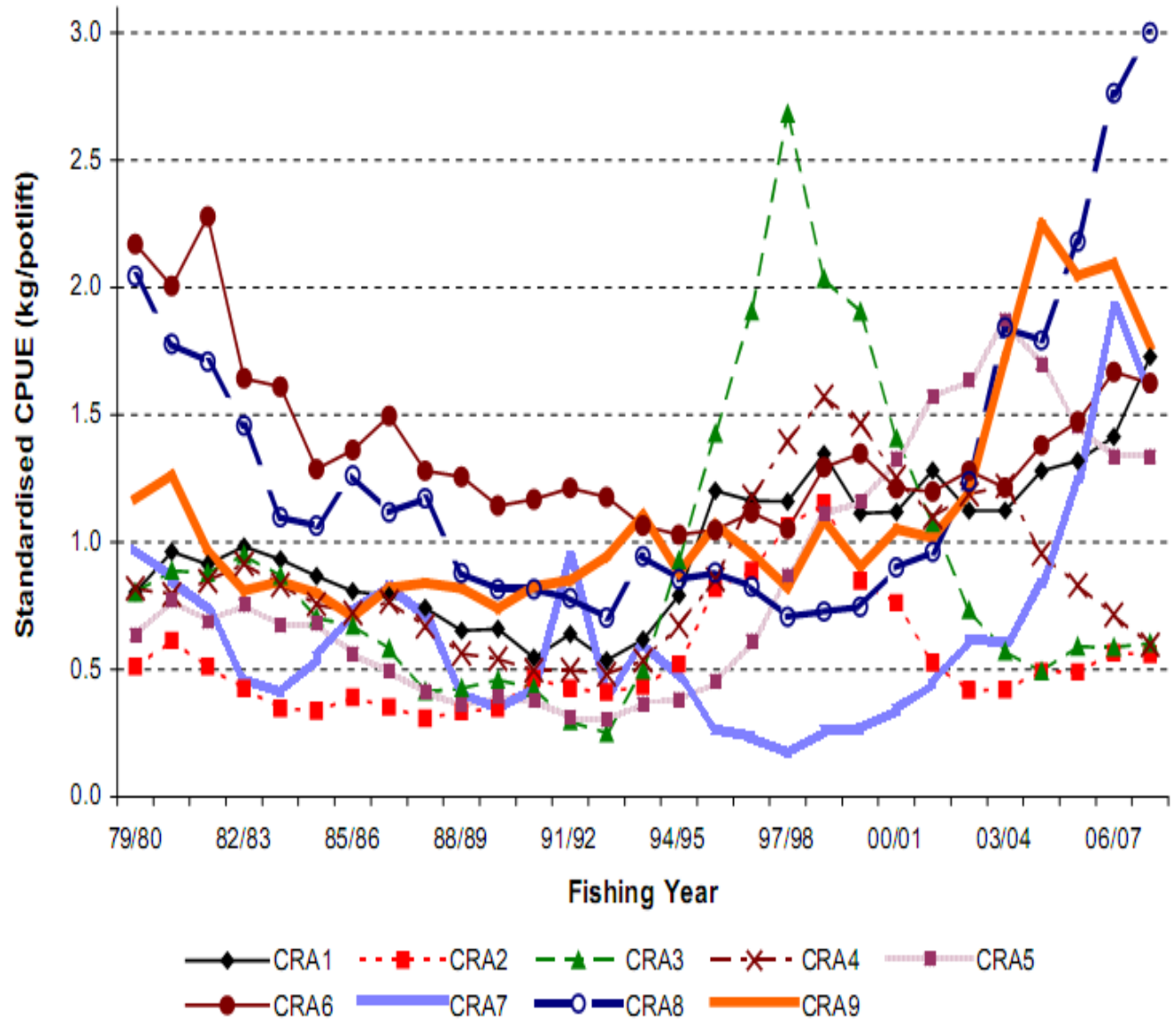


EXPANSION AND DEVELOPMENT



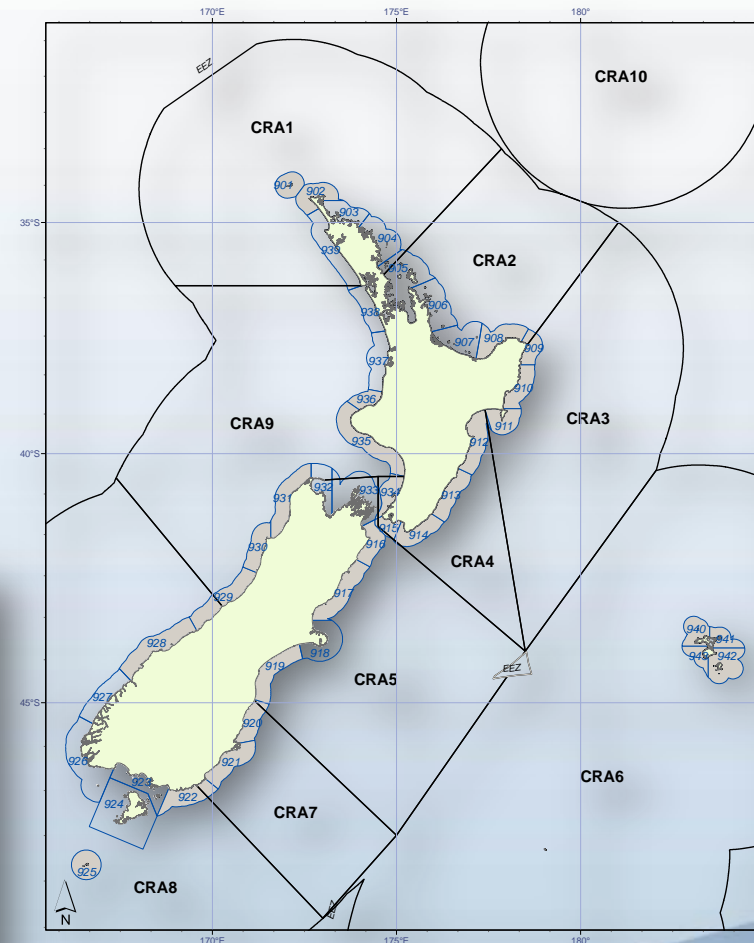
- Boom and bust cycles
- Introduction of rock lobster into QMS in 1990

