



**SUSTAINABLE
FISHERIES GROUP**

UNIVERSITY OF CALIFORNIA SANTA BARBARA



Bren School

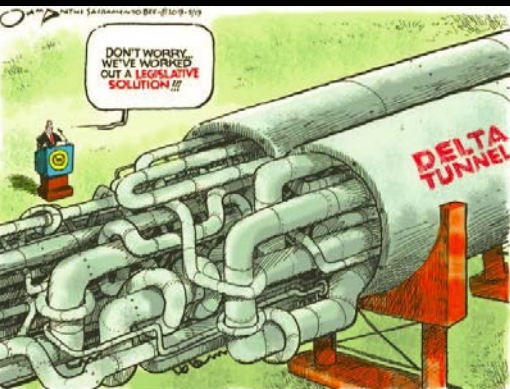
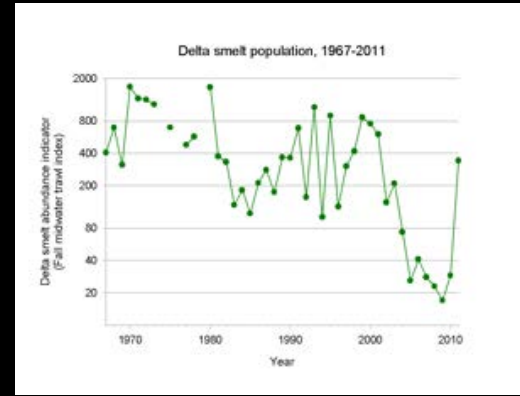
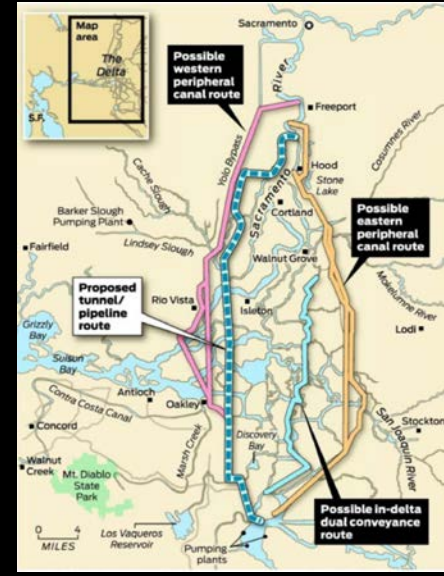
of Environmental Science & Management

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

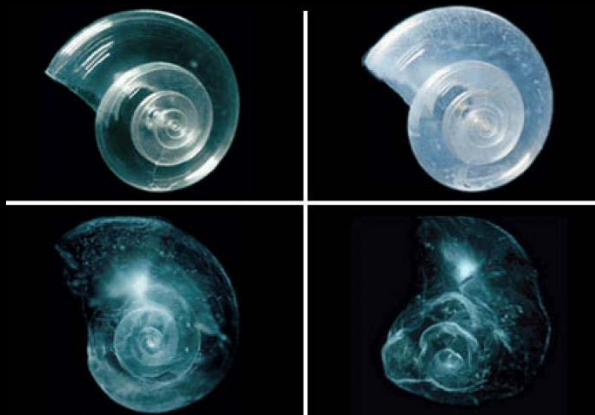
Lessons from the Ocean

Steve Gaines

No Shortage of Problems

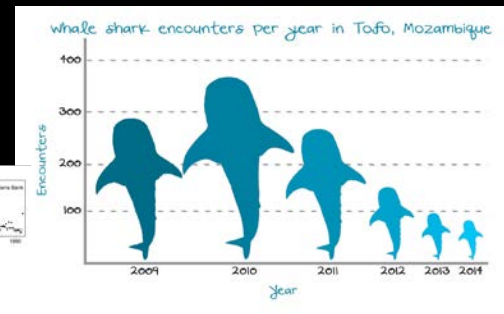
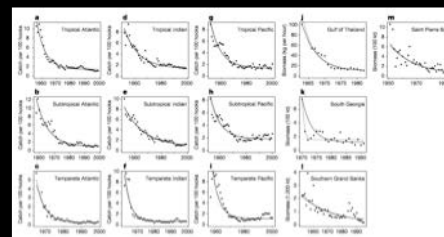
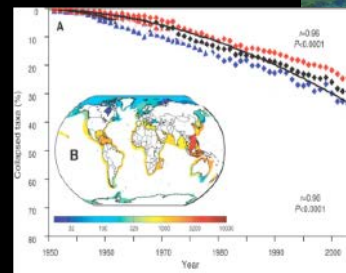
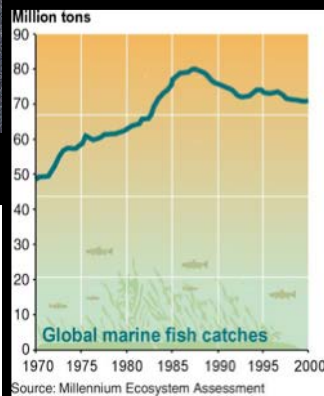


No Shortage of Problems



Scientists predict 50% drop in global fish stocks by 2015

A study is warning global fish stocks will be half what they were in 1988 by 2015.



