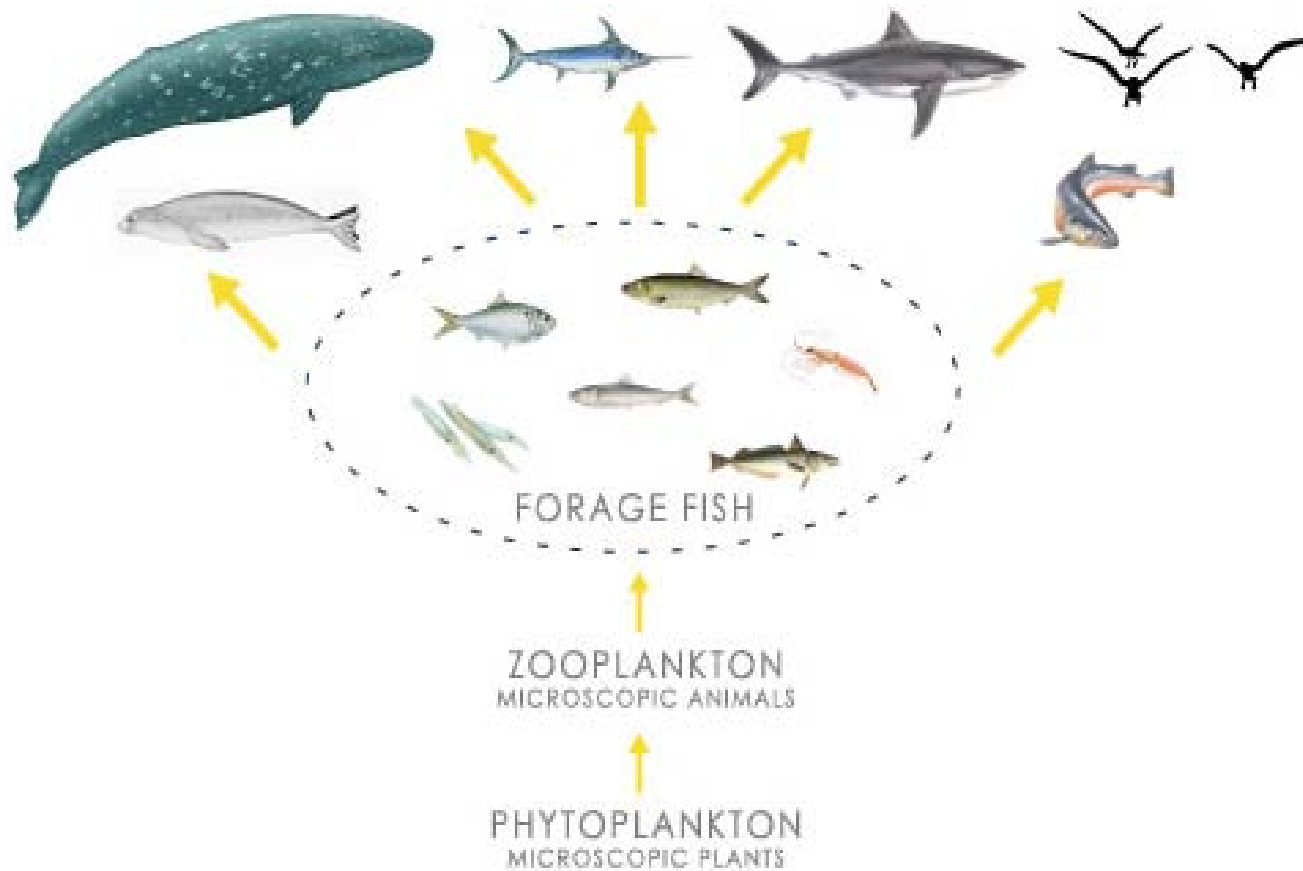


The Pacific EFMP: A Leadership Opportunity for Ecosystem-Based Management

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FORAGE FISH: THE VITAL LINK OF THE FOOD WEB