THE BIG PICTURE #2

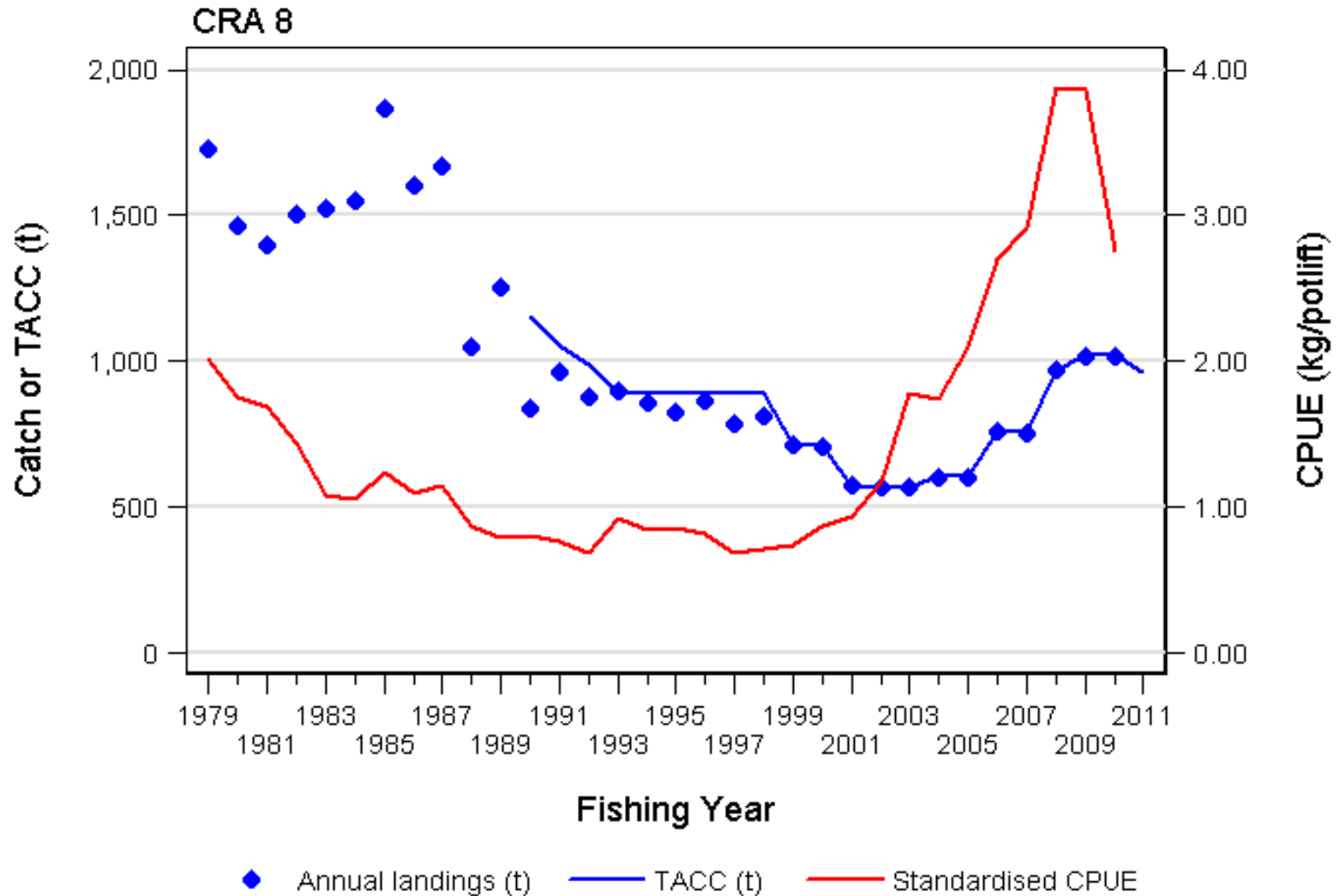


FISHERIES MANAGEMENT

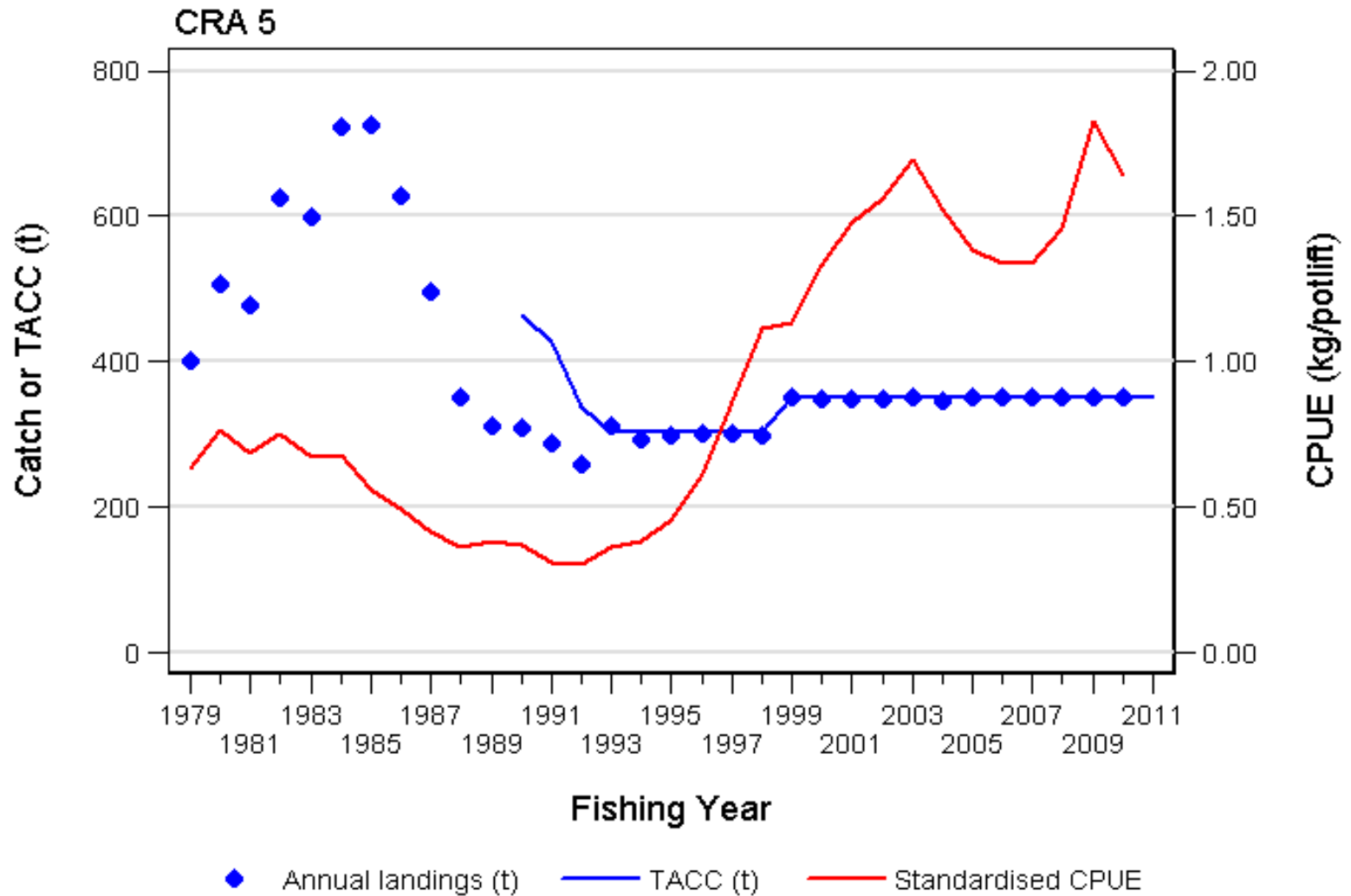
- Catch restrictions
size, season, with eggs, soft
- Extensive stock monitoring
(fisherman participation)
- Investment from fishers in
science and management