DON'T BE *SUCH* A SCIENTIST

TALKING SUBSTANCE IN AN AGE OF STYLE



RANDY OLSON

WRITER/DIRECTOR OF *FLICK UP STARS*, *THE EVILATHAN-INTELLIHUNT DESIGN OFFICE*
AND *TYZZE*, A GLOBAL MARIANO COMEDY

The Message Box

Audience: _____



A Guide to Making
Your Science Matter

ESCAPE from the IVORY TOWER

Nancy Baron

Communication is Key

But I don't want to talk about it

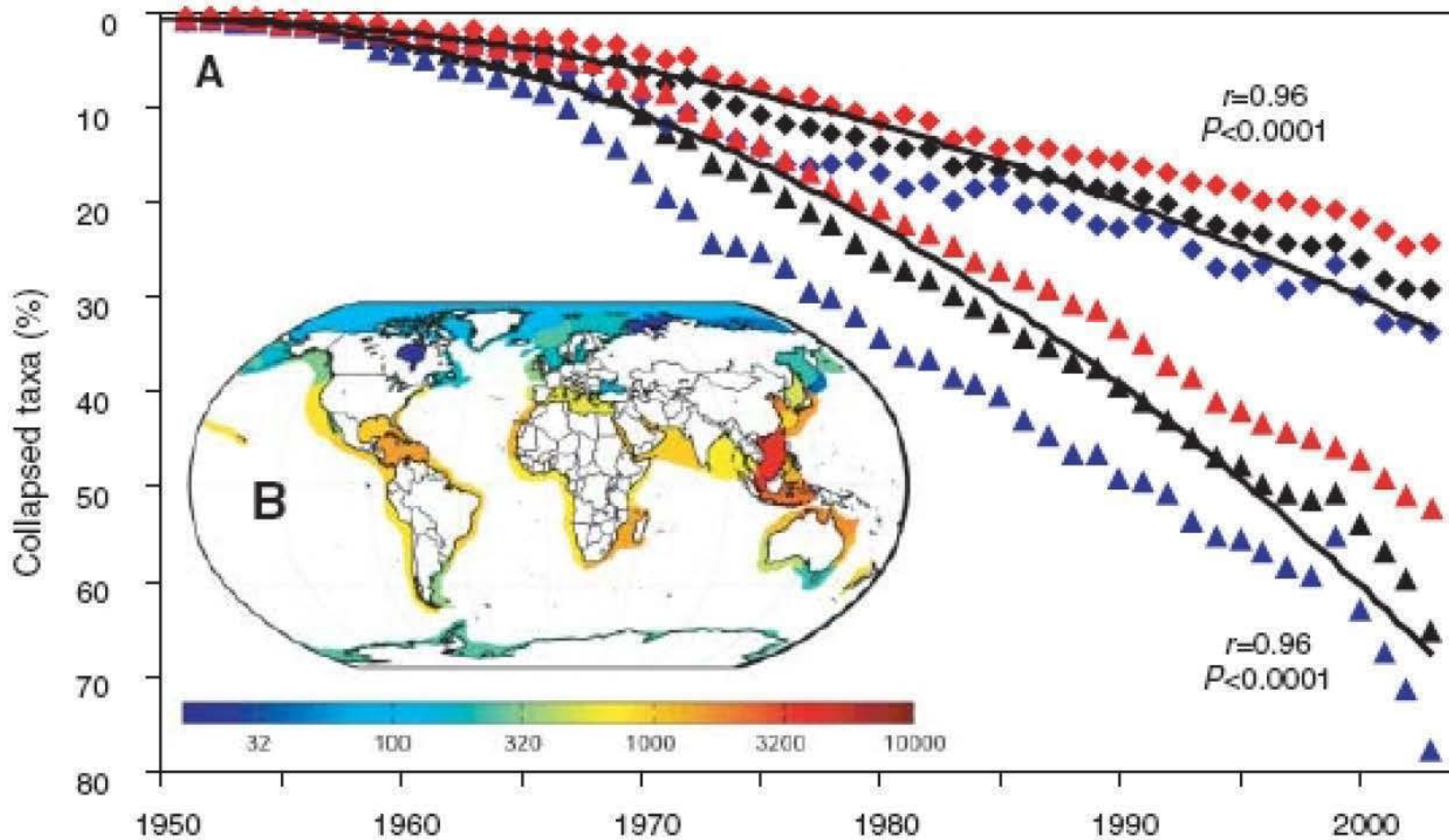
Science to Drive Solutions

- Think Solutions
- Build New Teams
- Different Values



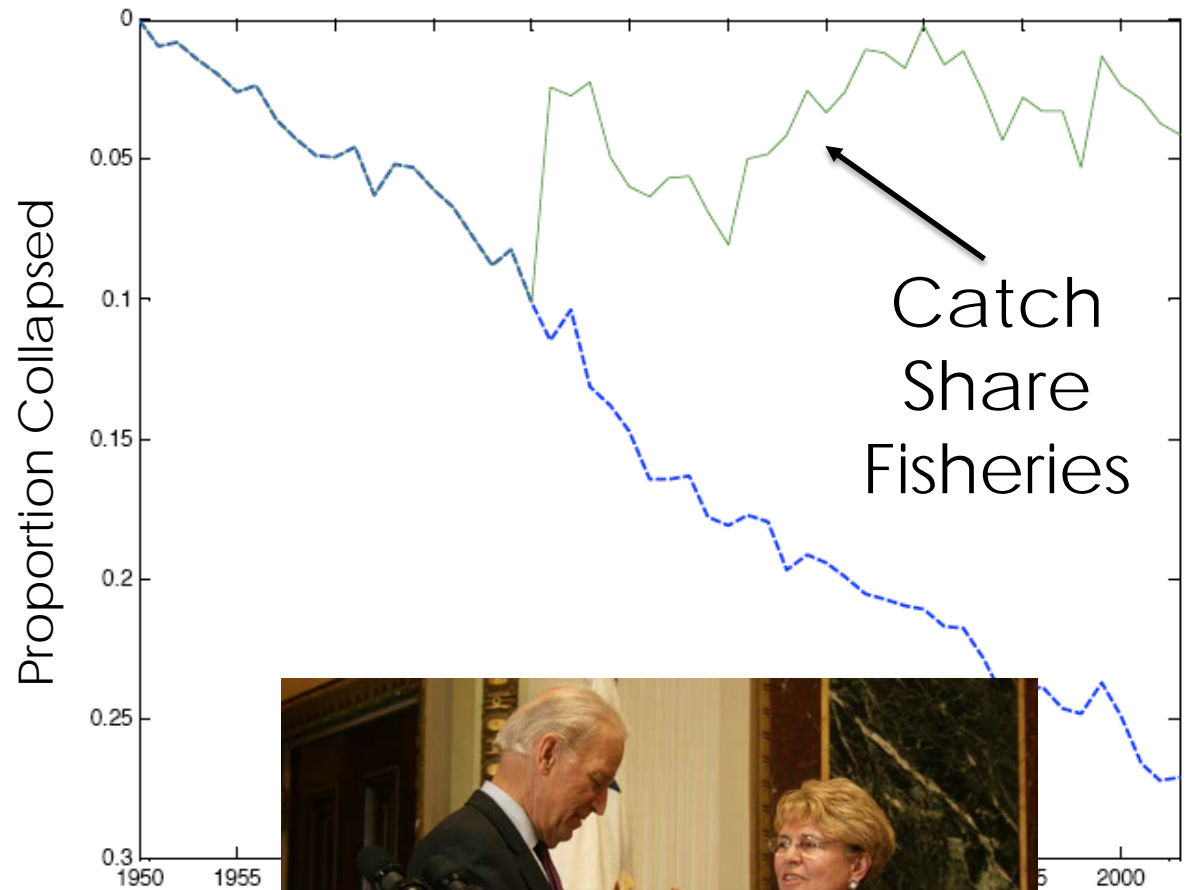
The facts are coming! The facts are coming!

Think Solutions



Think Solutions

- Look for exceptions
- Success elsewhere motivates change
- Timing helps



Build New Teams

- Social sciences study ecology of people
- Problems from human environment interactions
- Solutions from human environment interactions
- Synergies abound



Build New Teams





Tragedy of the Commons

Field Experiments
on Your Kids



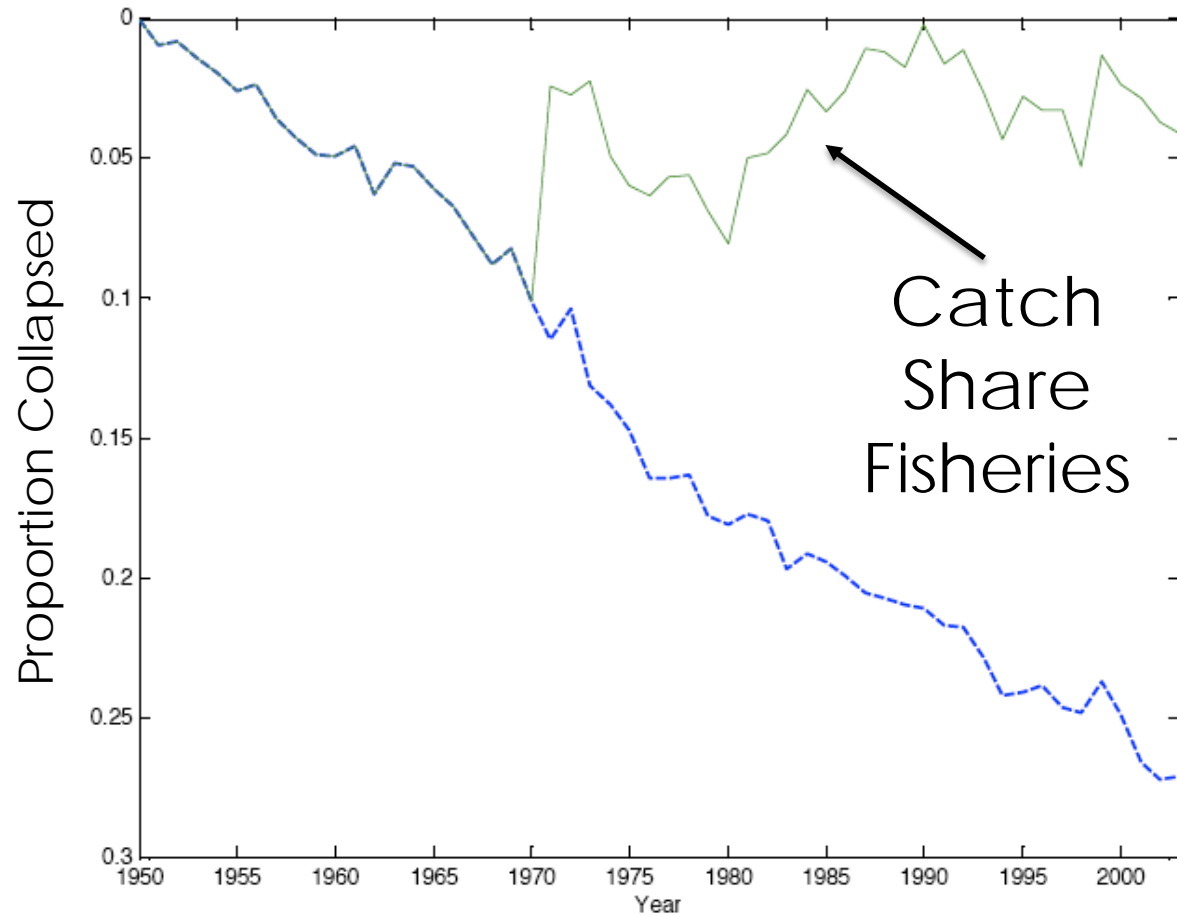
Brain Freeze!

