



BUILDING EFFECTIVE FISHERY ECOSYSTEM PLANS

A REPORT FROM THE LENFEST FISHERY
ECOSYSTEM TASK FORCE

@lenfestocean



Dr. Lee Anderson
University of Delaware



Dr. Phillip Levin
University of Washington
(formerly NOAA Northwest
Fisheries Science Center)



Timothy Essington



Phillip Levin



Alida Bundy



Felicia Coleman



Lee Anderson



Christian Möllmann



Olaf Jensen



James Sanchirico



Edward Houde



Leah Gerber



Courtney Carothers



Tony Smith



Jonathan Grabowski



Kenneth Rose



Kristin Marshall



Laura Koehn

Project Management Team



Dr. Kristin Marshall

Postdoctoral research associate
University of Washington



Laura Koehn

PhD candidate
University of Washington

The needs for an ecosystem guidance document within the Council process are:

1. Improve management decisions and the administrative process by incorporating biophysical and socio-economic information on ecosystem climate conditions, climate change, habitat conditions and ecosystem interactions into the assessment and management process.
2. Maintain an adequate forage base in the Mid-Atlantic and to consider, to a greater extent, the dynamics of ecosystems and the marine food web in fishery management decisions.
3. Develop new and inform existing fishery management measures that take into account the ecosystem effects of those measures on ecosystem species, habitat, and fishing communities.
4. Coordinate information across FMPs for decision-making within the Council process and for consultations with other regional, national, or international entities on actions affecting ecosystems or FMP species.
5. Identify and prioritize research needs and provide recommendations to address gaps in ecosystem knowledge, particularly with respect to the cumulative effects of fisheries management on marine ecosystems and fishing communities.

7.4.3 Recommendations and Guidelines

To incorporate species, fleet, habitat, and climate interactions into management, the Council should adopt a **structured framework** to first prioritize interactions, second specify key questions regarding high priority interactions, and third tailor appropriate analyses to address them. The primary tools for the initial steps in the framework are risk assessment and MSE. Finally, implemented management would be evaluated to ensure that objectives are being met, or to adjust measures as conditions change.

Main Findings and Recommendations

Operationalizing Ecosystem-Based Management requires a structured planning process that leads to action

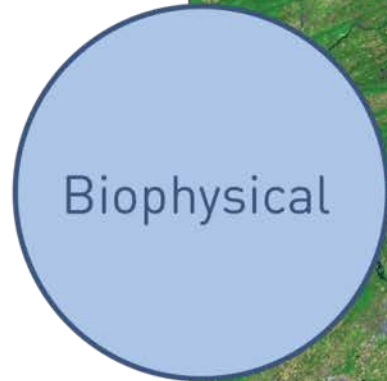
Fishery Ecosystem Plans use existing tools

