THE USE OF OPERATIONAL MANAGEMENT PROCEDURES TO ADDRESS THE BIOLOGICAL, SOCIAL AND ECONOMIC OBJECTIVES OF THE WEST COAST ROCK LOBSTER FISHERY

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OUTLINE

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II. Assessments

III. OMPs and resource recovery

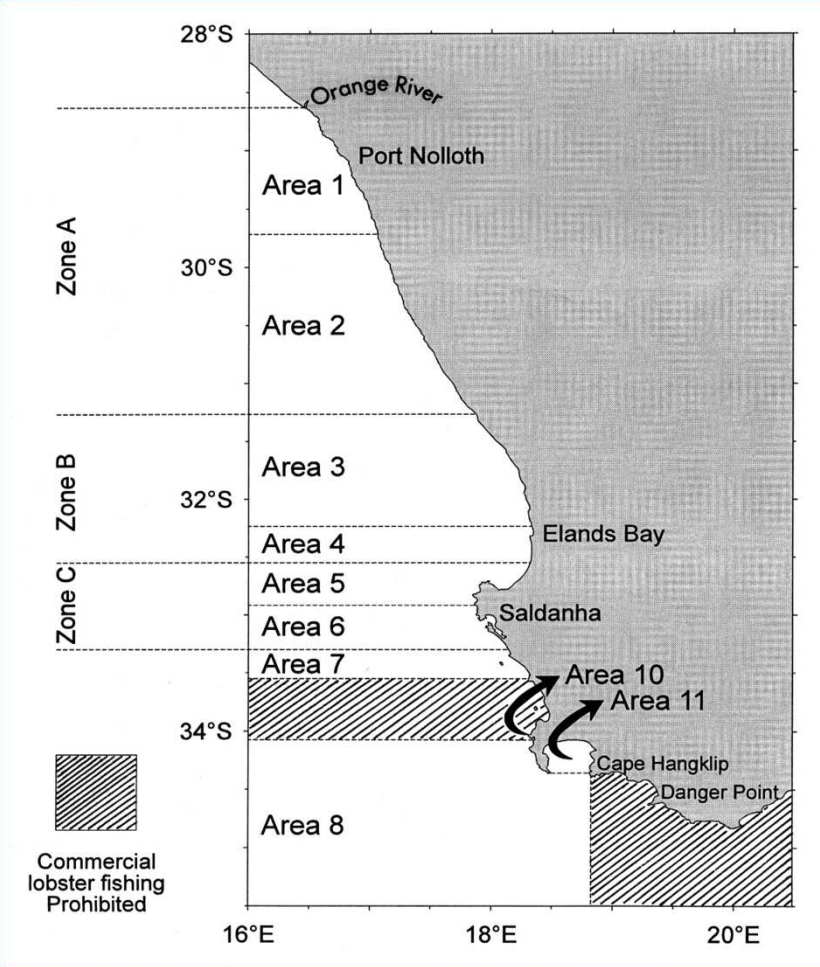
IV. Objectives and trade-offs

V. Recent events

VI. In conclusion

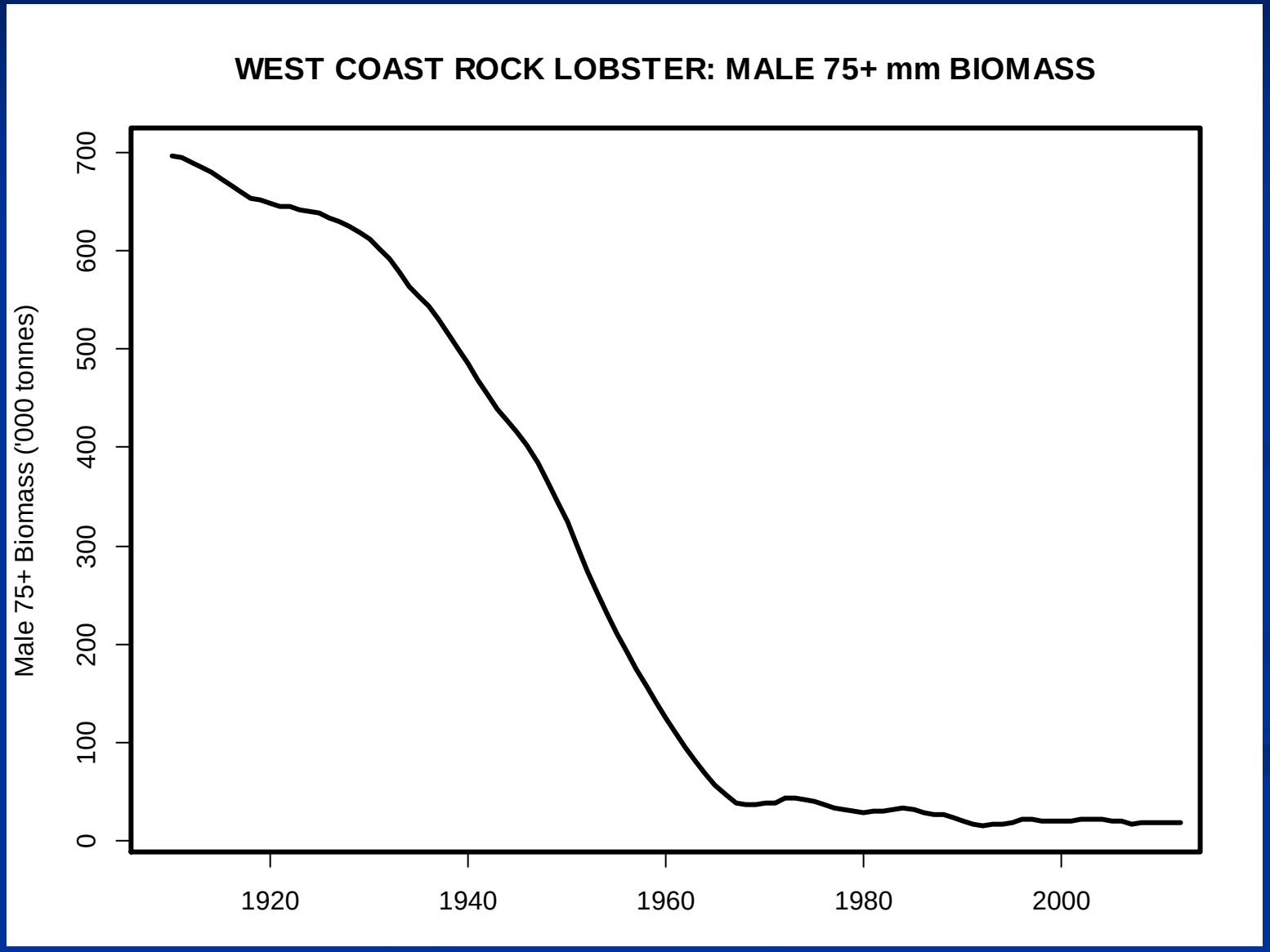
I. SOME HISTORY

LOBSTER RESOURCE IS MANAGED AS FIVE SEPARATE STOCKS

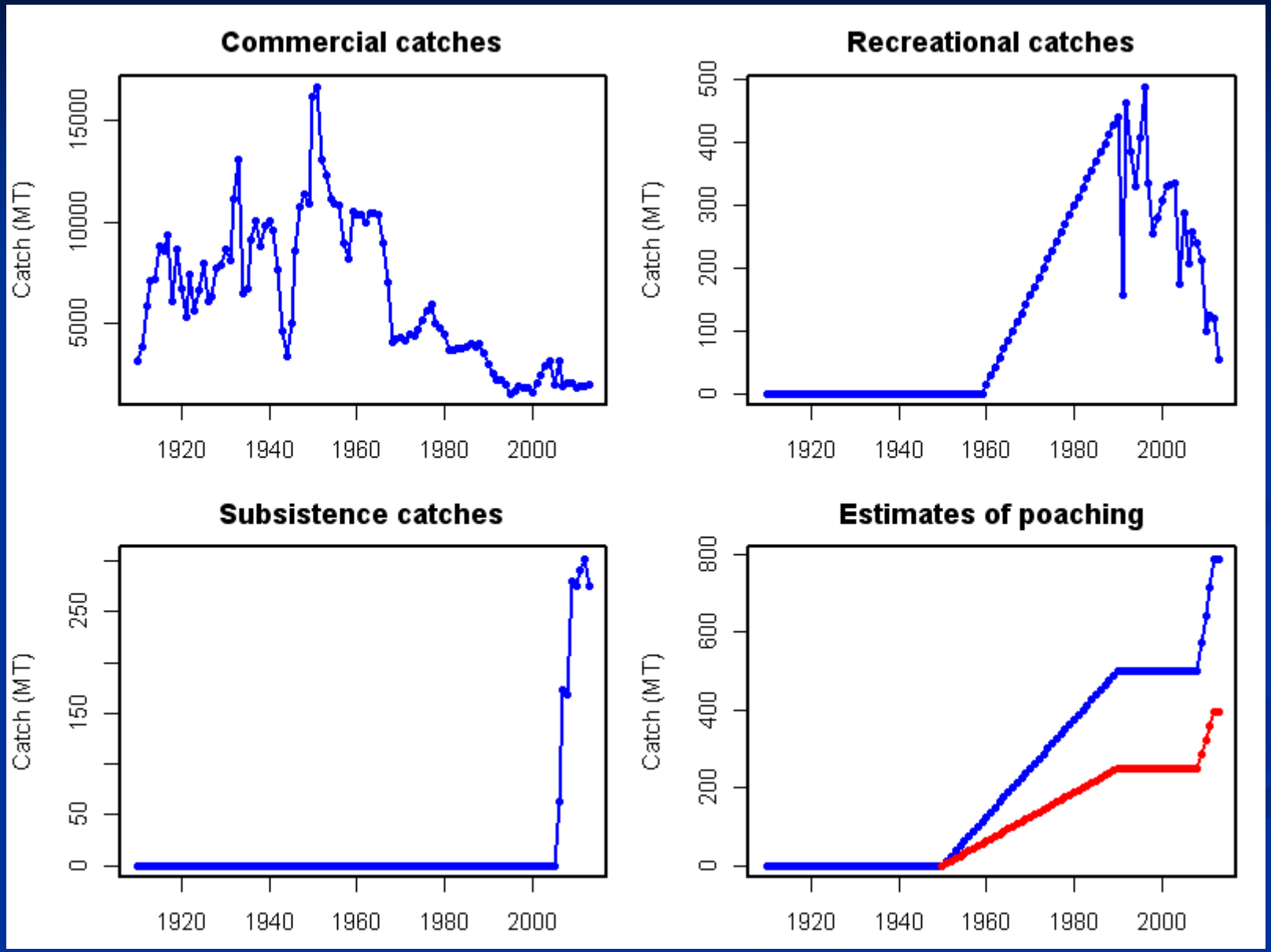


- FIVE STOCKS/SUPER-AREAS:
- Super-Area 1+2
- Super-Area 3+4
- Super-Area 5+6
- Super-Area 7
- Super-Area 8+ (includes east of Hangklip)