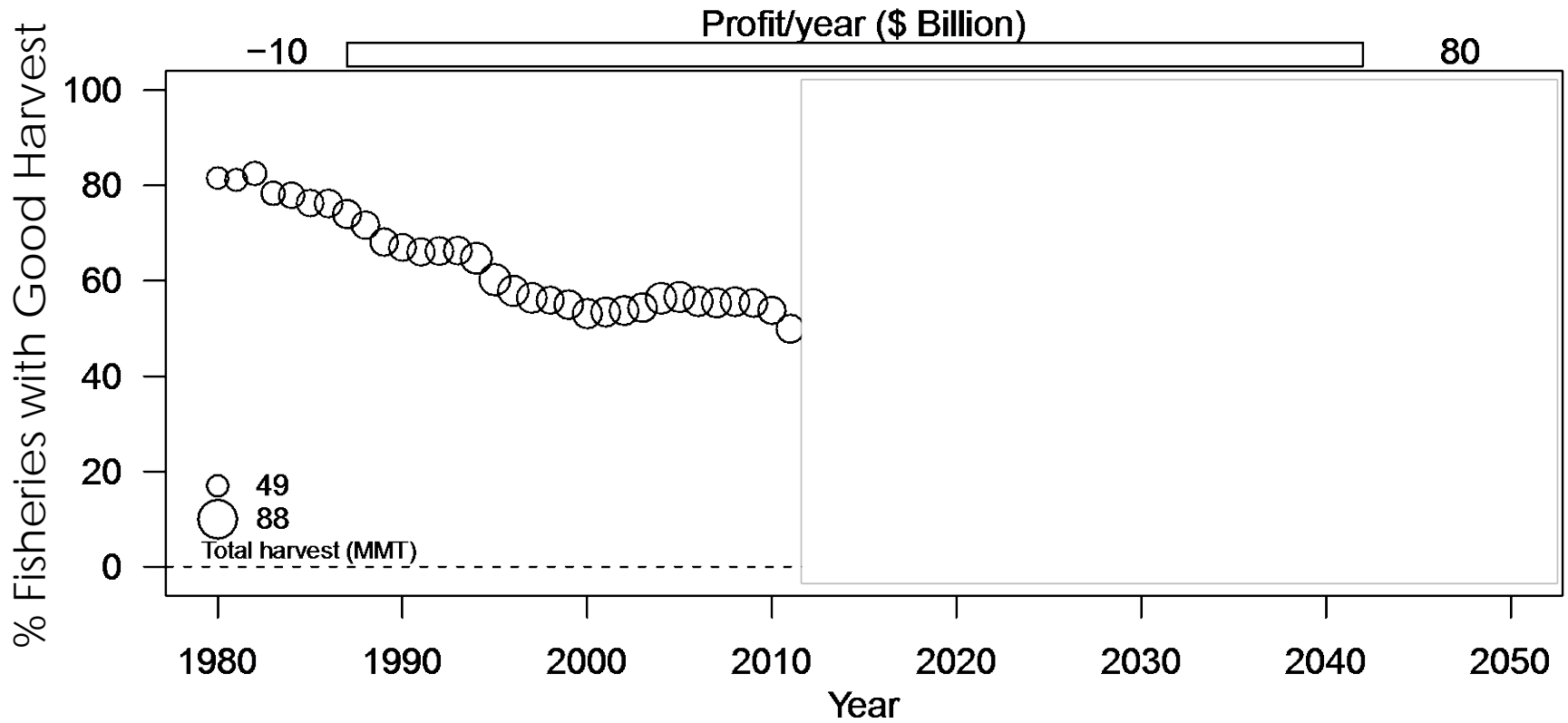


Rights Based Management

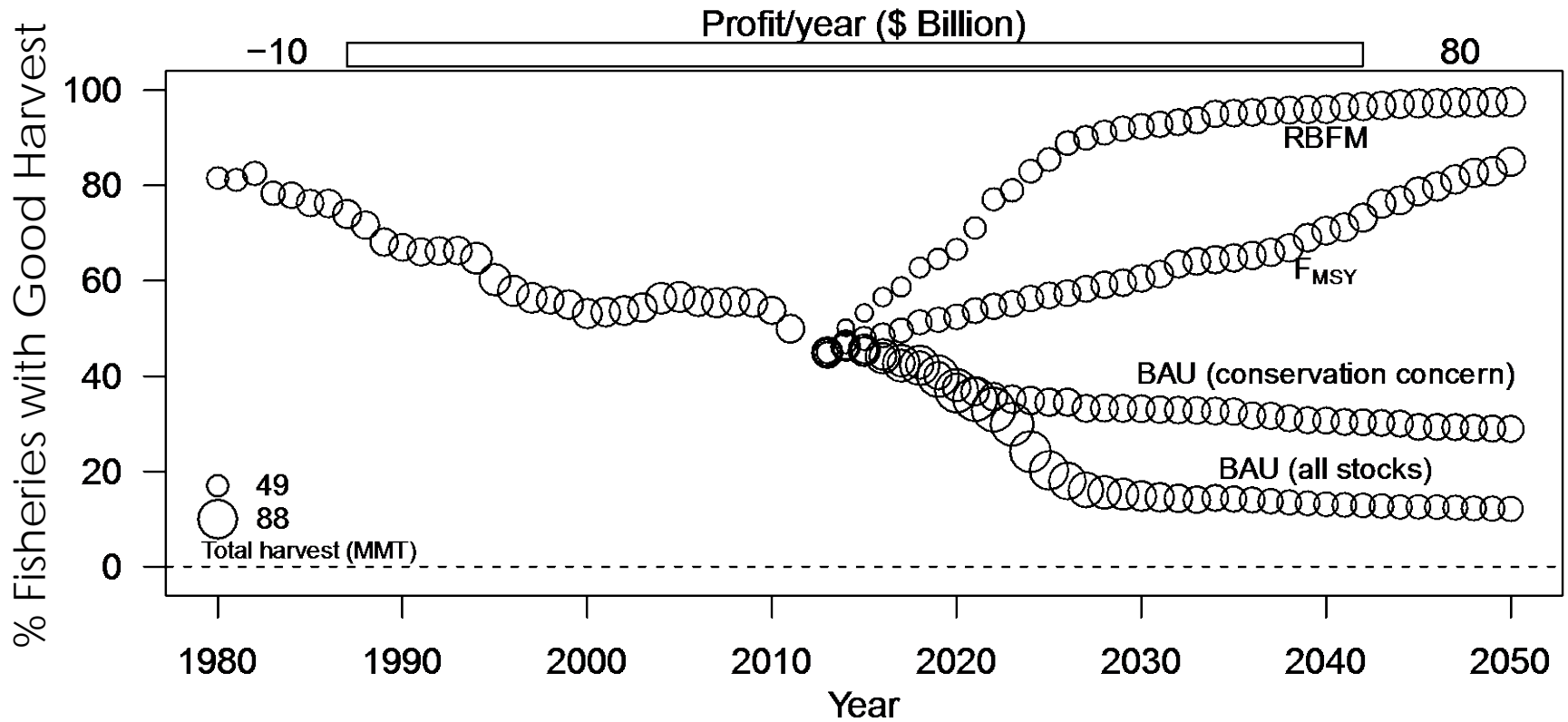
Build New Teams

- Design Solutions
- Change Incentives
- Align Environmental & Economic Interests





Where We are Today



Alternative Futures

Biggest Impact?