Fishery Ecosystem Plans integrate social, economic, and ecological goals

Fishery Ecosystem Plans promote transparency in decision making and trade-offs

Ecosystem-Based Fisheries Management

- Climate
- Food Webs
- Habitats
- Vulnerable species



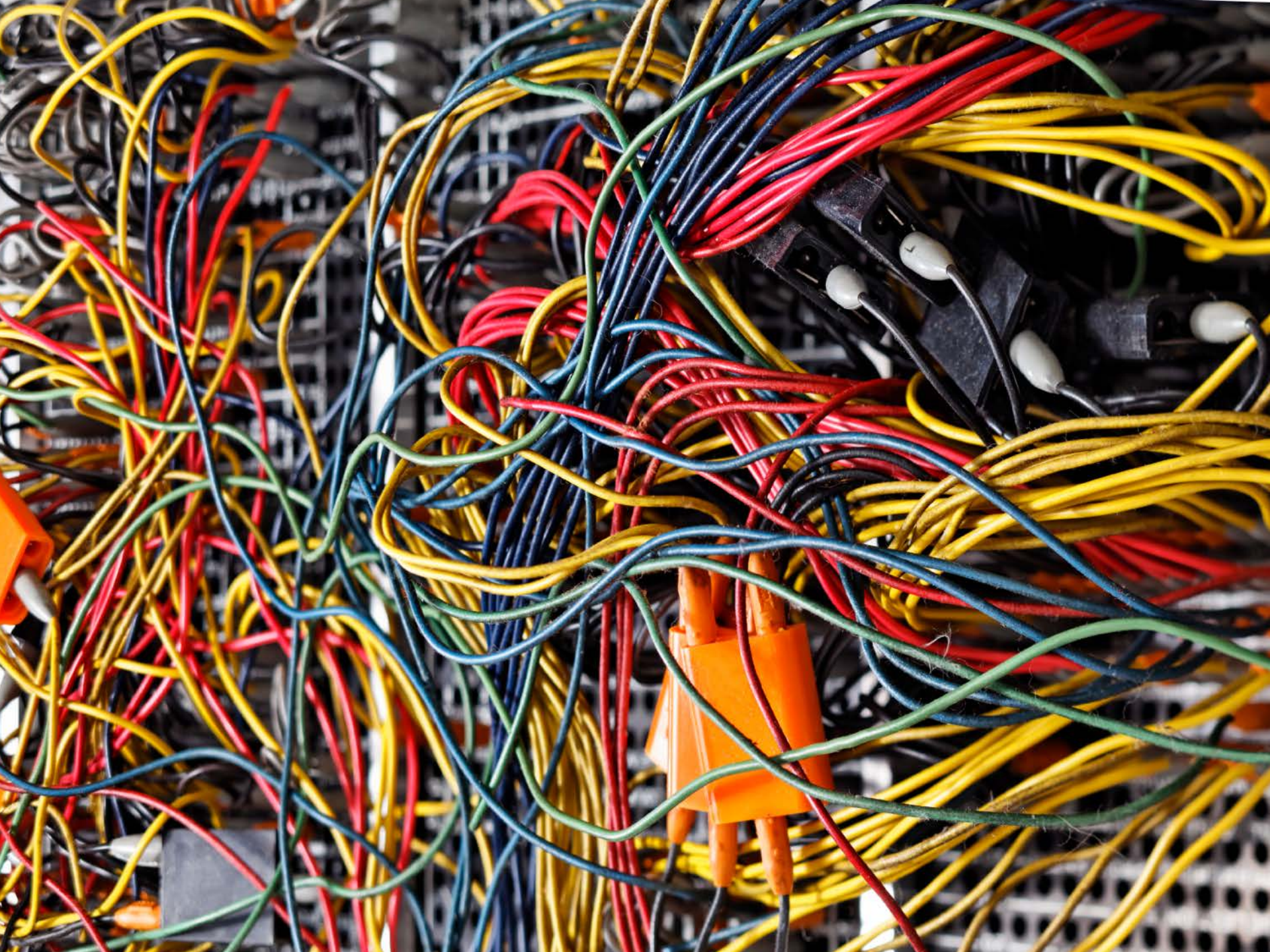
Governance

- MSFMCA
- ESA
- Council/FMP
- Tribal
- International
- States

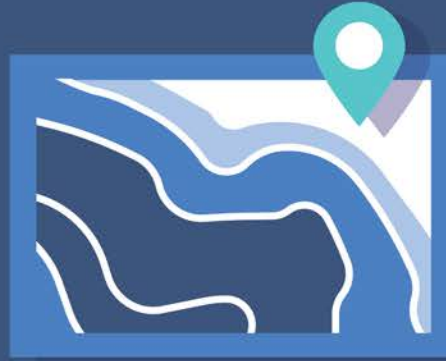
- Fisheries
- Communities
- Processors
- Cultural values

Humans









1 WHERE ARE WE NOW?

- Develop a conceptual model
- Select and calculate indicators
- Inventory threats



2 WHERE ARE WE GOING?

- Articulate a strategic vision
- Develop strategic objectives
- Analyze risks to objectives

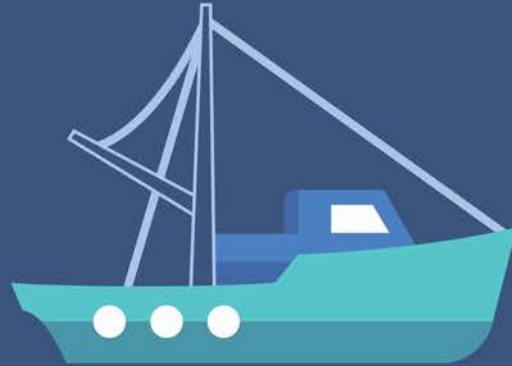
- Prioritize strategic objectives
- Develop operational objectives