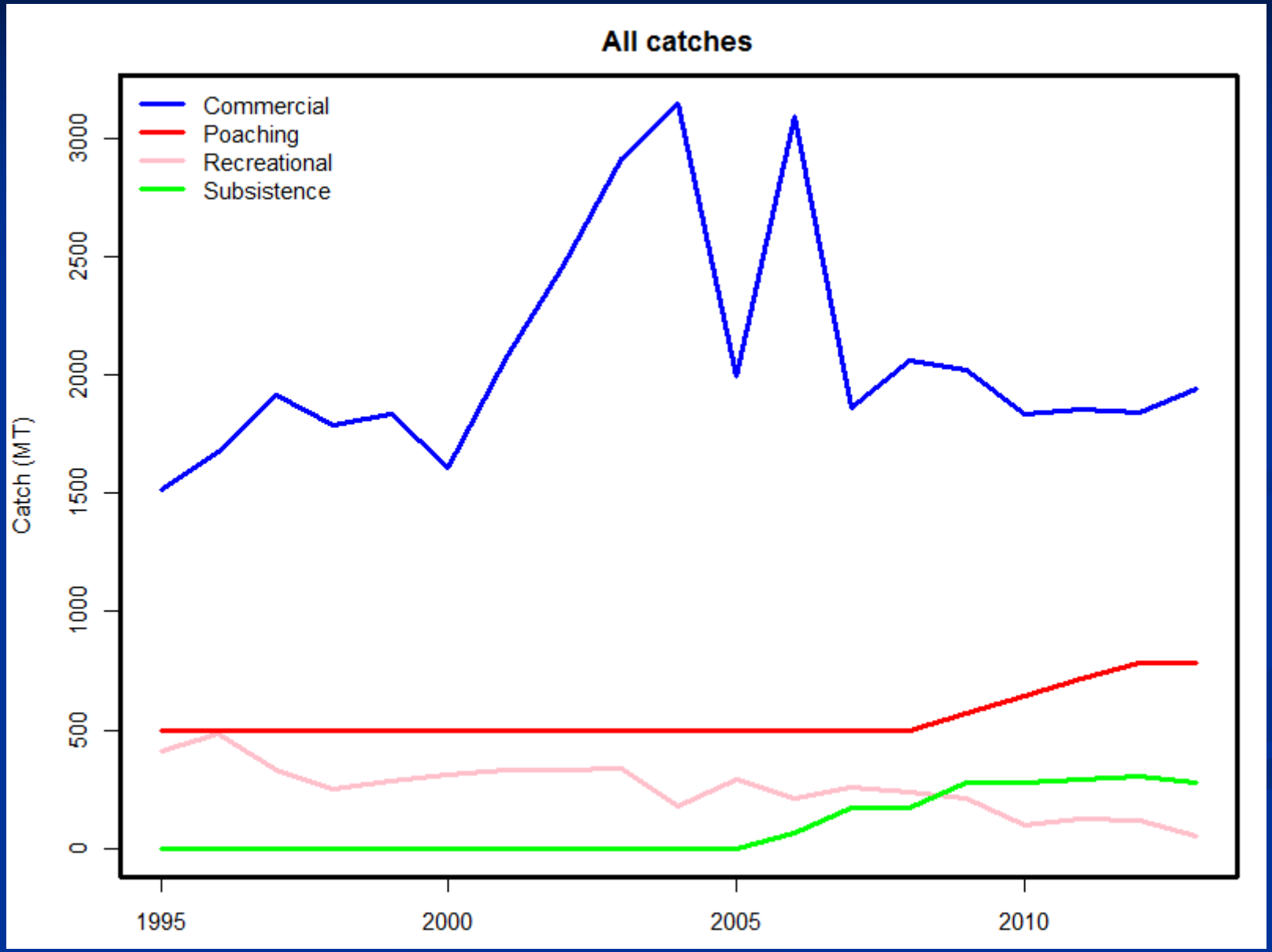
OVERALL BIOMASS TREND



PAST CATCHES FOR FOUR SECTORS



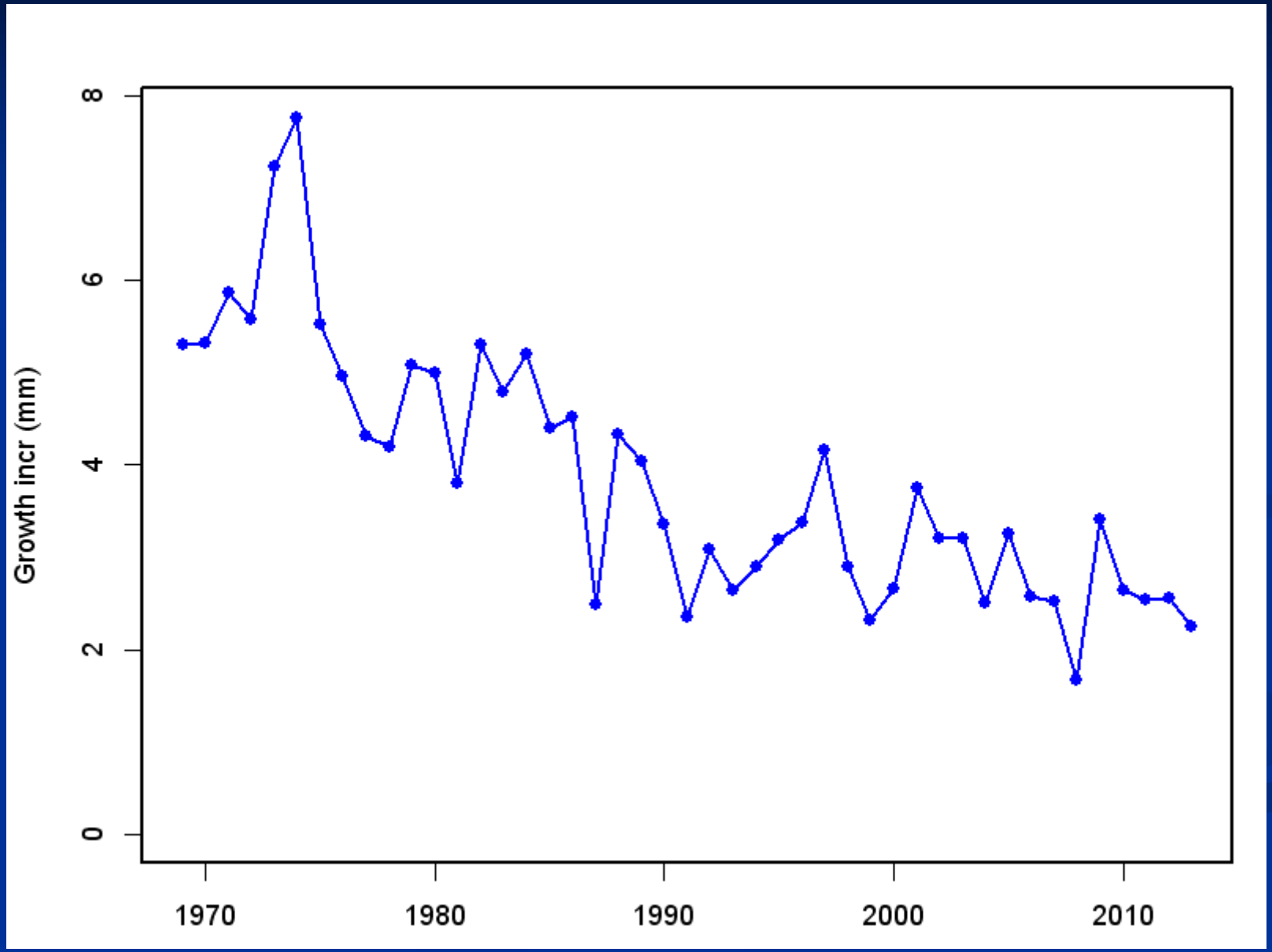
RECENT CATCHES FOR THE SECTORS



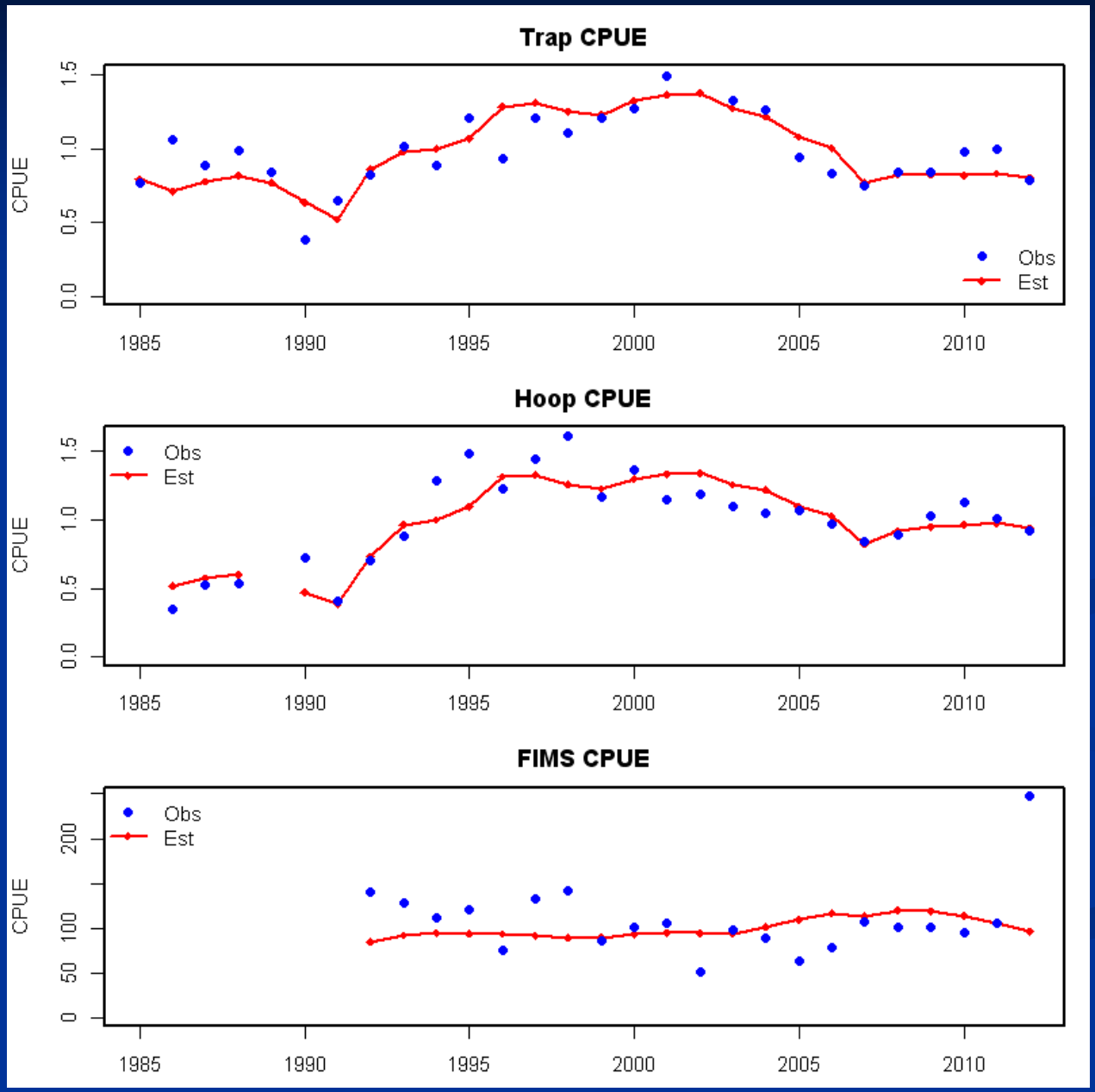
II. ASSESSMENTS

- SEPARATE FOR EACH SUPER-AREA
- LENGTH-BASED
- USE PAST CATCH ESTIMATES
- TAKE ACCOUNT OF VARIATION OVER TIME IN SOMATIC GROWTH
- FIT TO ABUNDANCE INDEX DATA:
  - i) TRAP CPUE
  - ii) HOOP CPUE
  - iii) FIMS (Fishery Independent Monitoring Survey)