The Ocean's Tremendous Potential

More Food



23% more
in harvests per year

+17
MMT/year

More Profit



315% more
in profits per year

+90B
USD/year

More Fish



112% more
fish biomass in the water

+782
MMT/year

Different Values

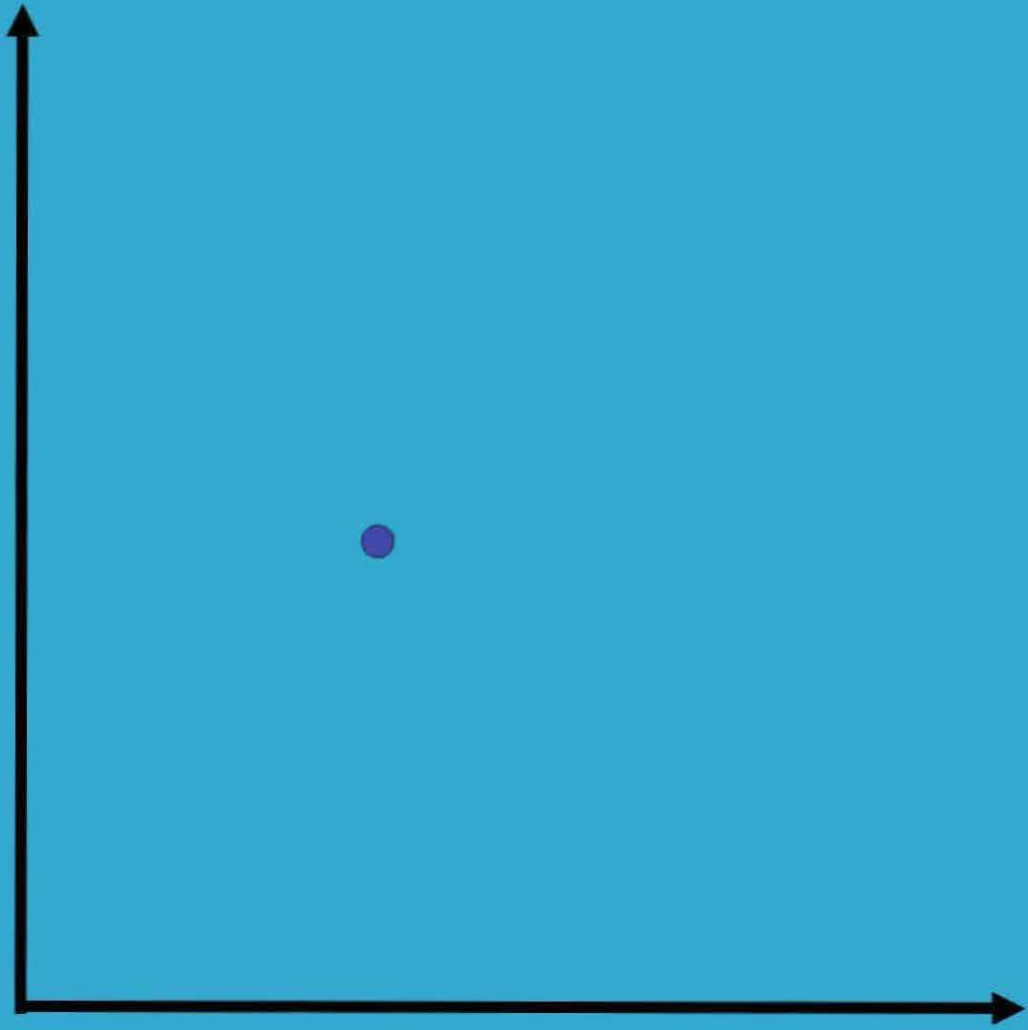


