

MANAGING THE TRANSITION DISTRIBUTIONAL ISSUES AND STOCK REBUILDING

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Experiment Station



Outline

Introduction

Three case studies

Insights

Introduction

Rebuilding stocks focuses on the biological endpoint.

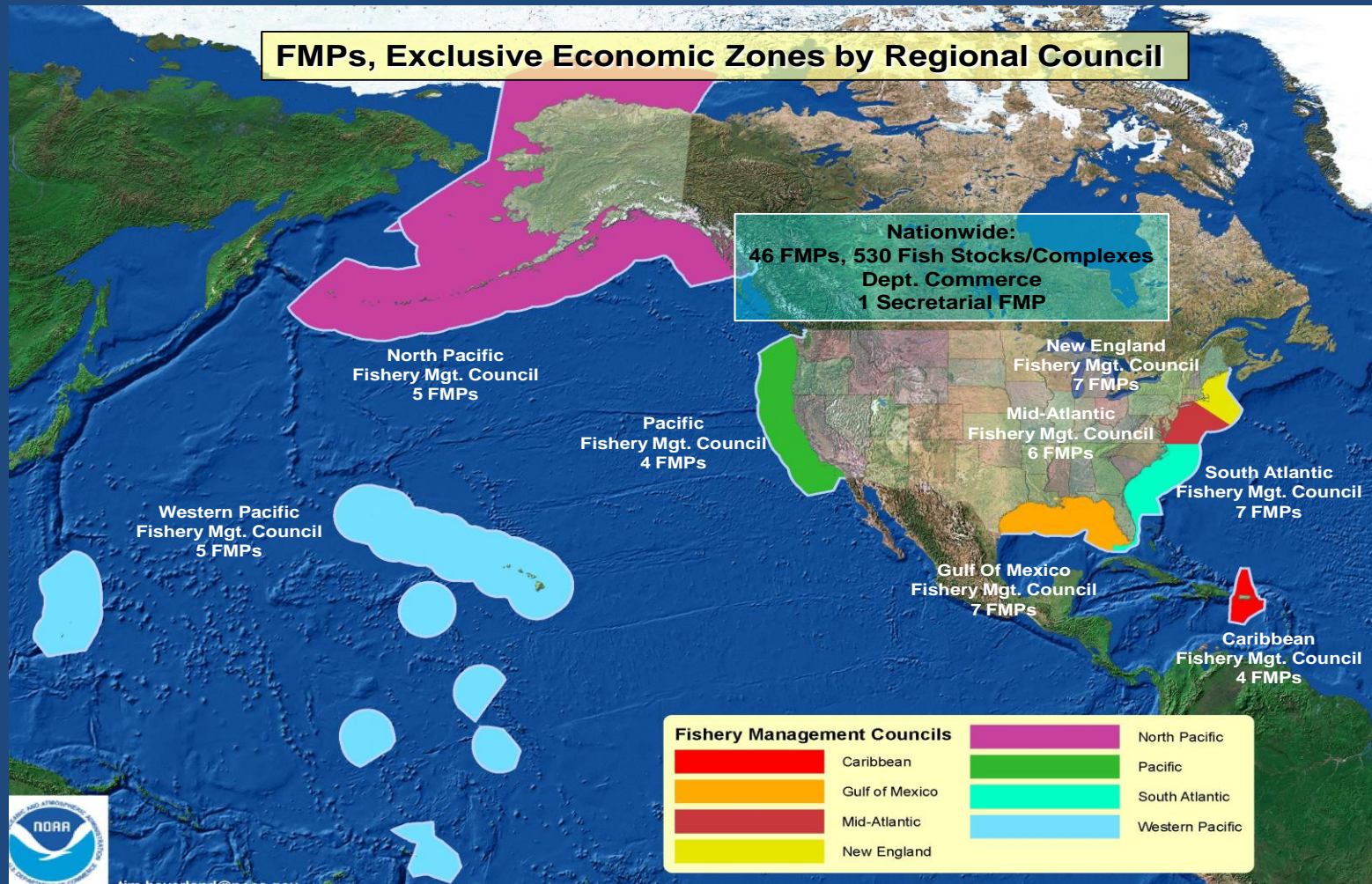
The economic benefits of the end point are clear.

The issue is the transition from “overfished” to “rebuilt.”