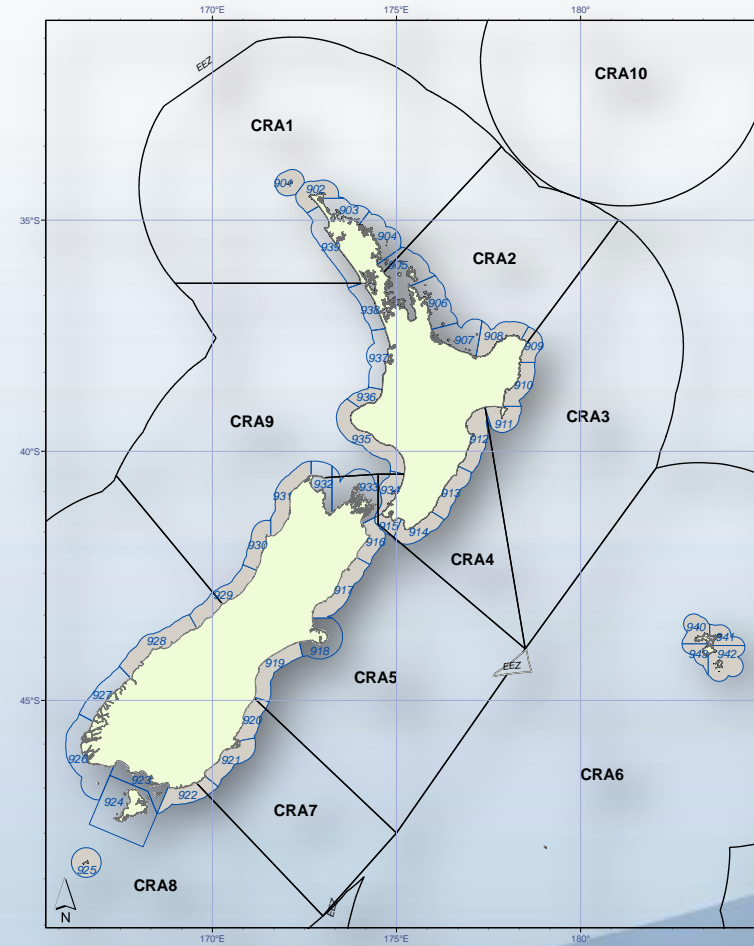
SELECTED STOCKS – CRA 8



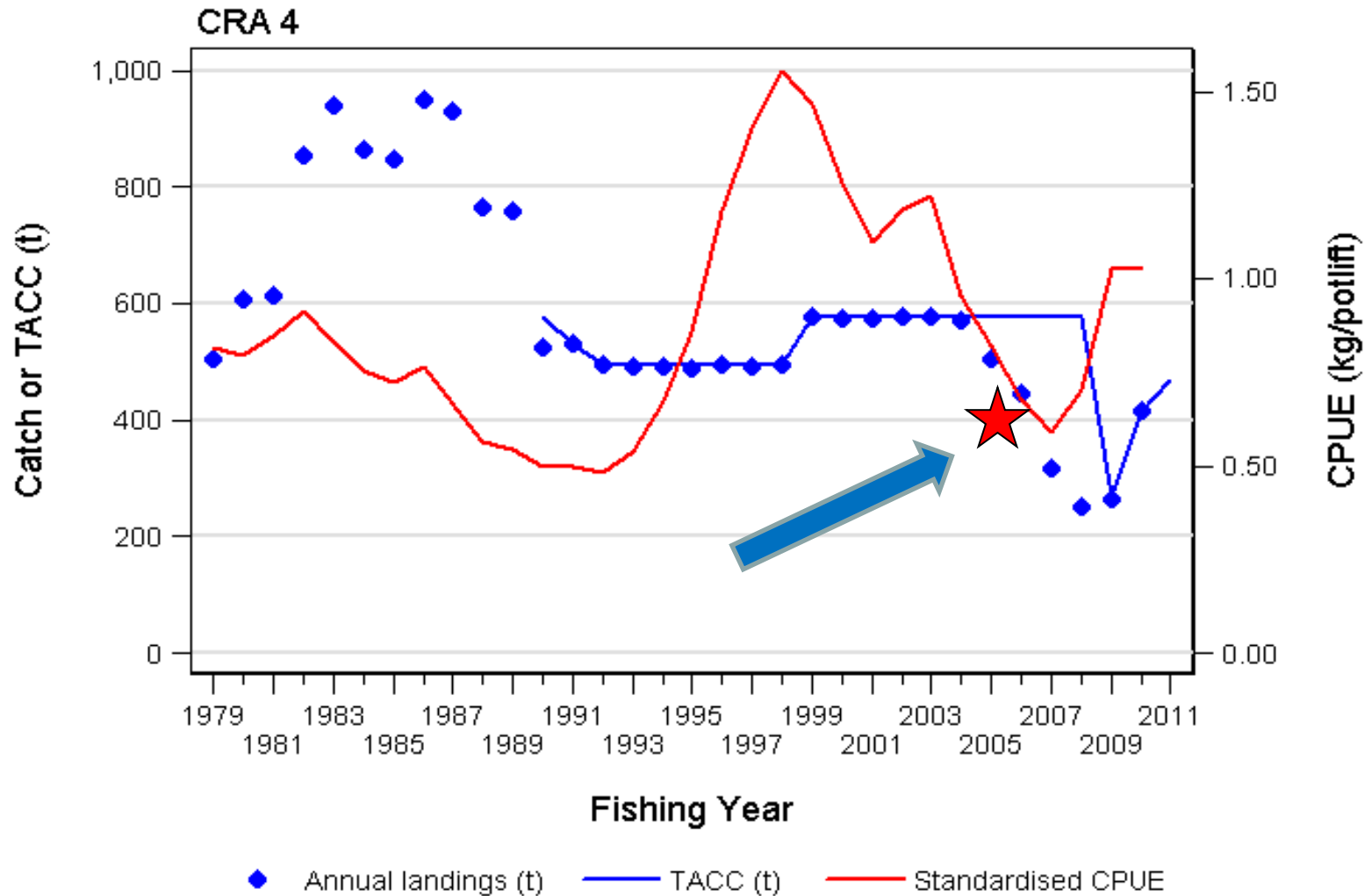
SELECTED STOCKS – CRA 5



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

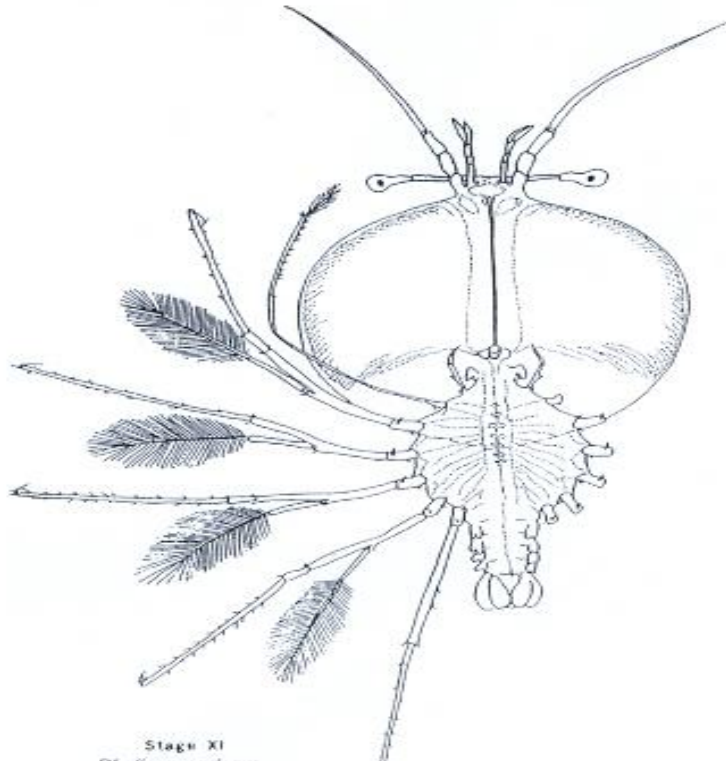


TAGGING PROGRAMME

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



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