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Different Values

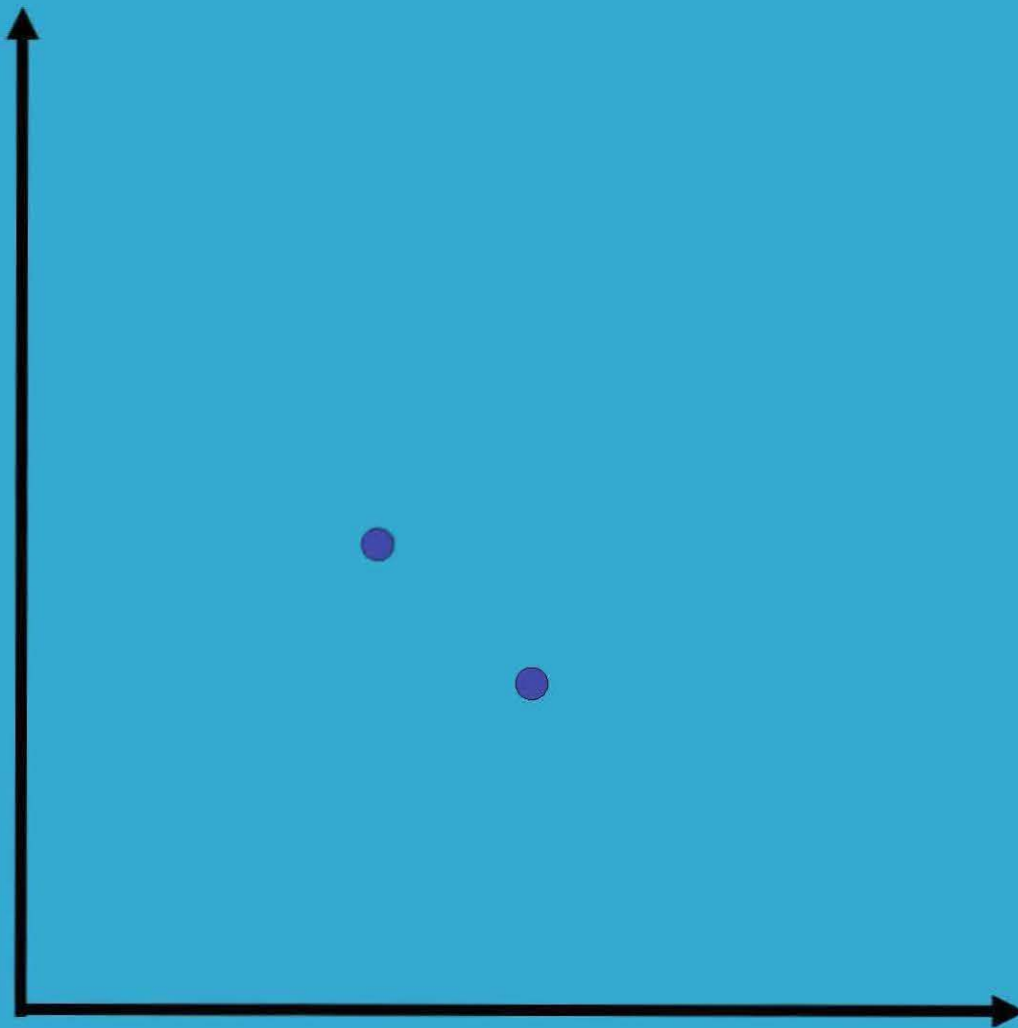


Fishery Profit

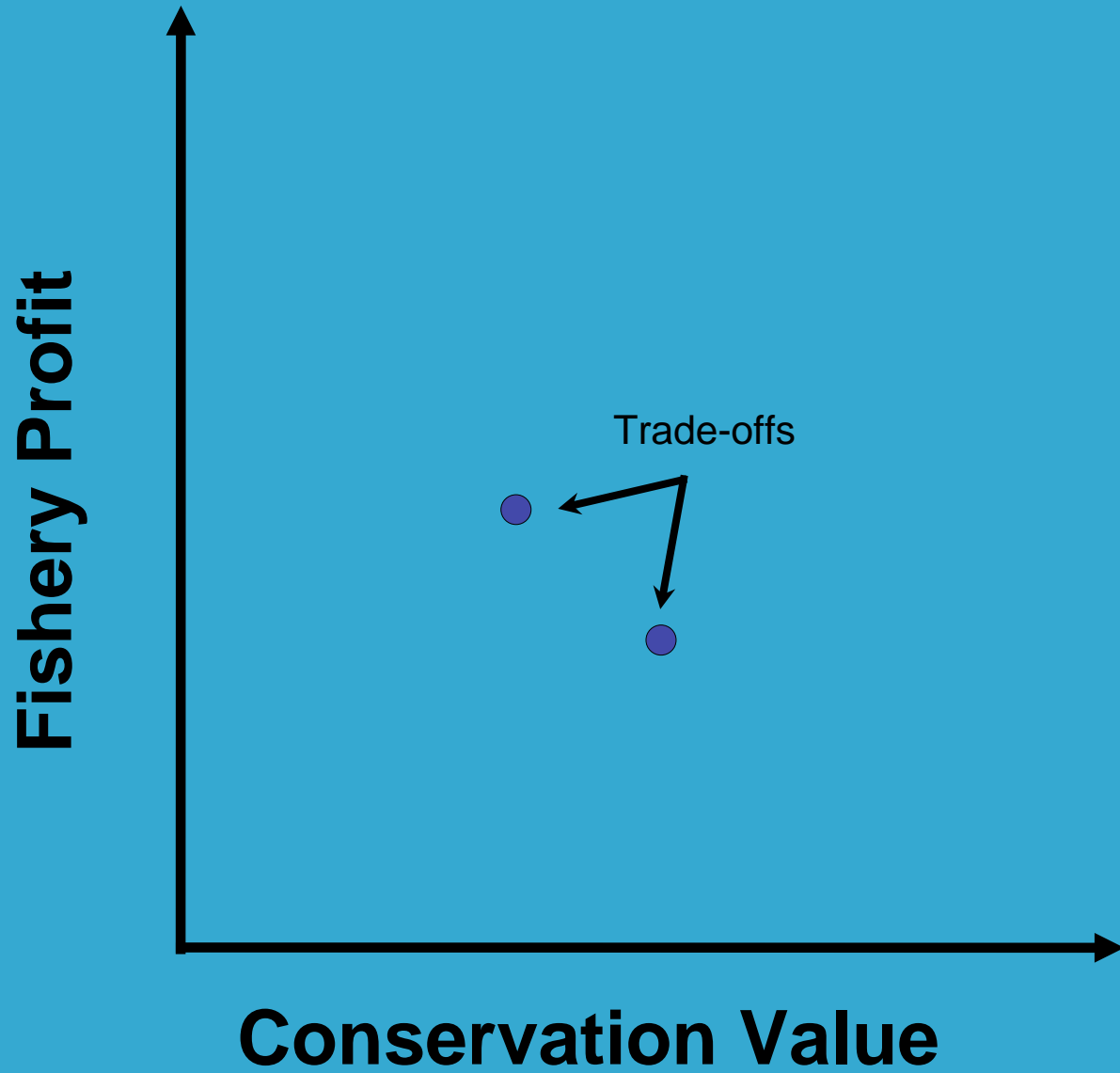


Conservation Value

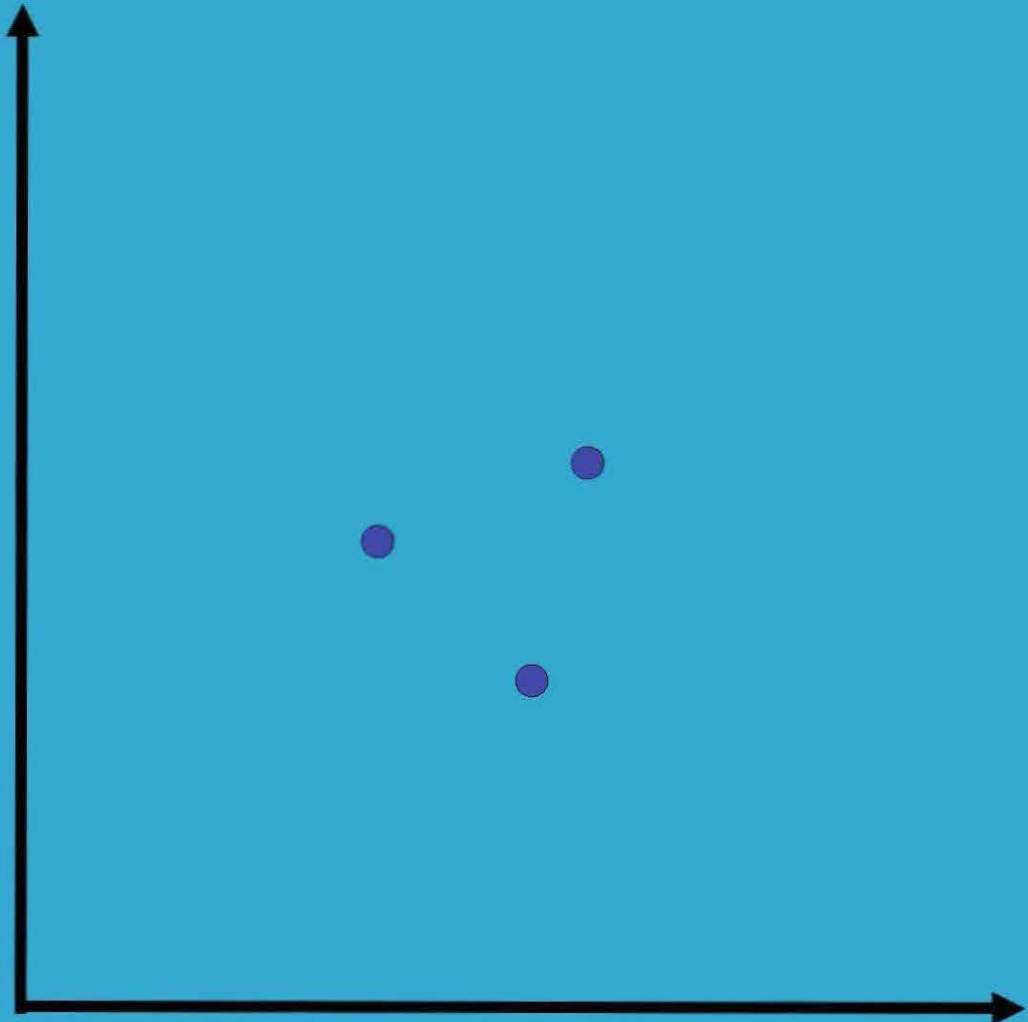
Fishery Profit



