



W SCHOOL OF AQUATIC AND FISHERY SCIENCES
UNIVERSITY of WASHINGTON
College of the Environment

Report
November 2016

SUPPORTING SCIENCE
AND COMMUNICATING
RESULTS.



BUILDING EFFECTIVE FISHERY ECOSYSTEM PLANS

A REPORT FROM THE LENFEST FISHERY
ECOSYSTEM TASK FORCE

@lenfestocean



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

Main Findings and Recommendations

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

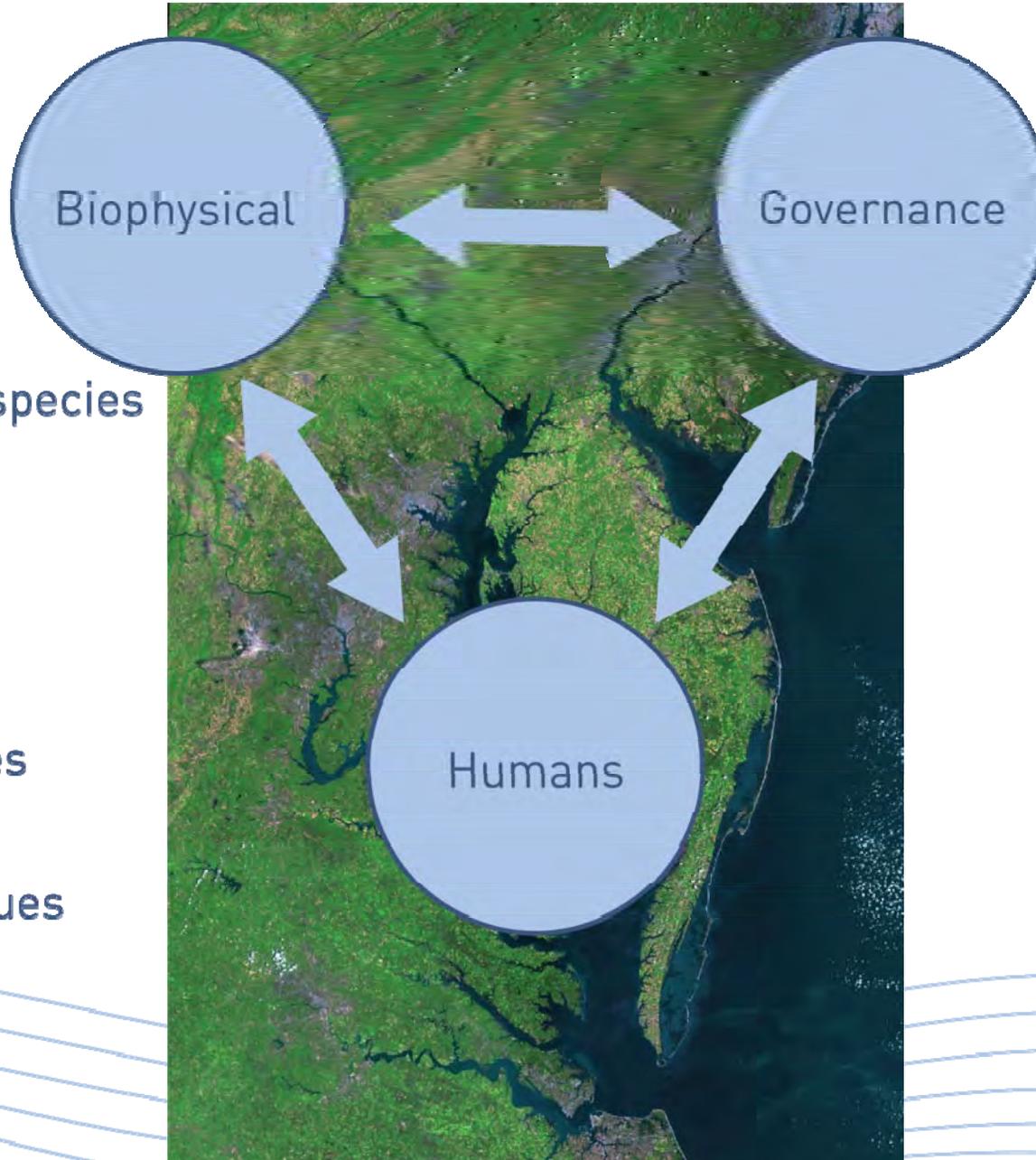
Fishery Ecosystem Plans use existing tools