SOMATIC GROWTH OF 70mm CL MALE LOBSTER



ABUNDANCE INDEX FITS: SUPER-AREA 8+



III. OMPs AND RESOURCE RECOVERY

OPERATIONAL MANAGEMENT PROCEDURES (OMPs)

PRE-AGREED INPUT DATA AND FORMULAE FOR TACs TESTED BY SIMULATION FOR ACHIEVING MANAGEMENT OBJECTIVES

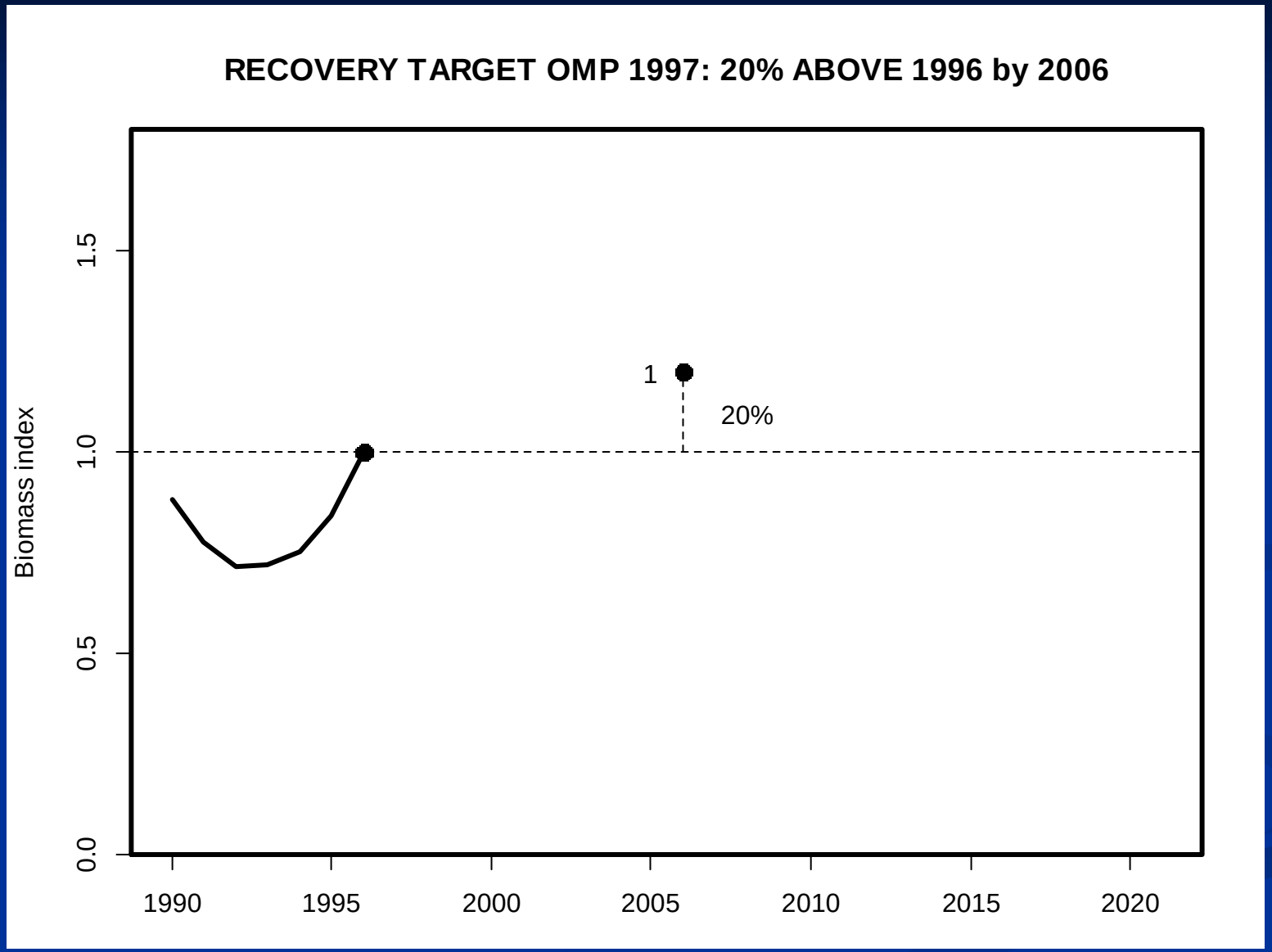
BROAD OBJECTIVE

ACHIEVE RESOURCE RECOVERY WITHOUT SUBSTANTIAL CATCH AND EMPLOYMENT REDUCTION

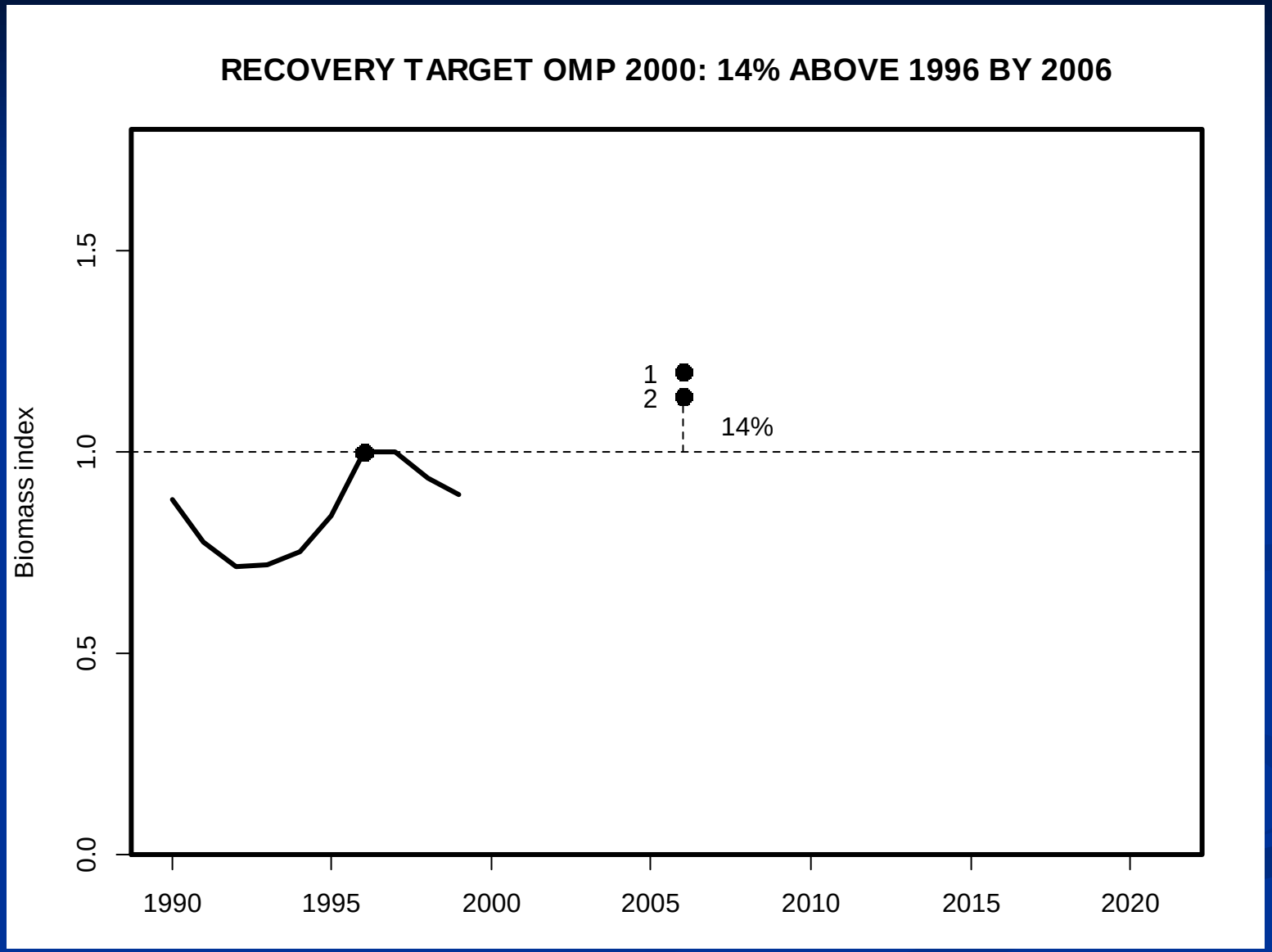
OMPs APPLIED SINCE 1996 TO ACHIEVE THIS

HOW WELL HAVE WE DONE?