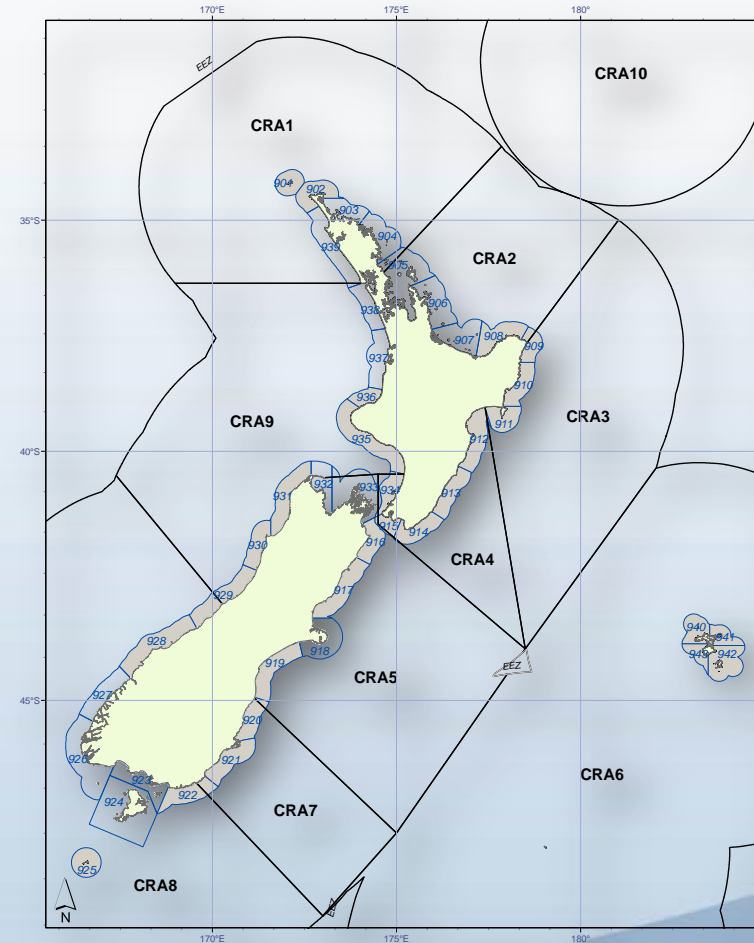
2011 Puerulus Settlement

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

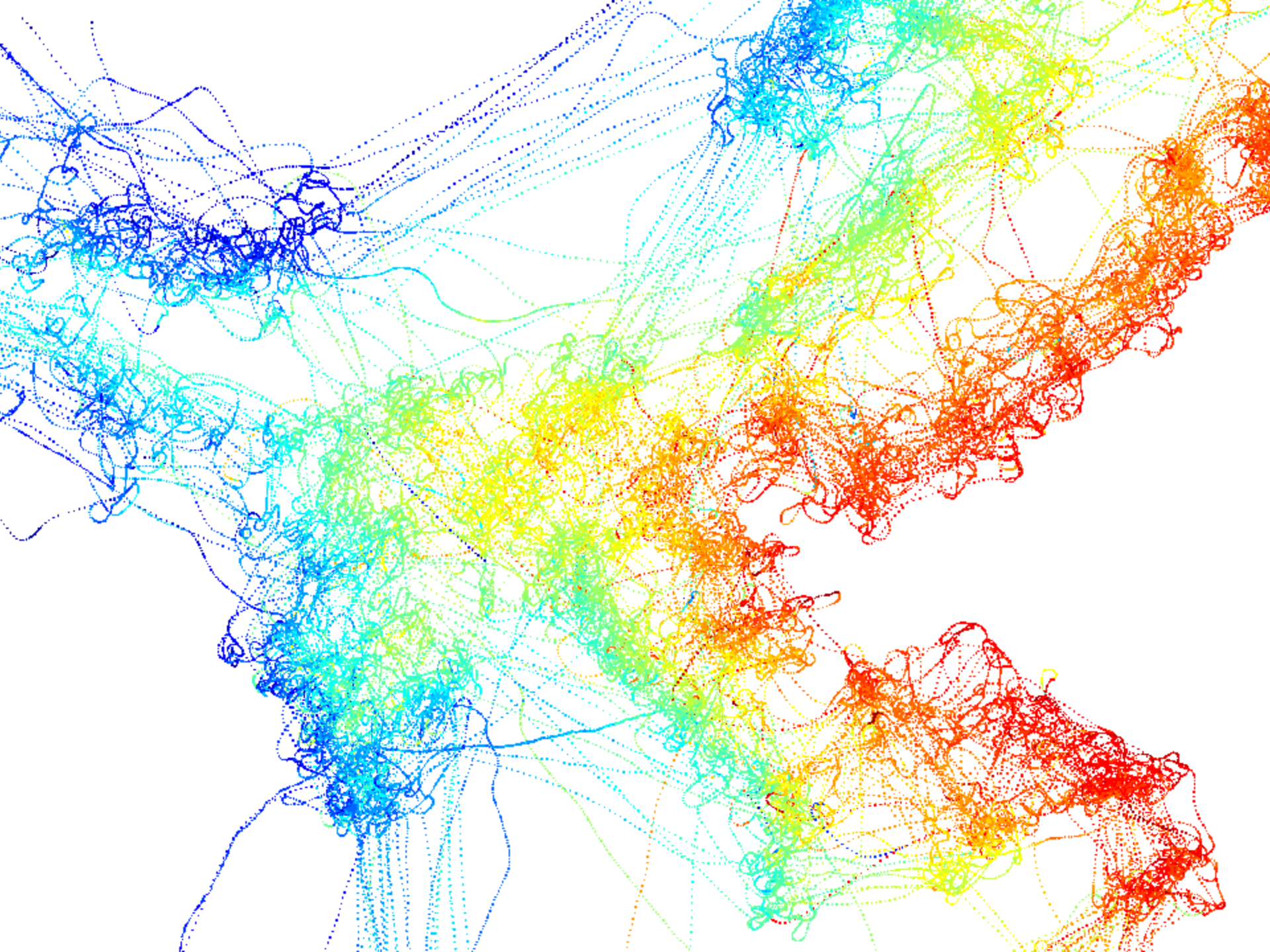
Enter Southland rock lobster fishermen, now retired, Ernie Cove. Ernie was a good fisherman, a stalwart of the CRA E industry, an active representative for that