Fishery Ecosystem Plans integrate social, economic, and ecological goals

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

Ecosystem-Based Fisheries Management

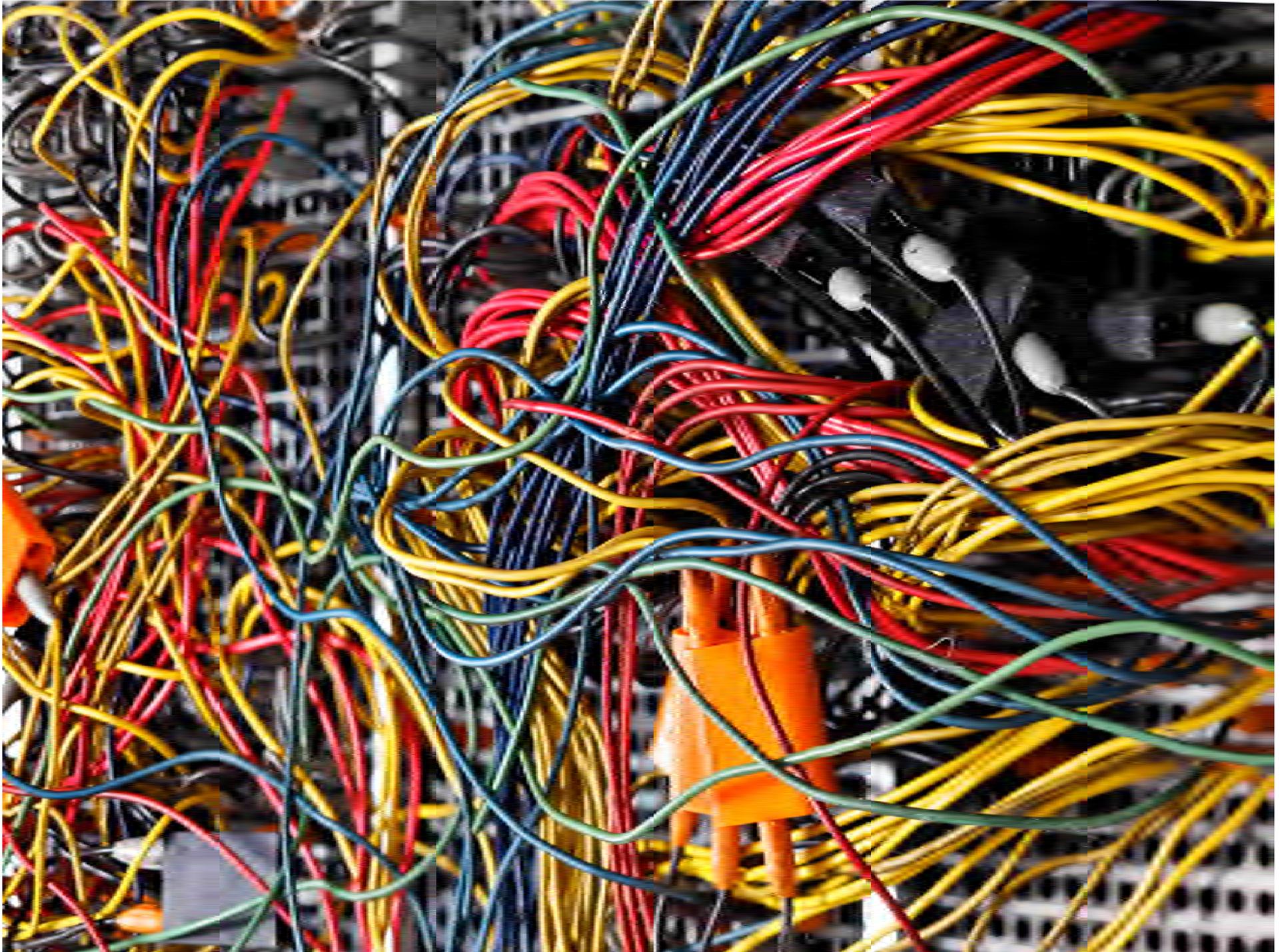
- Climate
- Food Webs
- Habitats
- Vulnerable species