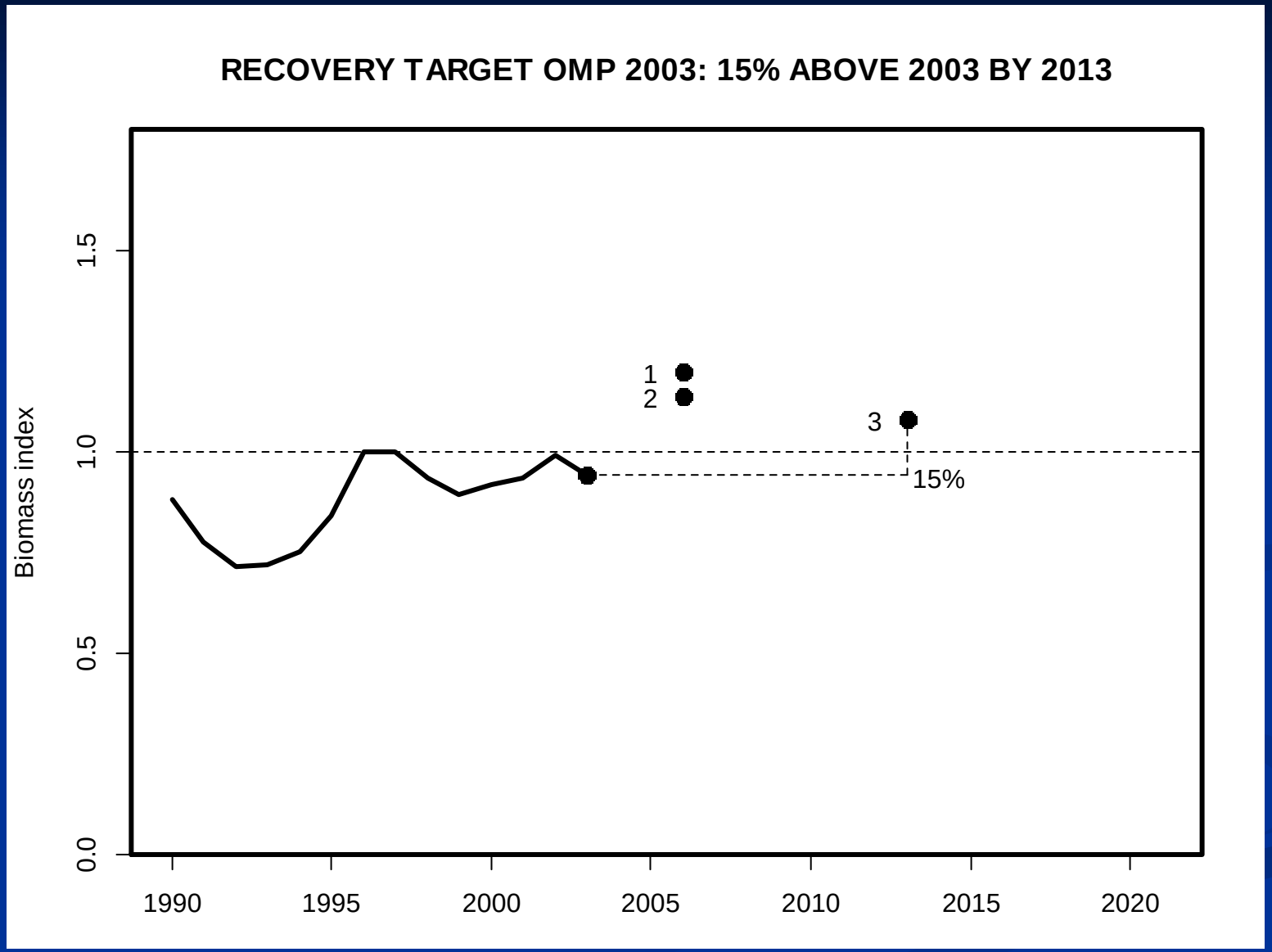
OMP 1997


RECOVERY TARGET OMP 1997: 20% ABOVE 1996 by 2006
Biomass index
0.0
0.5
1.0
1.5
1
20%
1990
1995
2000
2005
2010
2015
2020