Distributional issues are critical to the success or failure

- shape rebuilding strategies
- costs and benefits across sectors, space and time

The Influence of Distribution on Rebuilding Three Case Studies



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Three Case Studies of Rebuilding

Rebuilding history

Distributional issues identified

Associated fishery events

Gulf of Maine Cod (*Gadus morhu*)



Gulf of Maine Cod New England Fishery Management Council

Rebuilding History

- 1992: A4 rebuilding target
- 1994: A5 DAS and moratorium
- 1996: A7 more controls; no time schedule
- 1998: A9 rebuilding time schedule. Litigation.
- 2004: A13 10 yr rebuilding plan
- 2006: FW 42 effort reductions. Litigation.
- 2010: A16 effort reductions

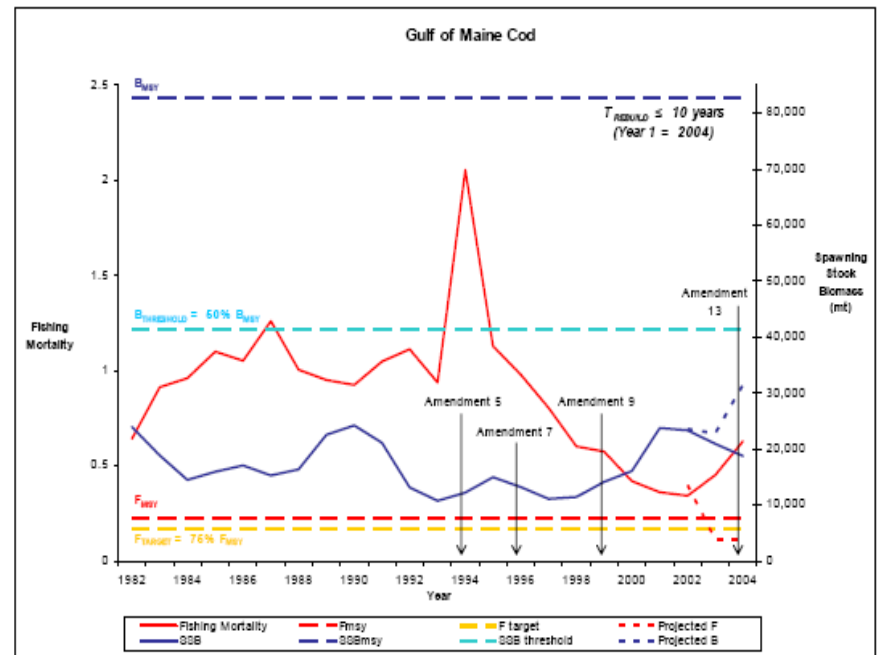


Figure 2. Historical trends and projections of biomass and fishing mortality rates for the Gulf of Maine cod stock, with reference to overfishing definitions and rebuilding targets identified in Amendment 13. Biological overfishing occurs when $F > F_{REBUILD}$. Note that the regulations only recognize overfishing to be occurring when $F > F_{MSY}$. Biomass is overfished when $B < B_{THRESHOLD}$ (NEFMC 2003b; NEFSC 2005b).