industry over many years, an advocate, and an innovator. Work done by Ernie Cove and Fiordland fishermen, Mark Psychovos, proved the effectiveness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

Ernie was one of the few working fisher



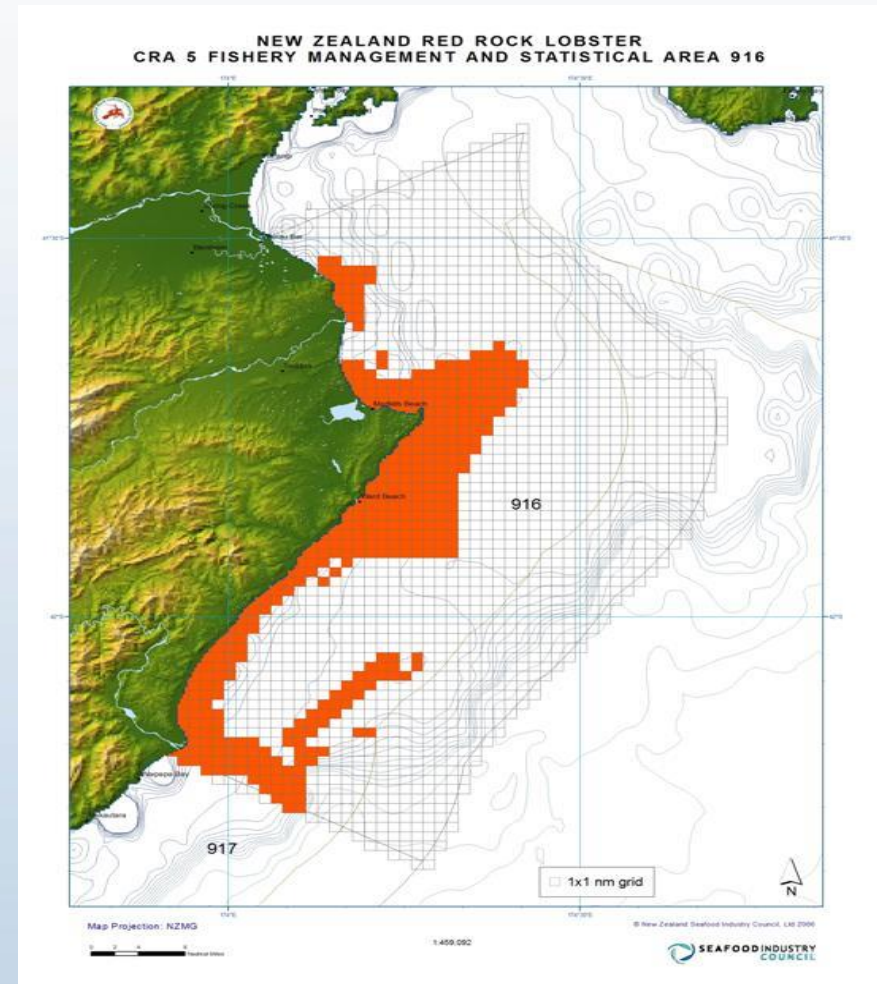
Ernie Cove - an inspiration for new technology. Photo: J. Cox