Conservation Value

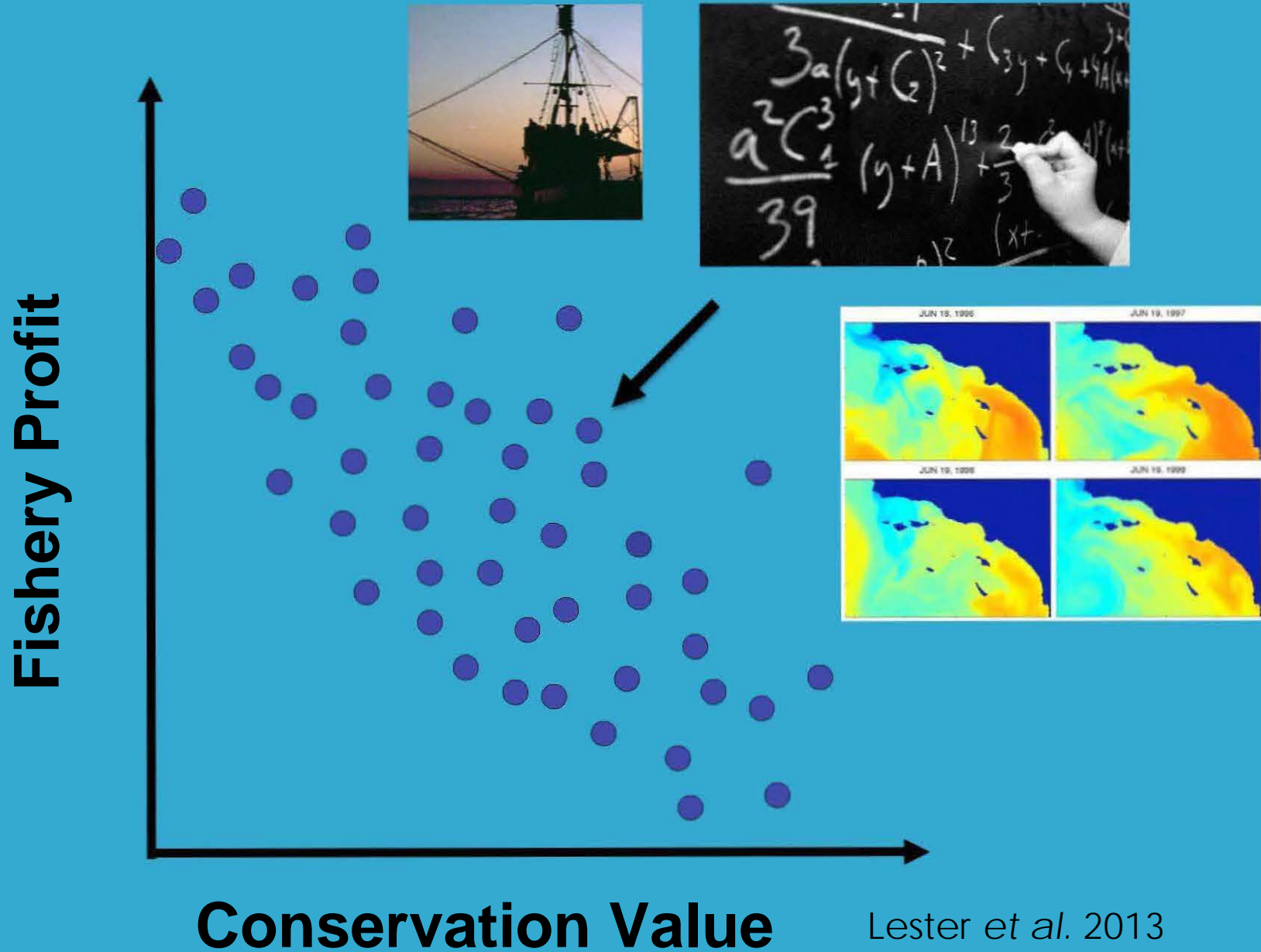


Fishery Profit

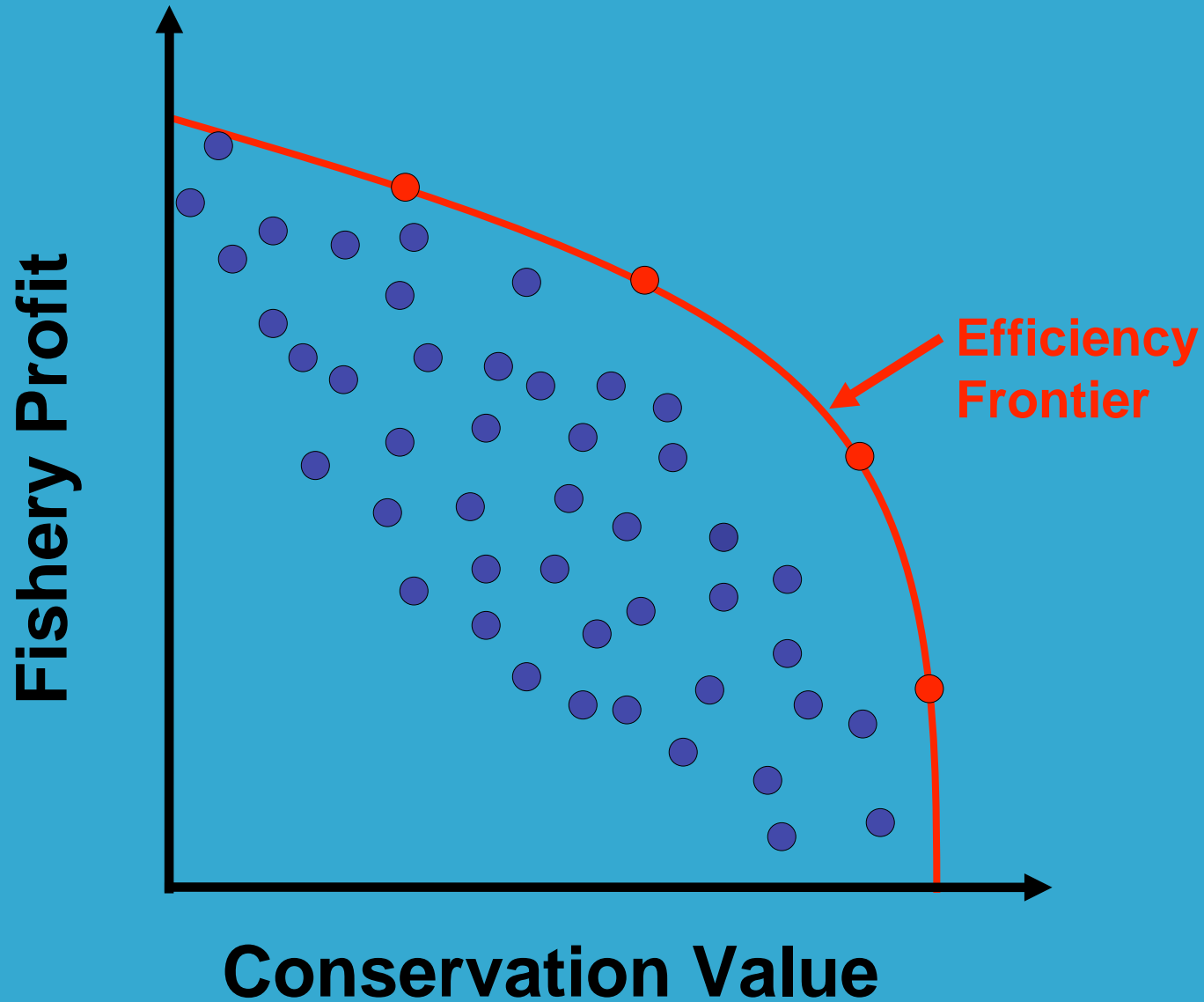


Conservation Value

ECOSYSTEM SERVICE TRADEOFF ANALYSIS



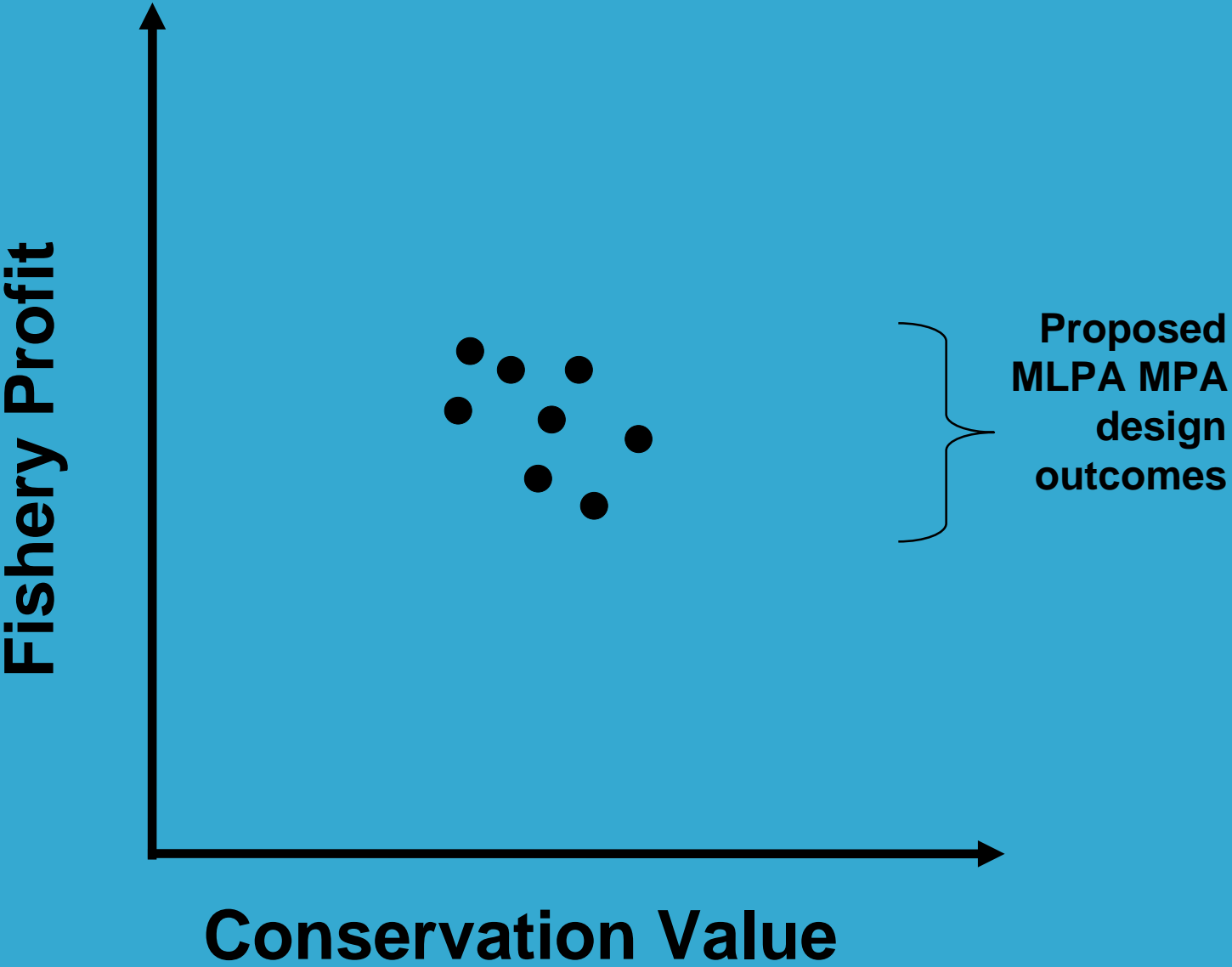
ECOSYSTEM SERVICE TRADEOFF ANALYSIS