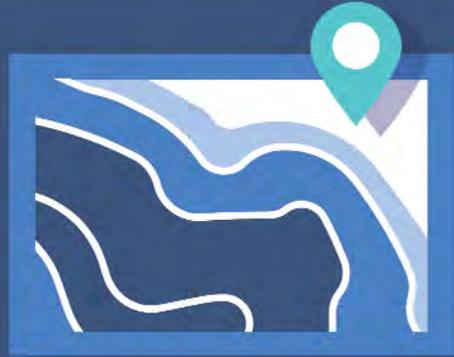
- MSFMCA
- ESA
- Council/FMP
- Tribal
- International
- States

- Fisheries
- Communities
- Processors
- Cultural values









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



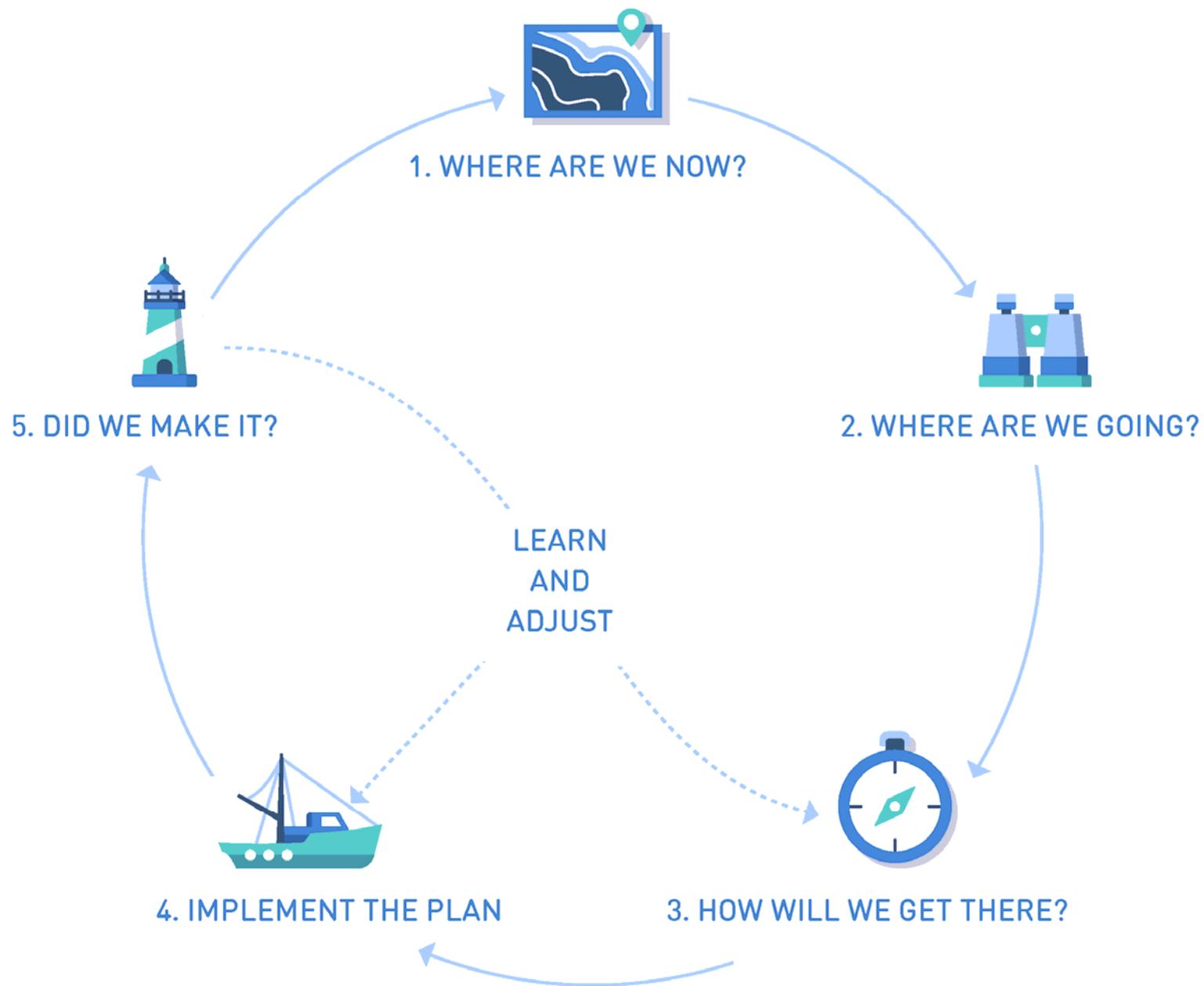
4 IMPLEMENT THE PLAN

- Work plan
- Resources

- Outputs
- Timeline



- Compare monitoring data with predictions



Next Generation FEPs Overcome Challenges