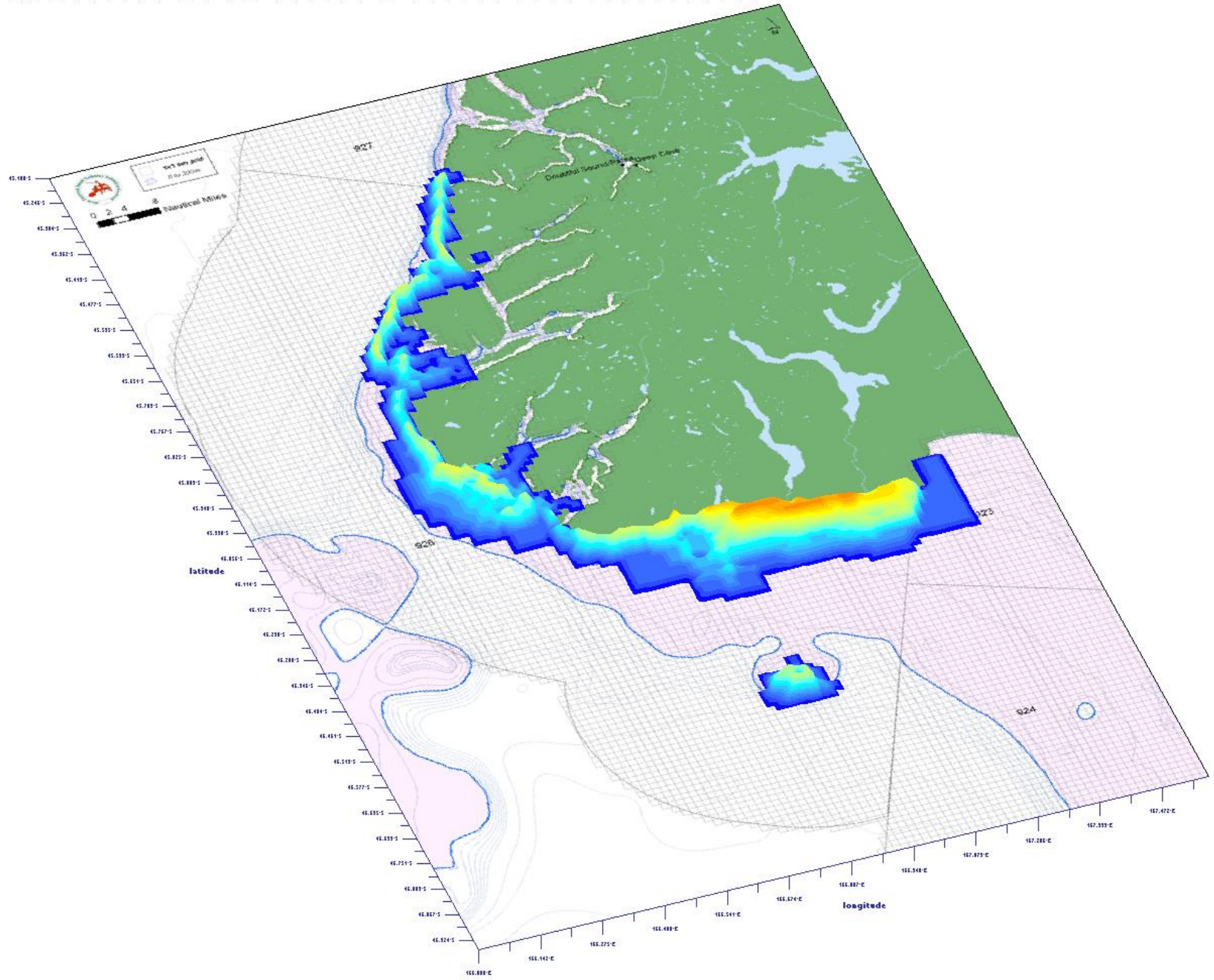
WHERE, WHEN, HOW MUCH

- 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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- 3-3
- 2-3
- 2-2
- 1-2
- 1-1
- 0-1