Gulf of Maine Cod

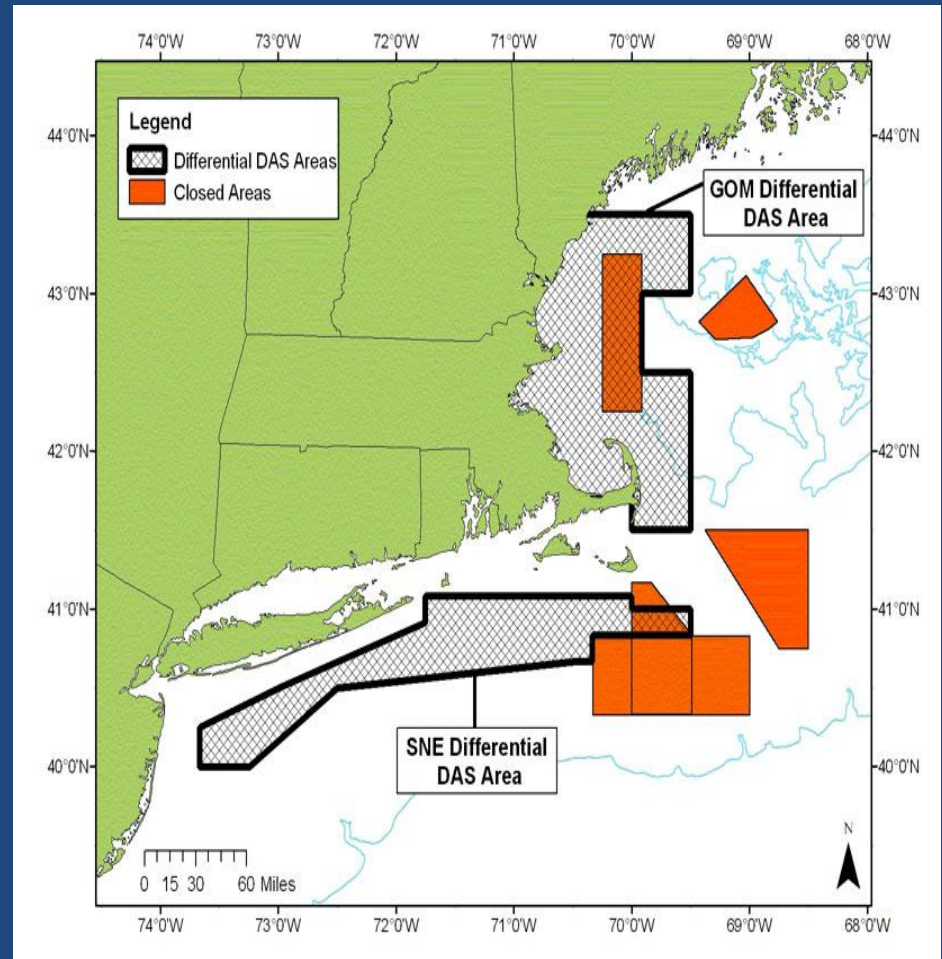
New England Fishery Management Council

Status

yr 5/10 yr plan

Overfishing: yes

Overfished: yes



Northeast Regional Office, NMFS

Gulf of Maine Cod

New England Fishery Management Council

Rebuilding has been controversial and contested.

Distributional Issues

- blame shifting of OF cause
- inadequacy of science
- effort displacement
- economic impacts of effort reductions
- inability to enforce effort reductions

Forms of contestation

- public comment
- litigation
- congressional intervention

Gulf of Maine Cod

New England Fishery Management Council

Associated Fishery Events

1994	permit moratorium
1994/1996	vessel buyback
2004	sector allocations authorized
2009	federal assistance for transition to sector allocation and catch shares. Cooperative research, data, monitoring systems
2010	sector allocations

Canary Rockfish (*Sebastes pinniger*)



Washington Department of Fish and Wildlife

Canary Rockfish

Pacific Fishery Management Council

Rebuilding History

1999: declared OF

2000: OY reduced 70%, limited to bycatch;