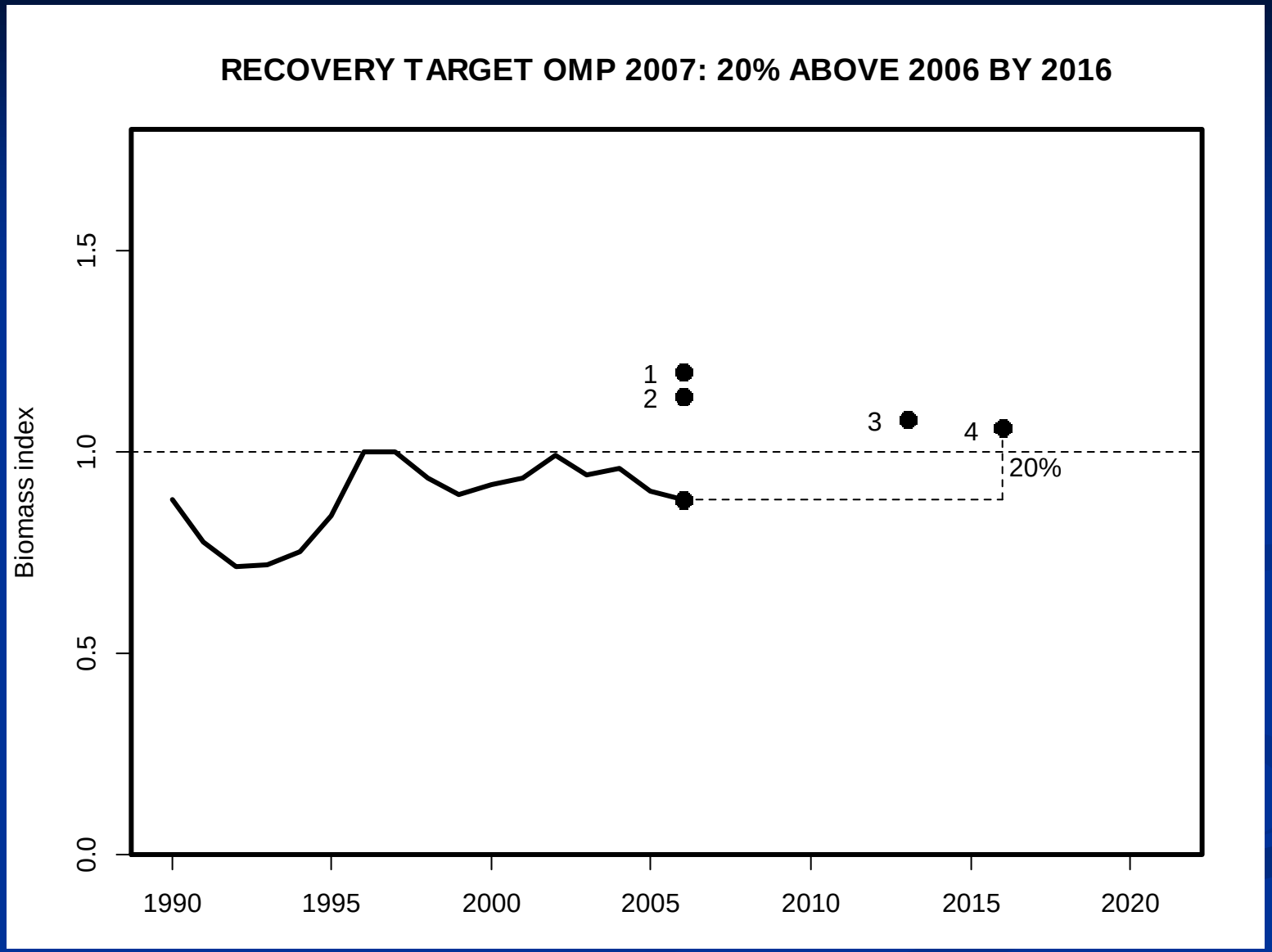
OMP 2000


RECOVERY TARGET OMP 2000: 14% ABOVE 1996 BY 2006
Biomass index
0.0
0.5
1.0
1.5
1
2
14%
1990
1995
2000
2005
2010
2015
2020

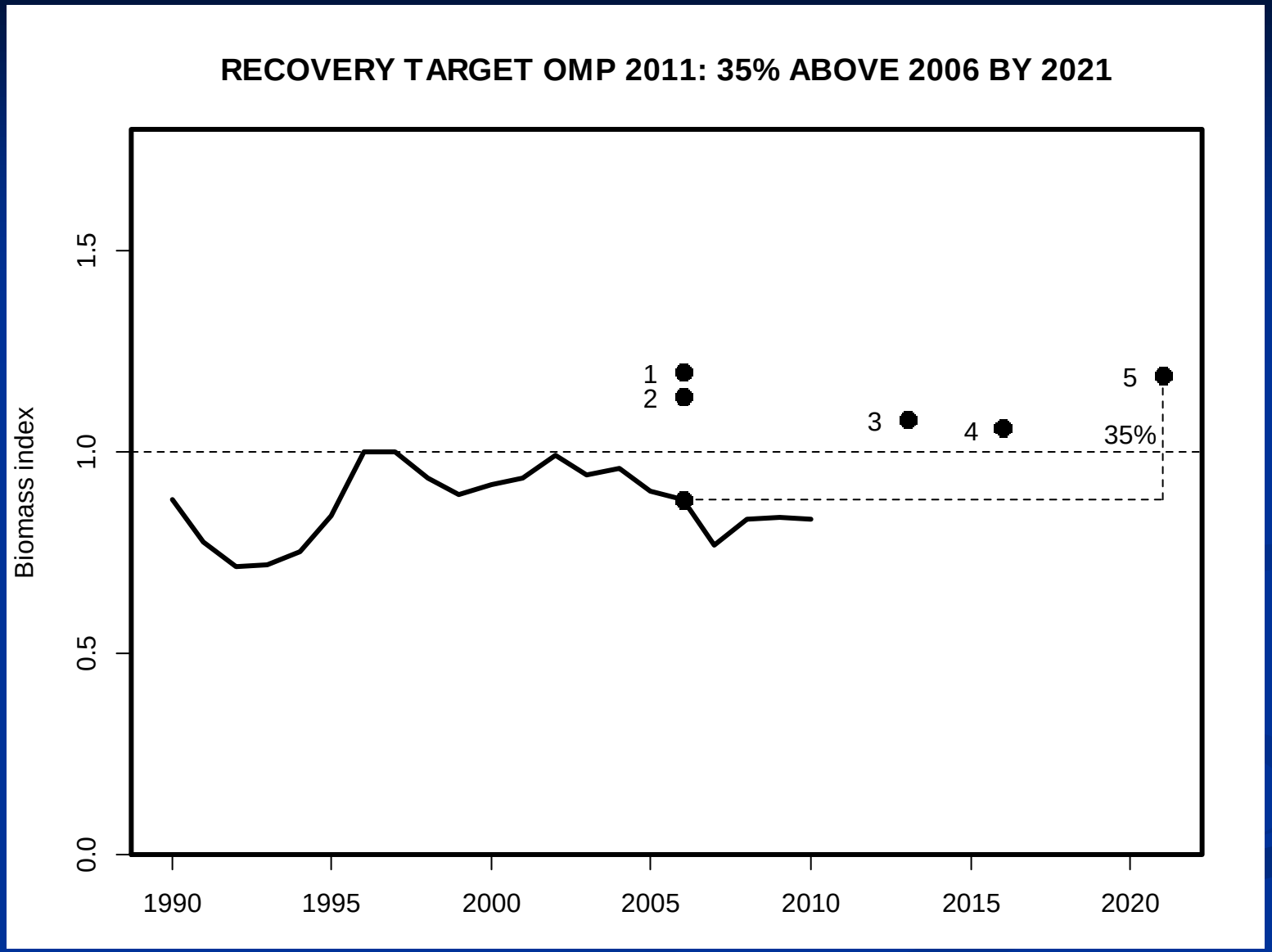
OMP 2003


RECOVERY TARGET OMP 2003: 15% ABOVE 2003 BY 2013
Biomass index
0.0
0.5
1.0
1.5
1990
1995
2000
2005
2010
2015
2020
1
2
3
15%

OMP 2007


RECOVERY TARGET OMP 2007: 20% ABOVE 2006 BY 2016
Biomass index
0.0
0.5
1.0
1.5
1990
1995
2000
2005
2010
2015
2020
1
2
3
4
20%

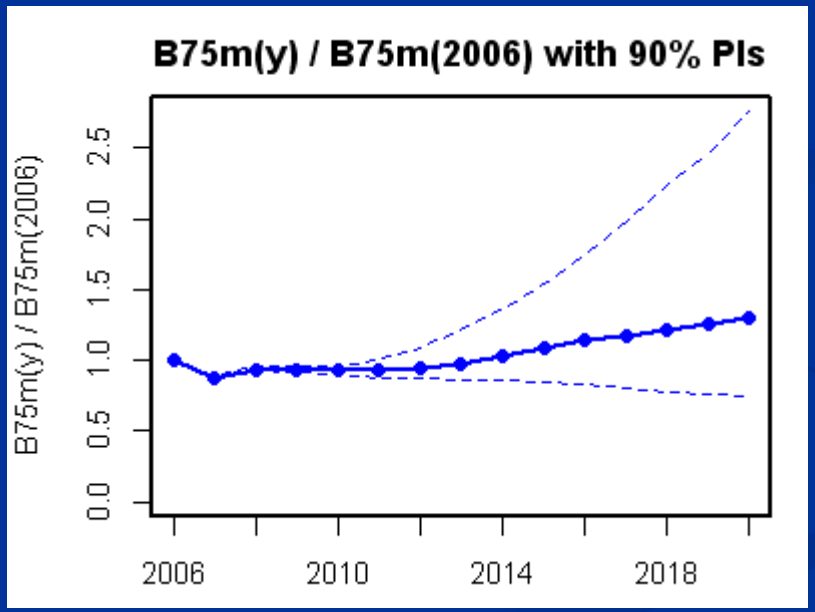
OMP 2011


RECOVERY TARGET OMP 2011: 35% ABOVE 2006 BY 2021
Biomass index
0.0
0.5
1.0
1.5
1990
1995
2000
2005
2010
2015
2020
1
2
3
4
5
35%

WHY THIS POOR SUCCESS?