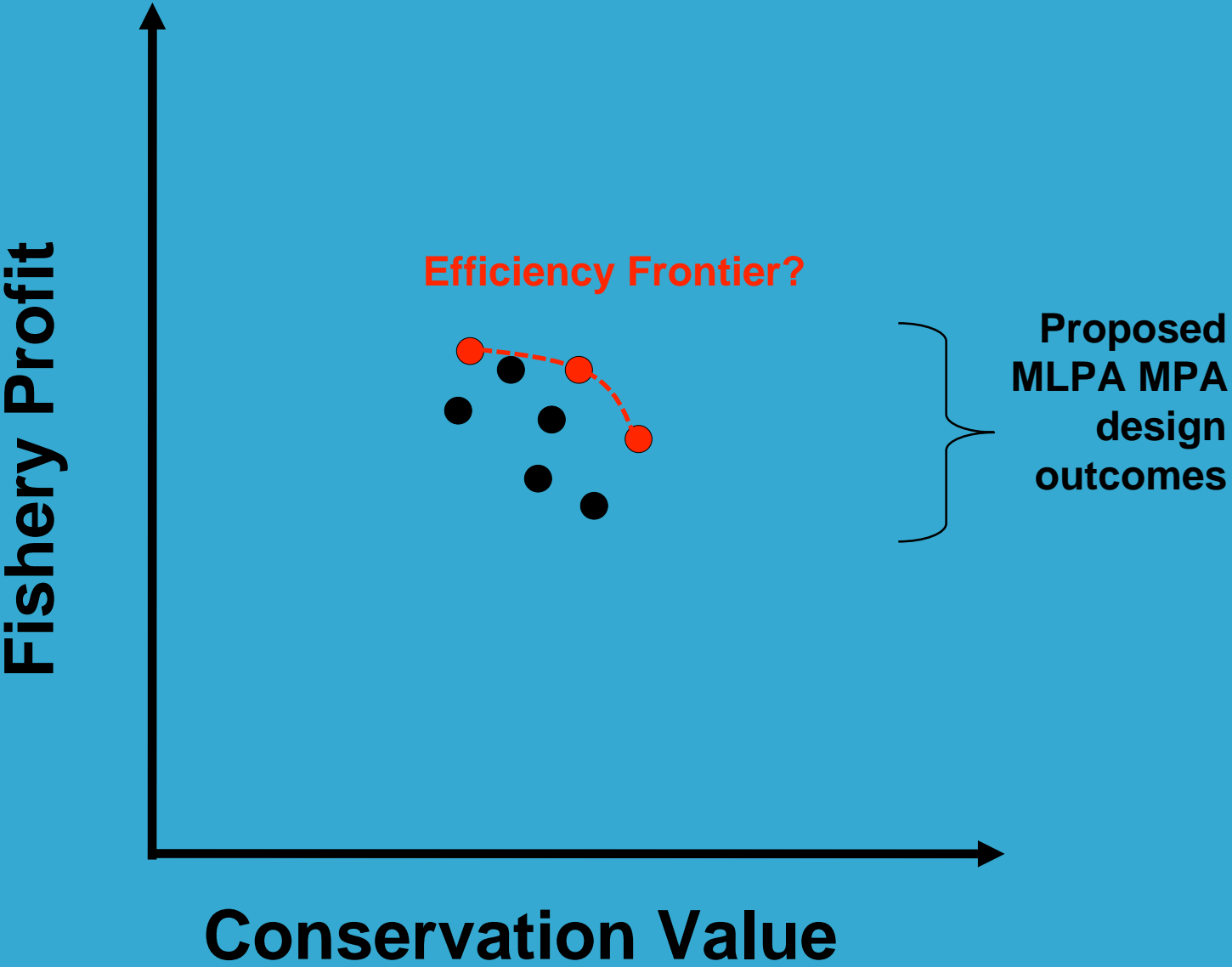
Different Values



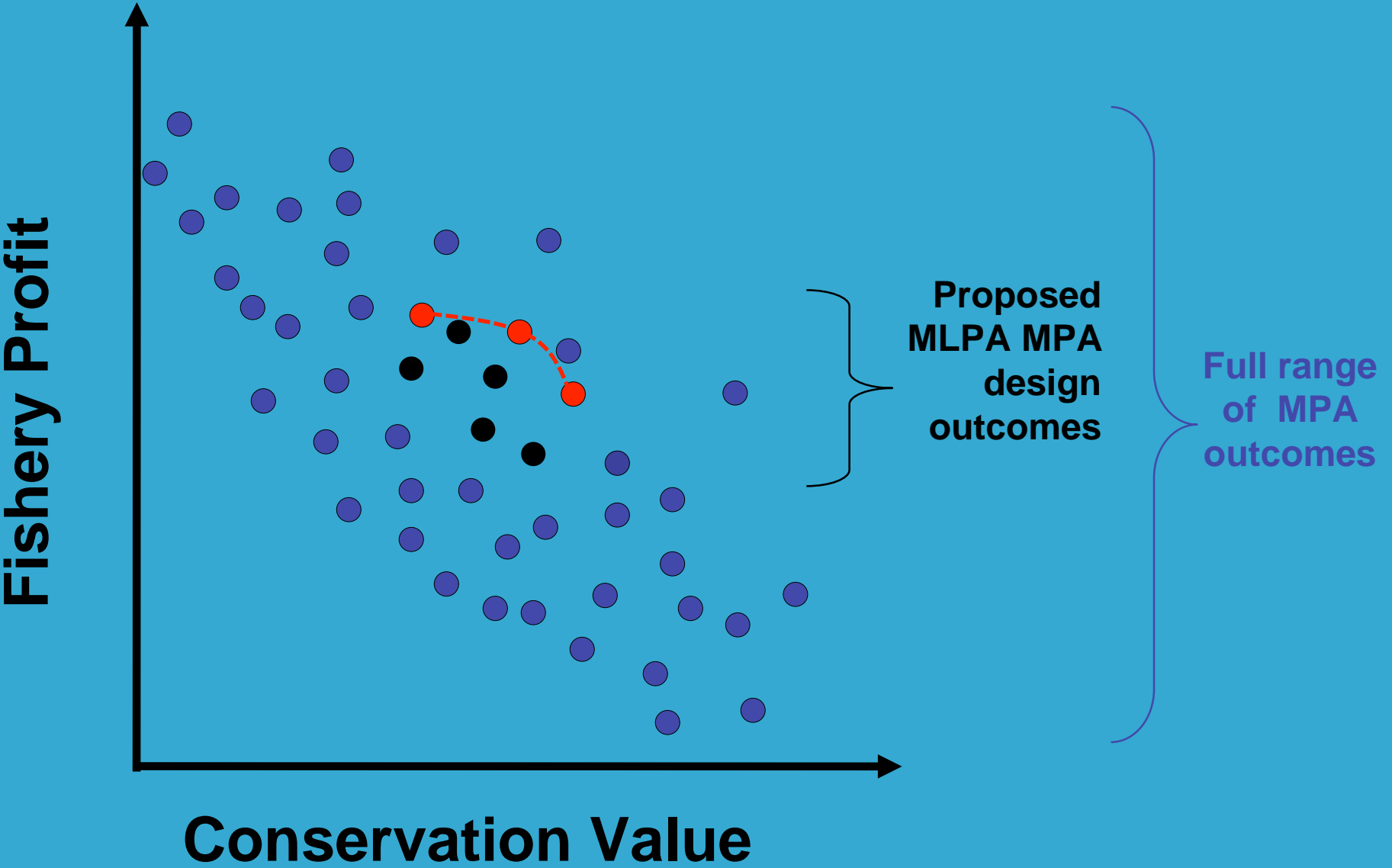
California's Marine Life Protection Act



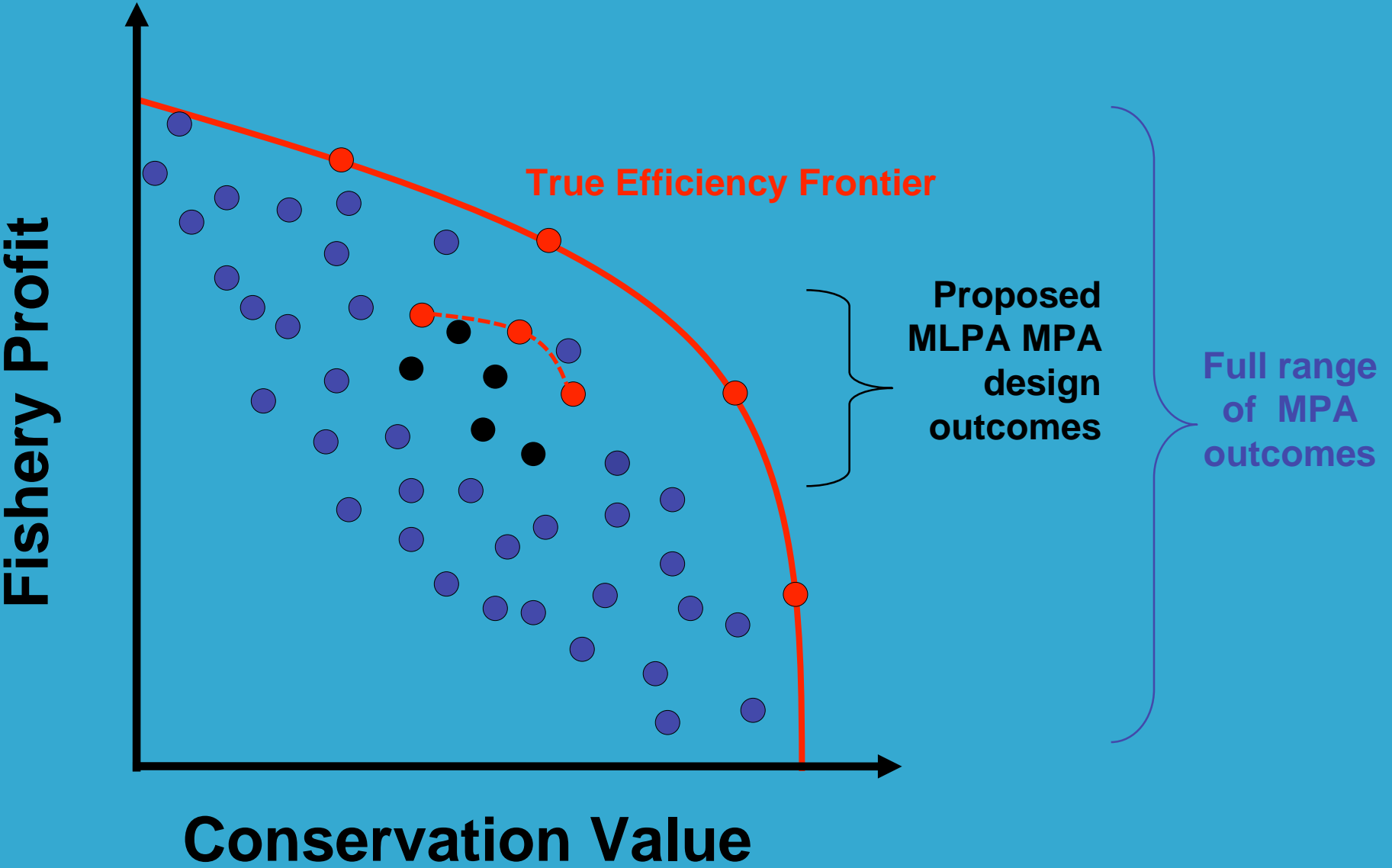
California's Marine Life Protection Act



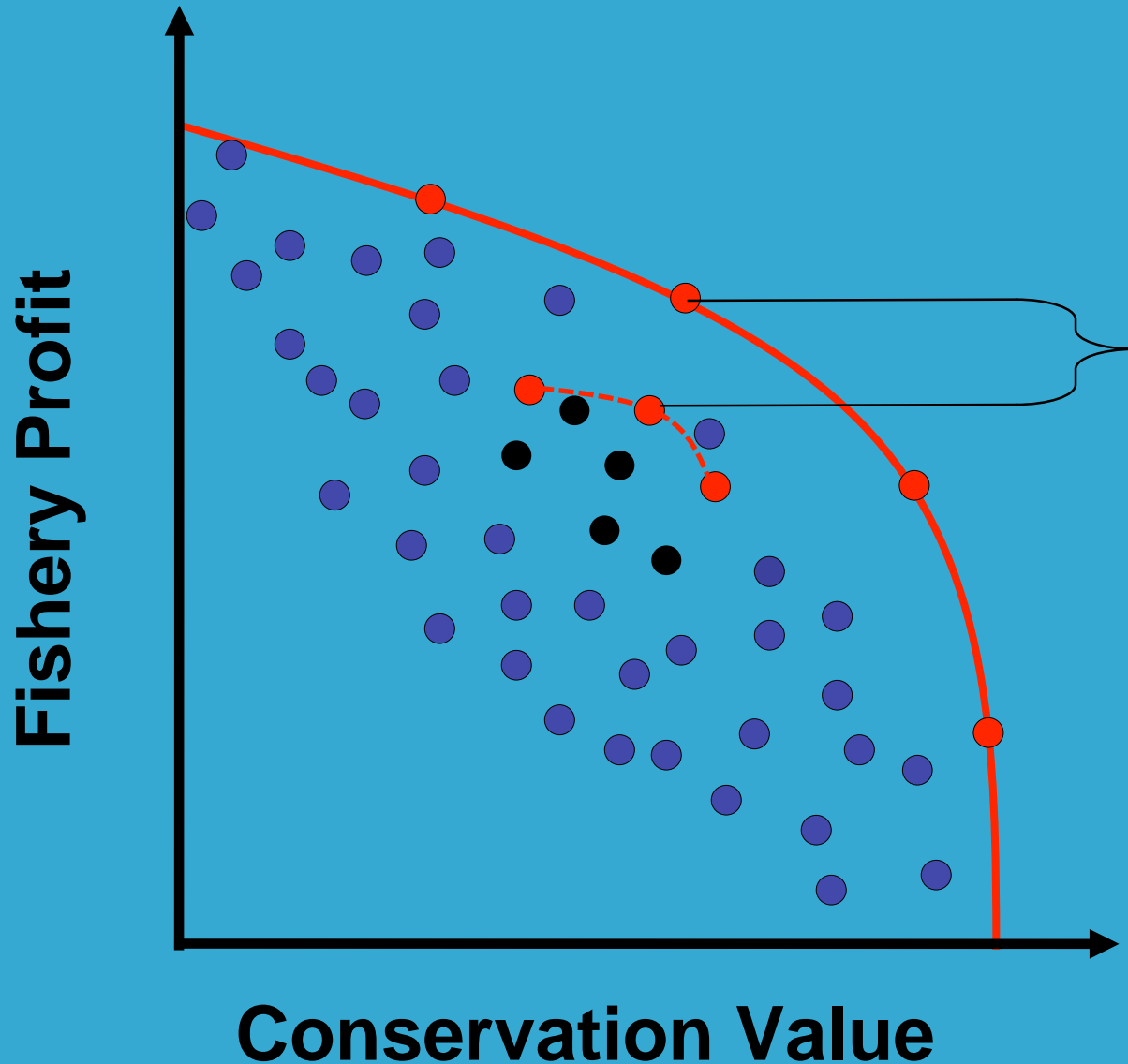