CHALLENGE

FEP Solution

Complexity

Indicators
Prioritization

Uncertainty

Structured process
Adaptive management

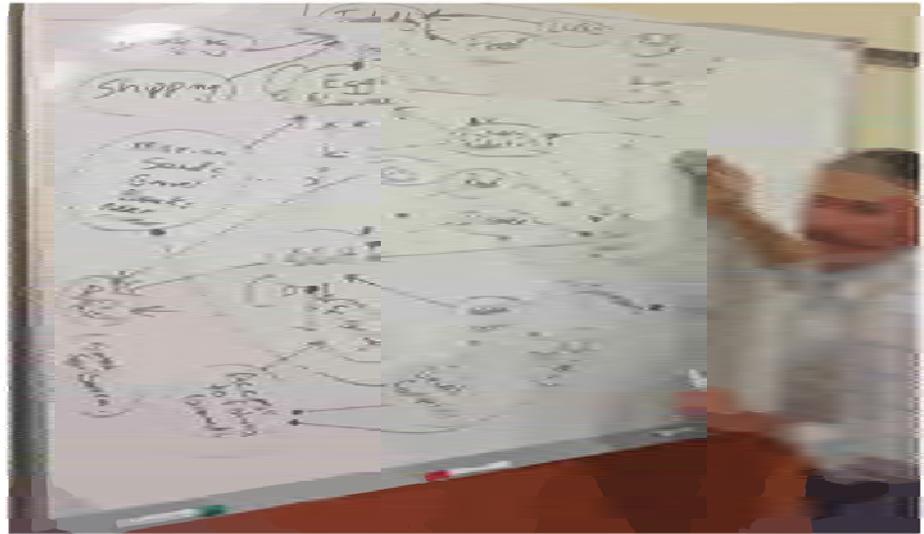
Cost

Streamline management

Clear Objectives

Objective setting

Stakeholder Participation is Crucial Throughout Loop



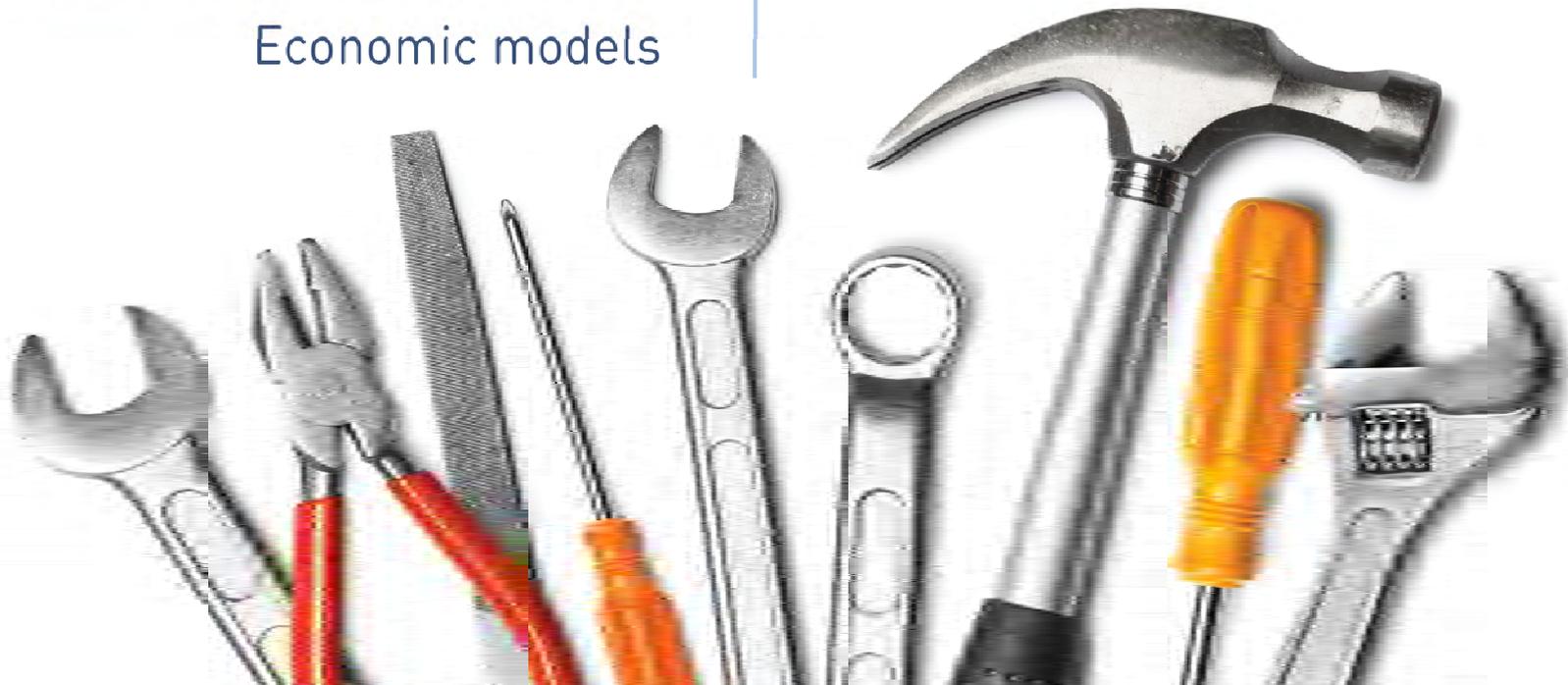
Science and Policy Tools Already Exist

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



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

Why FEPs?

From principles to action

Can do

Triple Bottom Line

Choosing among trade-offs



W SCHOOL OF AQUATIC AND FISHERY SCIENCES
UNIVERSITY of WASHINGTON
College of the Environment

Report
November 2016

SUPPORTING SCIENCE
AND COMMUNICATING
RESULTS.



BUILDING EFFECTIVE FISHERY ECOSYSTEM PLANS

A REPORT FROM THE LENFEST FISHERY
ECOSYSTEM TASK FORCE

@lenfestocean