- INCREASING POACHING?
- PERIODS OF POOR RECRUITMENT
- CONSEQUENT PROJECTION UNCERTAINTY

OMP 2011 (35% increase from 2006 to 2021)



Benefits of feedback control are limited by high variance in resource abundance indices

IV. OBJECTIVES AND TRADE-OFFS

■ BIOLOGICAL

RESOURCE RECOVERY *OMP recovery targets*

EXCEPTIONAL TAC REDUCTIONS BELOW BIOMASS THRESHOLDS

■ ECONOMIC

MAINTAIN/INCREASE CATCHES

TAC STABILITY *Large commercial sector change limit 10% pa*

■ SOCIAL

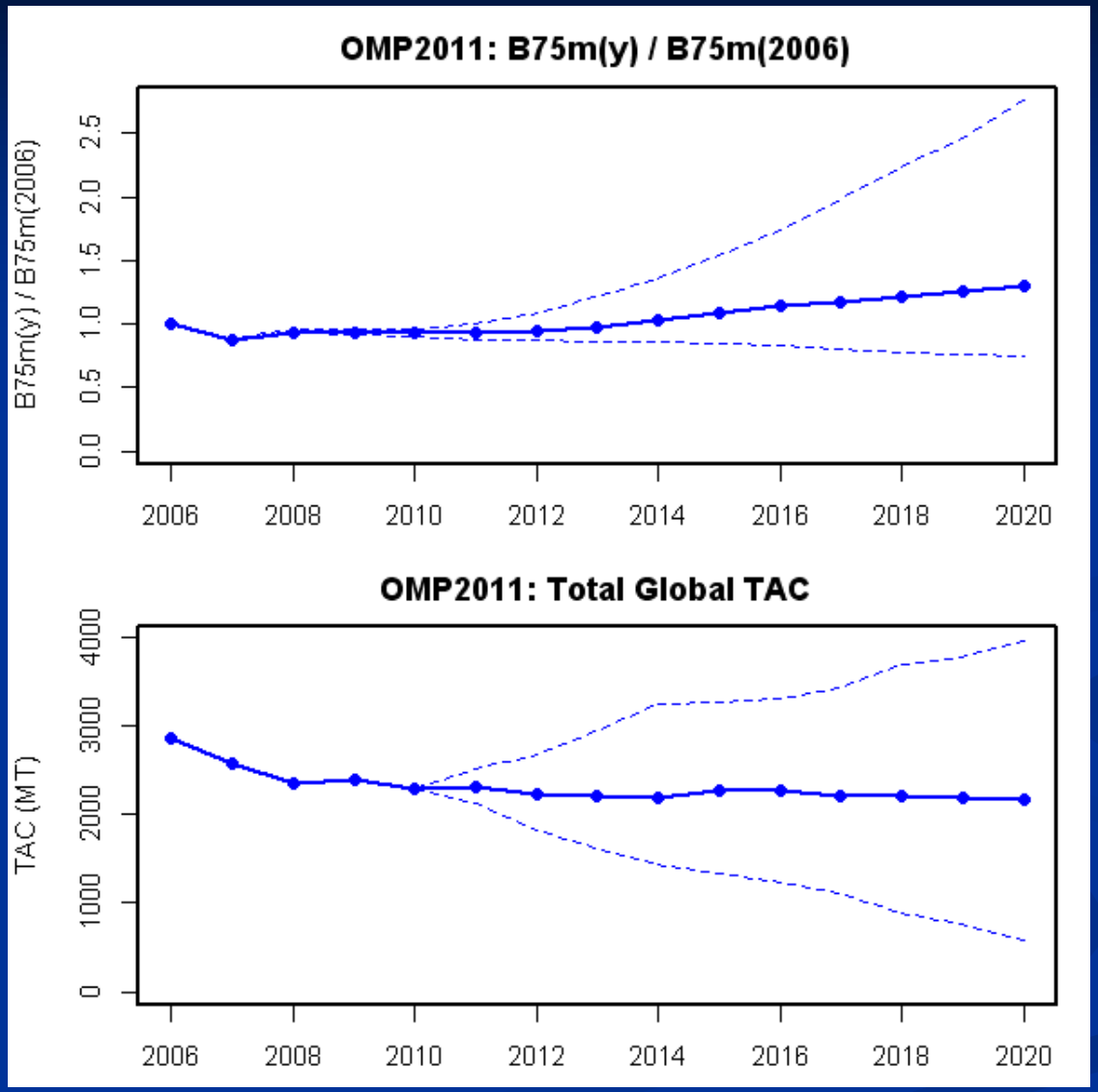
STEADY EMPLOYMENT *Keep effort (catch/biomass) steady*

ADDITIONAL TAC STABILITY FOR SMALLER OPERATORS *Buffer: Changed only if overall TAC changes by more than 20%*

NOT ALL SIMULTANEOUSLY ACHIEVABLE

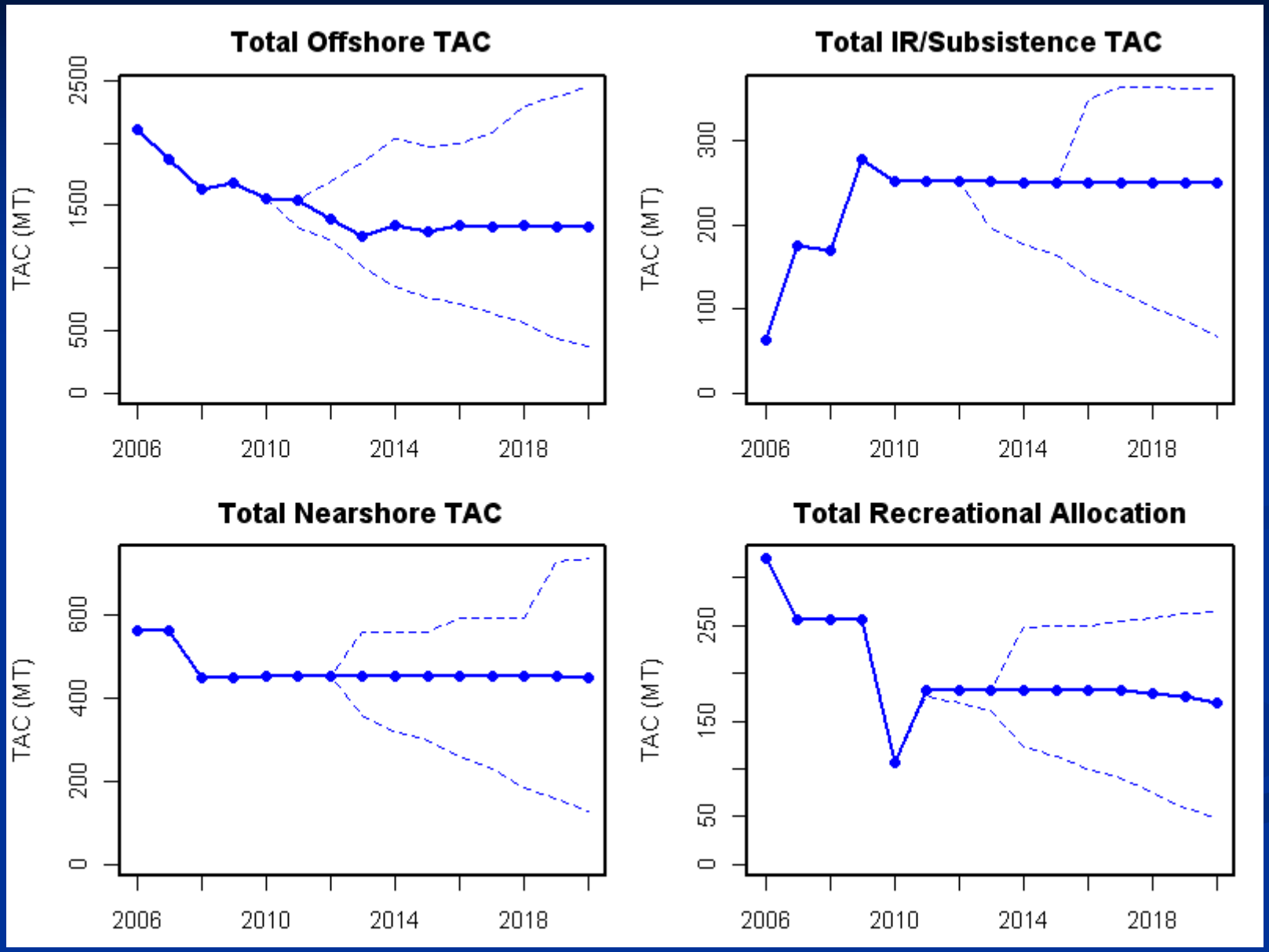
NEED TRADE-OFF SELECTIONS BY DECISION-MAKERS