2002: RCAs, gear restrictions, OY reductions

2003: A16-1; 16-2 rebuilding framework and parameters

2004: A16-3 rebuilding plan

2005: litigation over TF

2006: A16-4 new rebuilding schedule

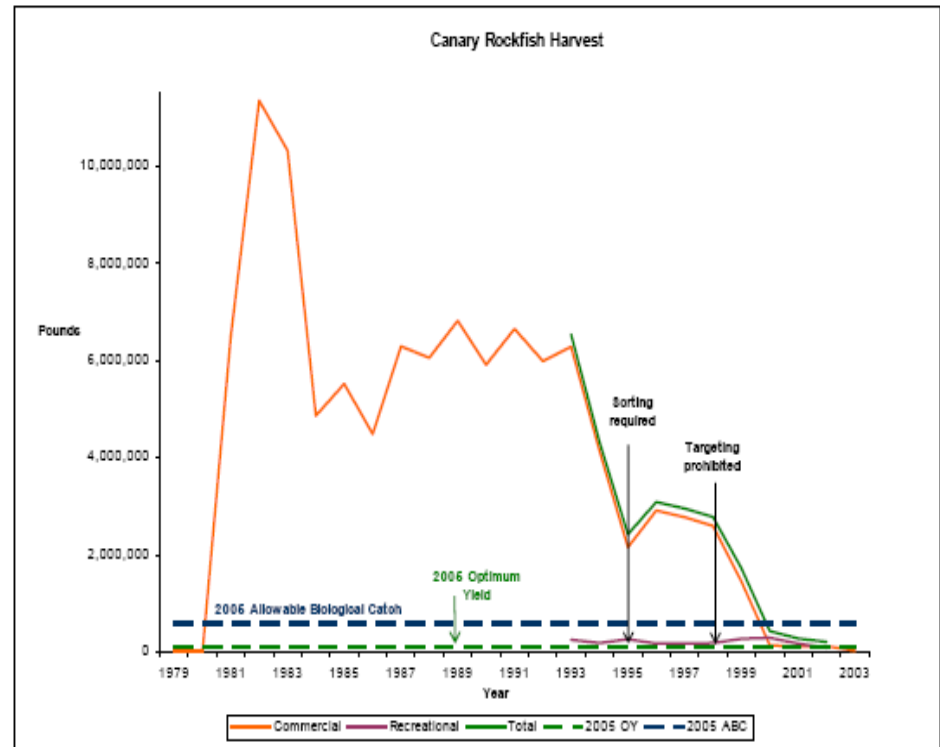


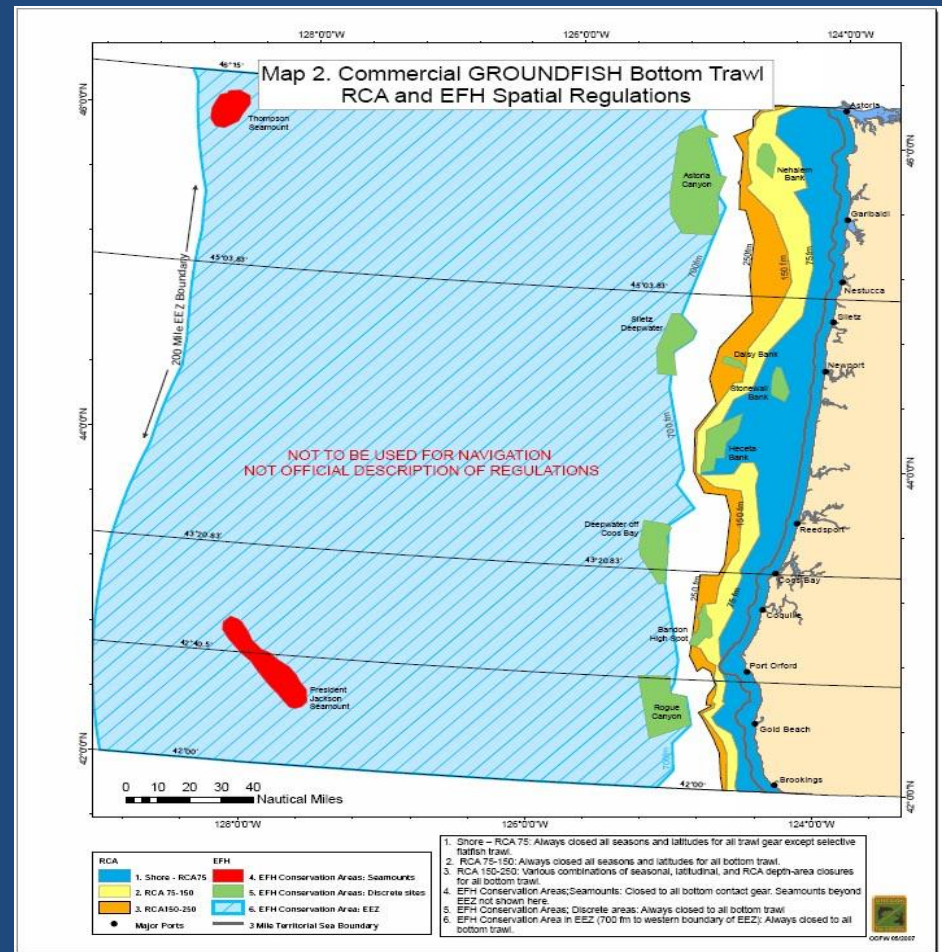
Figure 81. Recent commercial, recreational and total harvest of the canary rockfish, with reference to the current optimum yield and allowable biological catch (NOAA Fisheries 2005a; NOAA Fisheries 2005b; PFMC 2005a).

Canary Rockfish Pacific Fishery Management Council

Status

yr 8/63 yr plan

Overfishing: no
Overfished: no



Canary Rockfish

Pacific Fishery Management Council

Rebuilding has been complicated by the mixed stock fishery.

Distributional Issues

- information adequacy for rebuilding plan
- community impacts
- treaty rights
- blame shifting
- mixed stock exception: yes/no
- precaution
- bycatch

Canary Rockfish Pacific Fishery Management Council

Associated Fishery Events

2000	trawl vessel buyback
2008	trawl ITQ; whiting coops
2009	proposed license limitation in OA fishery

Bering Sea Snow Crab (*Chionoecetes opilio*)