3 HOW DO WE GET THERE?

- Develop performance measures
- Identify potential management strategies

- Evaluate alternative management actions
- Select management strategy



4 IMPLEMENT THE PLAN

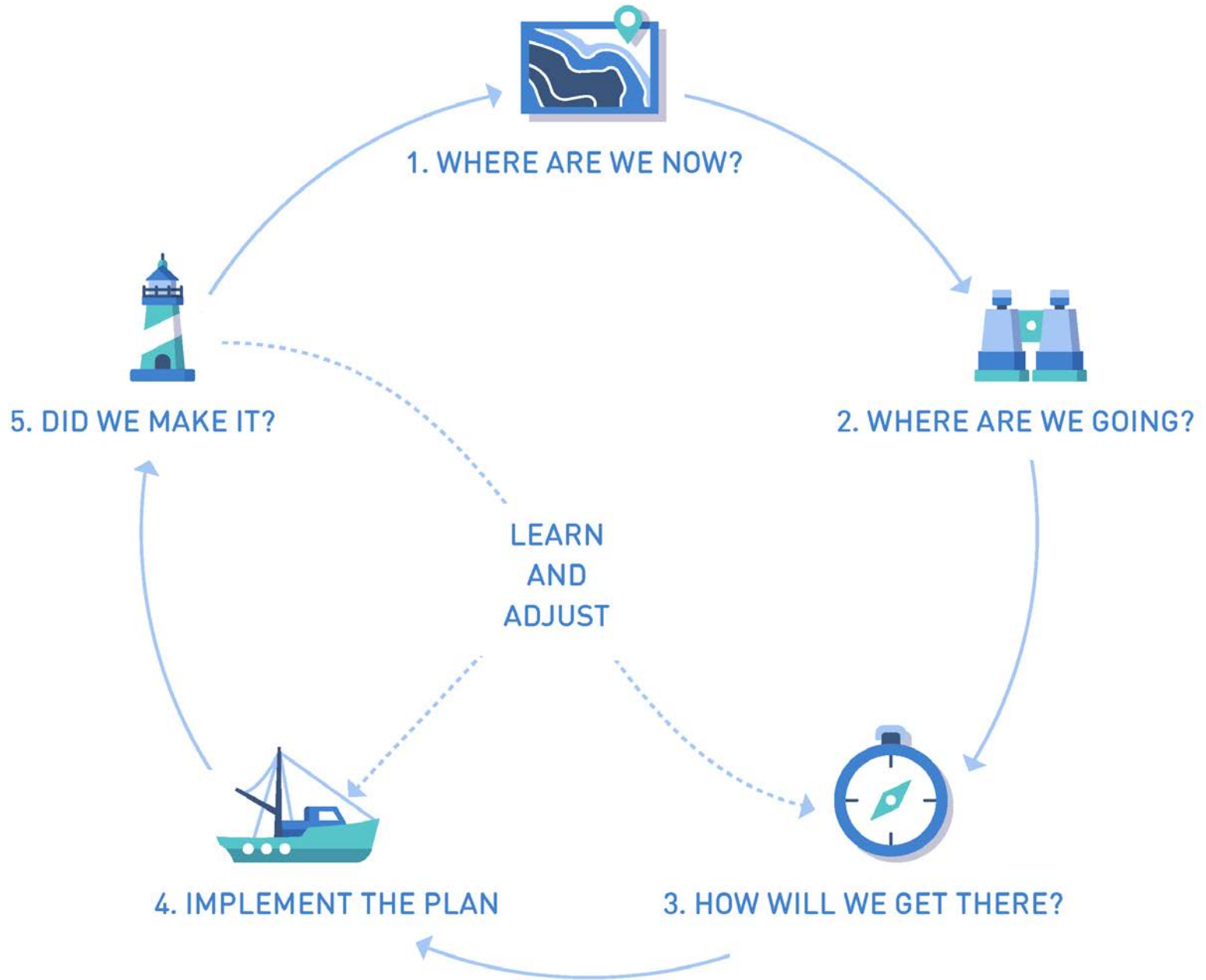
- Work plan
- Resources

- Outputs
- Timeline



5 DID WE MAKE IT

- Compare monitoring data with predictions



Next Generation FEPs Overcome Challenges

CHALLENGE

FEP Solution

Complexity

Indicators
Prioritization

Uncertainty

Structured process
Adaptive management

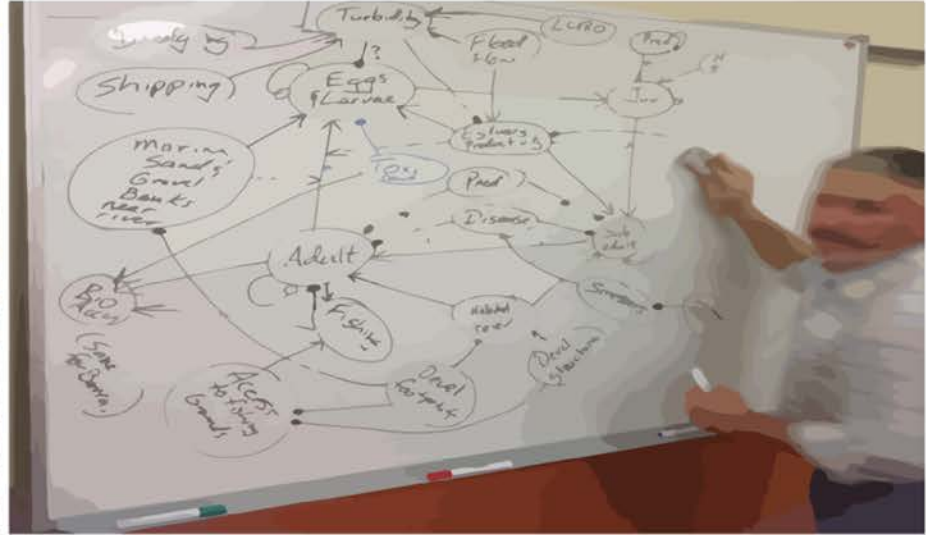
Cost

Streamline management

Clear Objectives

Objective setting

Stakeholder Participation is Crucial Throughout Loop



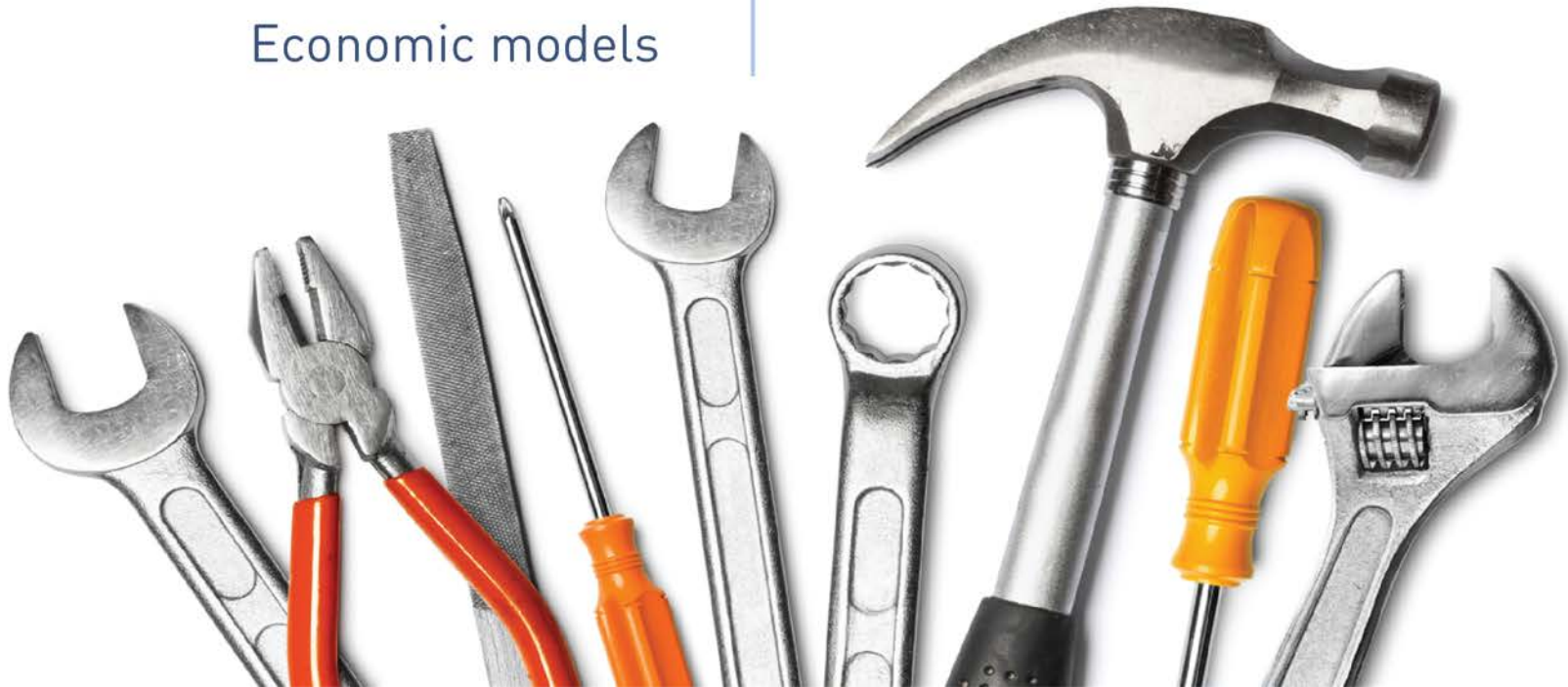
Science and Policy Tools Already Exist

SCIENCE TOOLS

Risk assessment
Scenario planning
Management strategy evaluation
Coupled multi-species models
Models with climate drivers
Economic models

POLICY TOOLS

Existing tools:
But in novel combinations
and calibrated differently to
reach ecosystem objectives



Case Studies



Alaska Groundfish

N. E. Pacific

Pacific Sardine

Gulf of Mexico

Menhaden

Mid-Atlantic

New England

Scotian Shelf

Baltic

S. E. Australia

Case Study Findings

No case study did every step

Almost each step was done somewhere

Steps sometimes done out of order (time cost)

Explicit prioritization not found in these case studies

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Why FEPs?

From principles to action

Can do

Triple Bottom Line

Choosing among trade-offs



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