RECOVERY vs SHORT-TERM TAC



HIGHER RECOVERY TARGETS MEAN LOWER SHORT-TERM TACs

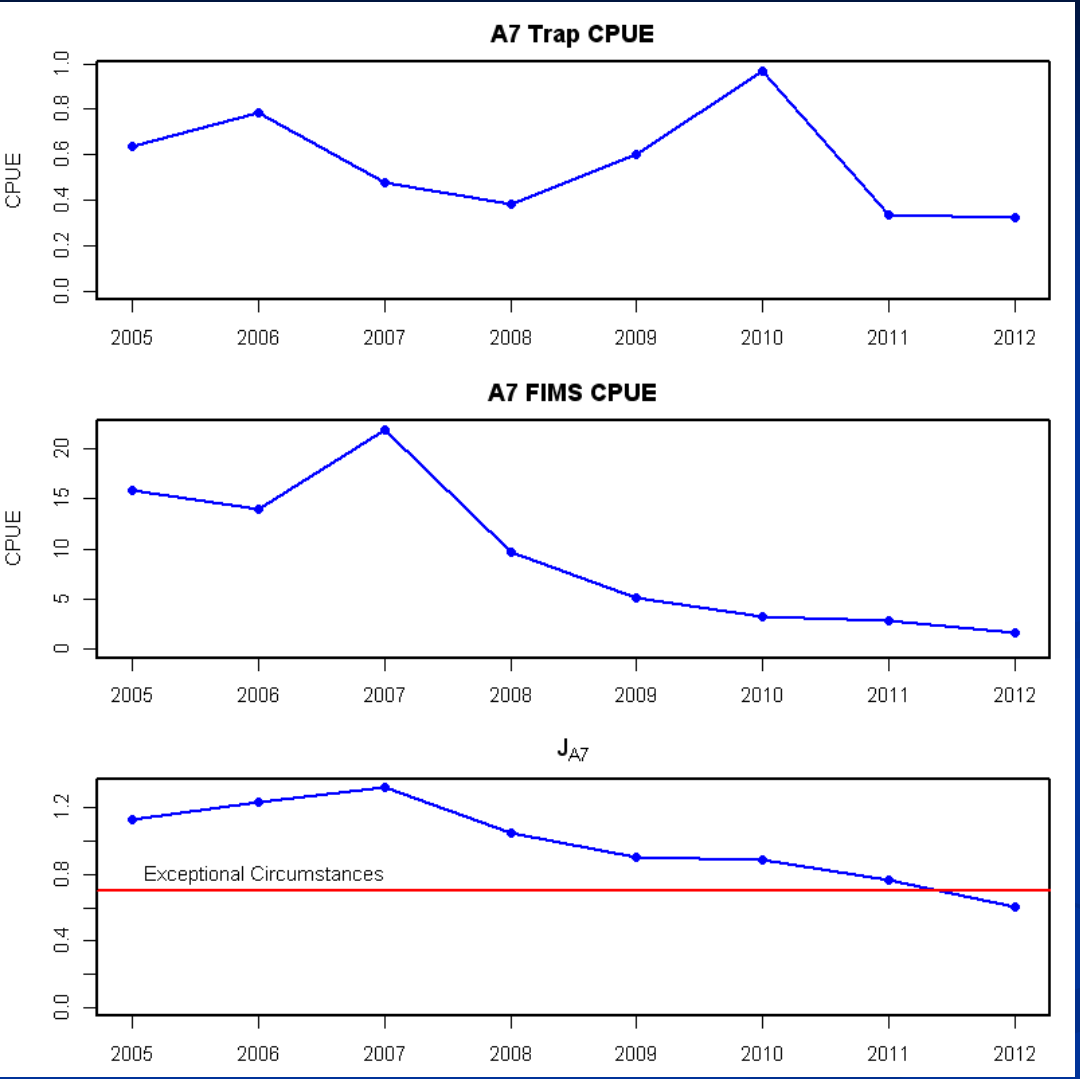
GREATER STABILITY FOR SMALLER OPERATORS



V. RECENT EVENTS

- OMP 2011 involved transfer of overall TAC allocation to subsistence (IR) away from offshore commercial and recreational
- Implemented in 2011 in a way that postponed reduction to offshore commercial
- 2012 application of OMP 2011 required offshore commercial TAC reduction
- Decision-makers overrode OMP to maintain TAC, citing "socio-economic" reasons (though without supporting analyses)
- Public outcry – first time OMP overridden in any fishery post-2000
- Green Party litigates for closure of the fishery
- In early 2013 at Minister's instruction OMP readjusted to maintain 35% recovery target
- Court rejects Green Party application: "it would be totally irresponsible of the court to consider … [closing the fishery] … bearing in mind the huge financial implications and social upheaval that would be caused"

LATER IN 2013: SUPER-AREA 7 (DASSEN)



EXCEPTIONAL CIRCUMSTANCES THRESHOLD BREACHED

OMP PROVISIONS REQUIRE LARGE ADDITIONAL TAC REDUCTION

2013-2014 DEVELOPMENTS

- Additional TAC reduction implemented in 2013 for 2013/14 season; experimental allocation only to Dassen island super-area (A7) to maintain CPUE monitoring index
- Ad-hoc re-allocations of TAC shares, with decreases for offshore commercial and particularly recreational, but net *increase* for subsistence
- Lack of clarity on future sector allocation policy precludes OMP revision to maintain recovery target

  As only the offshore commercial sector is able to change catch distribution amongst super-areas annually, but not other sectors, and since resource recovery by stock requires different TAC changes in different super-areas annually, OMP/recovery evaluations require sector allocation information

- Updated assessments are in progress to inform a 2014/15 TAC recommendation, pending allocation policy clarification to allow OMP evaluations to inform 2015/16+ TAC recommendations

VI. IN CONCLUSION

POSITIVES

- OMPs greatly simplified the annual TAC recommendation process, with difficulties arising only very recently
- They facilitated needed emergency TAC reduction in A7
- In broad terms, the extent of TAC changes was constrained
- They achieved at least some greater focus on a longer-term view

NEGATIVES

- Resource recovery has not been achieved as intended
- Poaching has been increasing, and to an extent that is unclear
- With TACs likely needing to decrease to achieve recovery targets, and recent pressures especially for increased subsistence sector allocations, interactive discussions on longer-term policy/trade-offs became held hostage to inter-sector competition for TAC share sizes
- Co-incident with this there have been calls for more flexibility in OMPs. However, given recent experience, concerns must arise that in reality these are in reality surrogates for reluctance to decrease TACs when necessary, inconsistent with stated acceptance of recovery targets.

Thank you for your attention

and to Will Robinson for assistance in preparation of the slides