“Freeze the Menu”

Prevent new fisheries from developing on key forage species



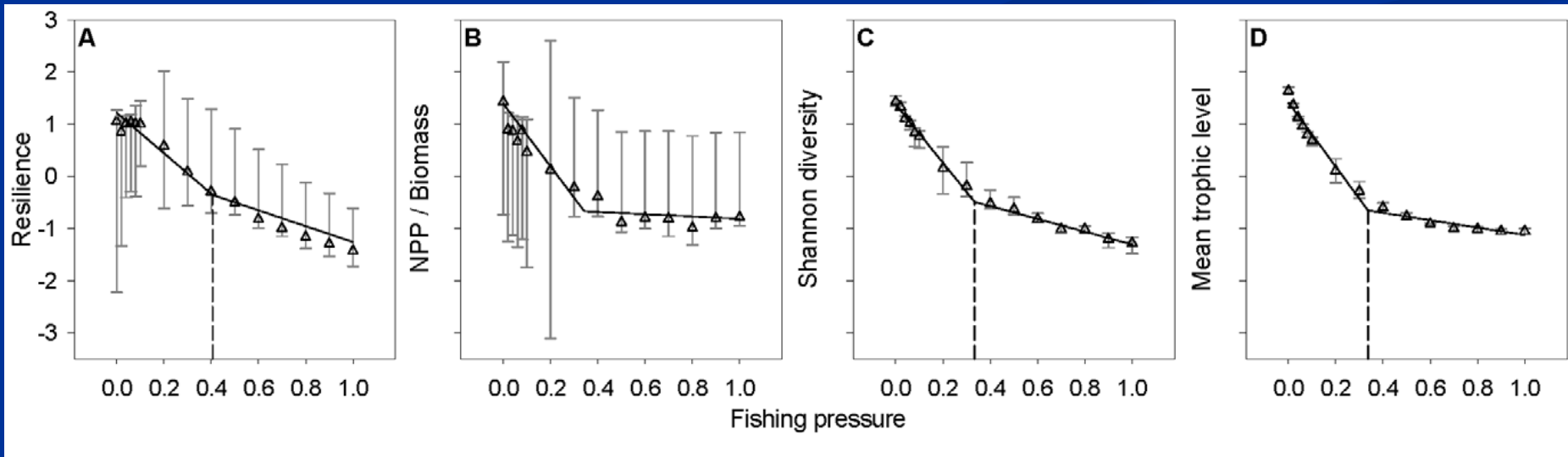
Precautionary Actions by Pacific Fishery Management Council:

- Prohibited Krill Fishing off entire US West Coast
- Prevented expansion of harvest on Shortbelly Rockfish
 - Key forage for Chinook salmon, seabirds, mammals, etc.



Ecosystem Effects of Fishing

- Effects on predators (fish, seabirds, mammals)
- Food web indicators (e.g., Atlantis, Ecopath w/ Ecosim)



Optimum Yield = Ecologically Sustainable Yield

- How do we maintain the resilience of the food web?
- How much do predators need?
- Role of fishing vs. environmental effects
- Maintain total overall forage base/guilds
- Protect key habitats (spawning grounds)
- Separating fishing effects from environmental effects



EFMP: Purpose and Need

- Tools for ecological factors into OY (ACLs)
- Establish new management authority to meet Ecosystem objectives (Needs to be true FMP)
- Establish PFMC as a leader in Ecosystem-based Management
- Programmatic review of Council management

EFMP should include:

- Framework for ecologically sustainable yield (OY)
- Identify key forage species in California Current
- Analyze alternative harvest strategies on ecosystem
- Programmatic review of cumulative fishing impacts
- Establish regulatory authority
 - Manage new ecosystem component species
 - Time/area closures for ecosystem protection
- Periodic reports on “State of California Current LME”

Thank you