NOAA



Forrest Bowers

Forrest Bowers
North Pacific Fishery Management Council

Snow Crab

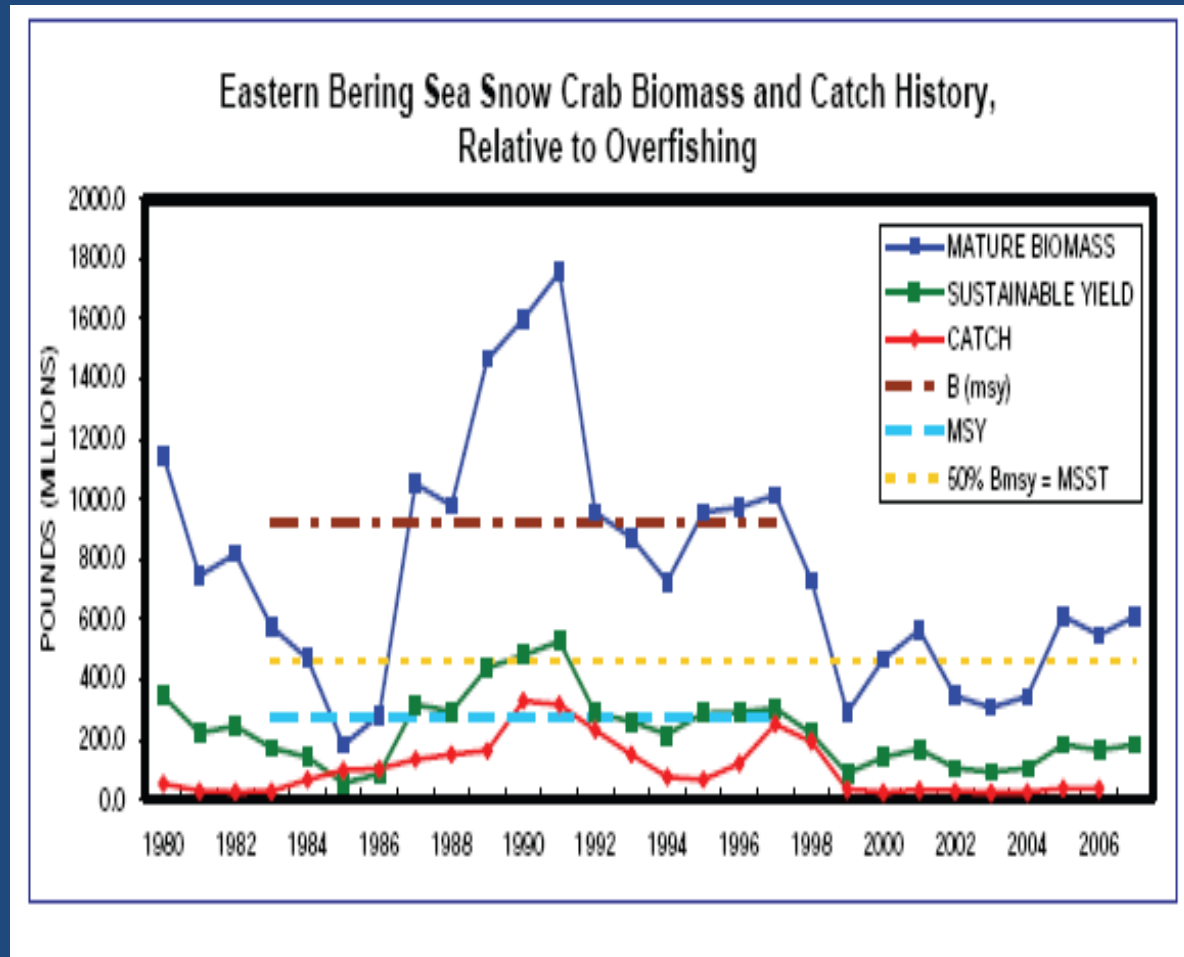
North Pacific Fishery Management Council

Rebuilding History

1999: declared OF

2000: rebuilding plan A14

2007: A24 revised OF definitions. Tier assessment.



Snow Crab

North Pacific Fishery Management Council

Status

yr 9/10 yr plan

Overfishing: no

Overfished: no



F/V Kiska Sea
National Marine Fisheries Service

Snow Crab

North Pacific Fishery Management Council

Rebuilding was conducted through established management approaches

Distributional Issues

- effective bycatch reduction
- necessity of rebuilding

Snow Crab

North Pacific Fishery Management Council

Associated Fishery Events

1998	crab added to CDQ program
2000	license limitation
2000	capacity buyback
2005	crab rationalization program

Insights: Case Studies

A Spectrum of Effectiveness

Distributional effects

addressed

not addressed

Stakeholder resistance

minimum

maximum

BS snow crab

Pac. canary rockfish

GOM cod

Insights: Management Context Incentives

Expectations about fishery tenure

- property rights shift stakeholder perspective to long-term asset value

Complexity of management

- increasing complexity limits flexibility

Authority of control rules

- importance of nondiscretionary legislation

Insights: Derivative Distributional Effects

The need to rebuild may lead to strategies to address larger social and economic objectives

- capacity reduction
- rationalization

Insights: Mitigating Distributional Effects

Tenure security

Management flexibility

Stakeholder involvement

Clear justification of time path

Clear decision rules

Effective enforcement



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