MANAGEMENT

Annual management planning process involving all stakeholders

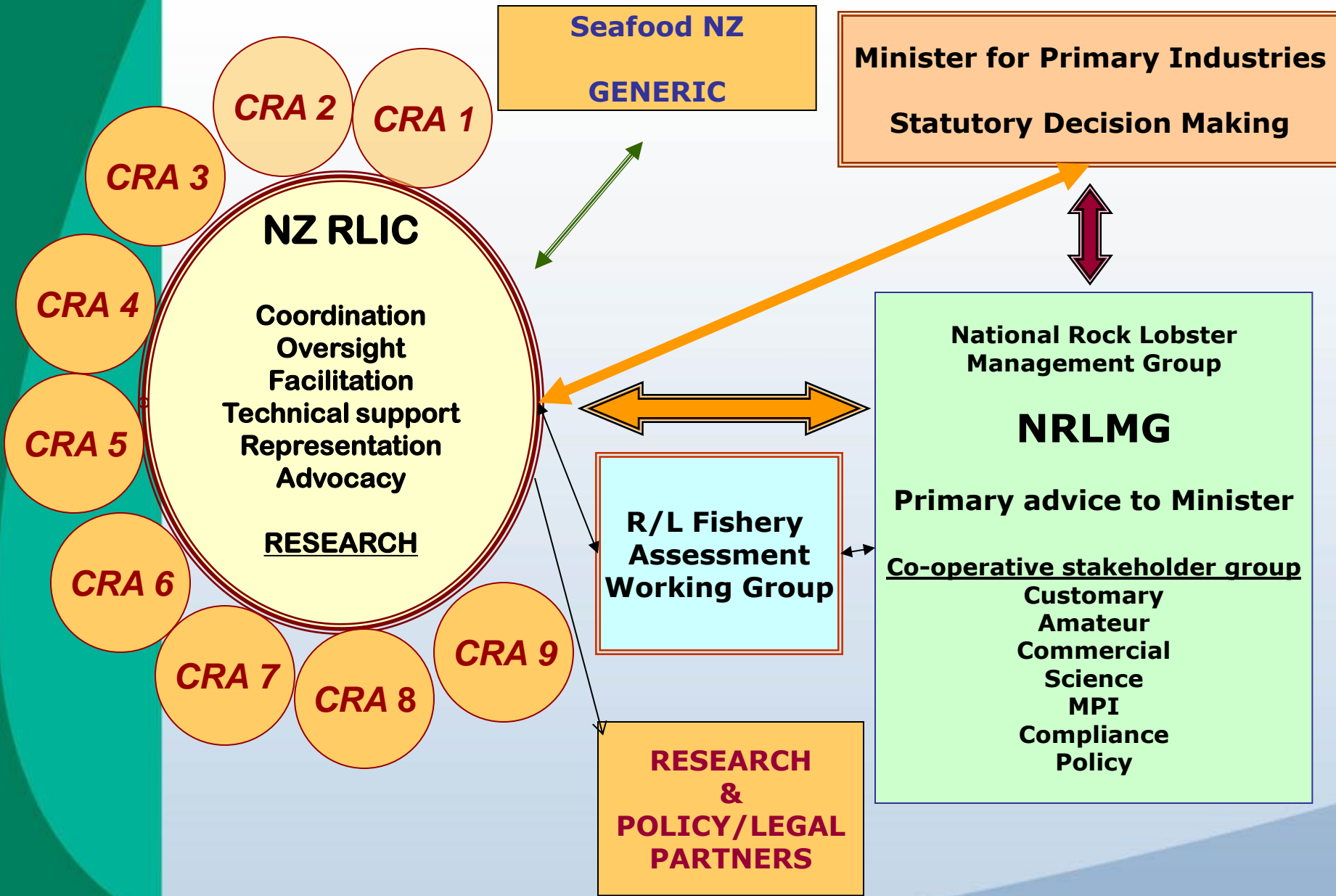
NATIONAL ROCK LOBSTER MANAGEMENT GROUP (NRLMG)

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



Seafood NZ
GENERIC

Minister for Primary Industries
Statutory Decision Making

CRA 3

CRA 2

CRA 1

NZ RLIC

Coordination
Oversight
Facilitation
Technical support
Representation
Advocacy

RESEARCH

CRA 4

CRA 5

CRA 6

CRA 7

CRA 8

CRA 9

R/L Fishery
Assessment
Working Group

RESEARCH
&
POLICY/LEGAL
PARTNERS

National Rock Lobster
Management Group

NRLMG

Primary advice to Minister

Co-operative stakeholder group

Customary
Amateur
Commercial
Science
MPI
Compliance
Policy

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



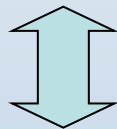
FISHERMEN



FISHERMEN



Quota Share
Owners



Takk for oppmerksomheten