California's Marine Life Protection Act



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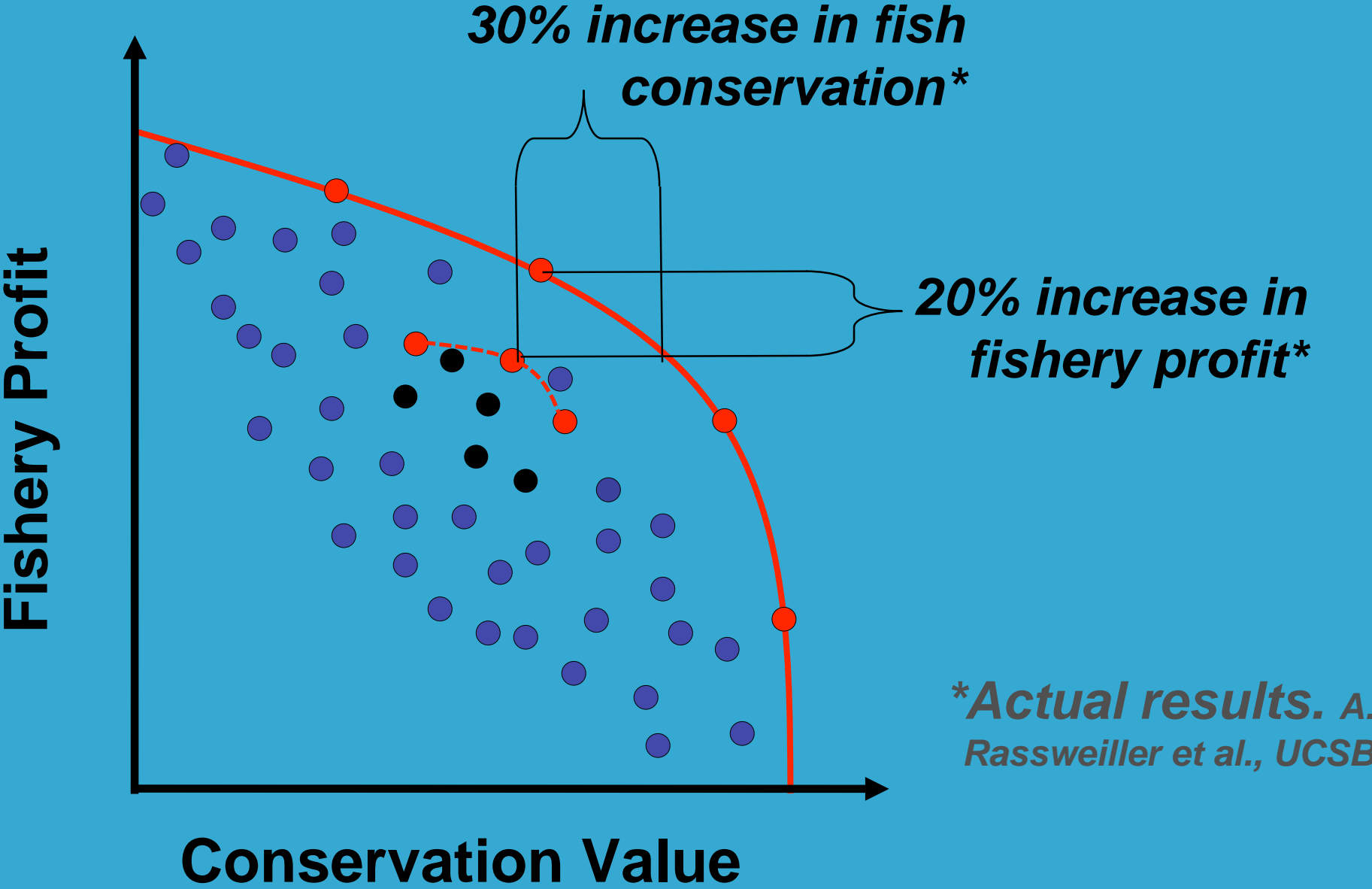
California's Marine Life Protection Act



*20% increase in fishery profit**

**Actual results. A. Rassweiler et al., UCSB*

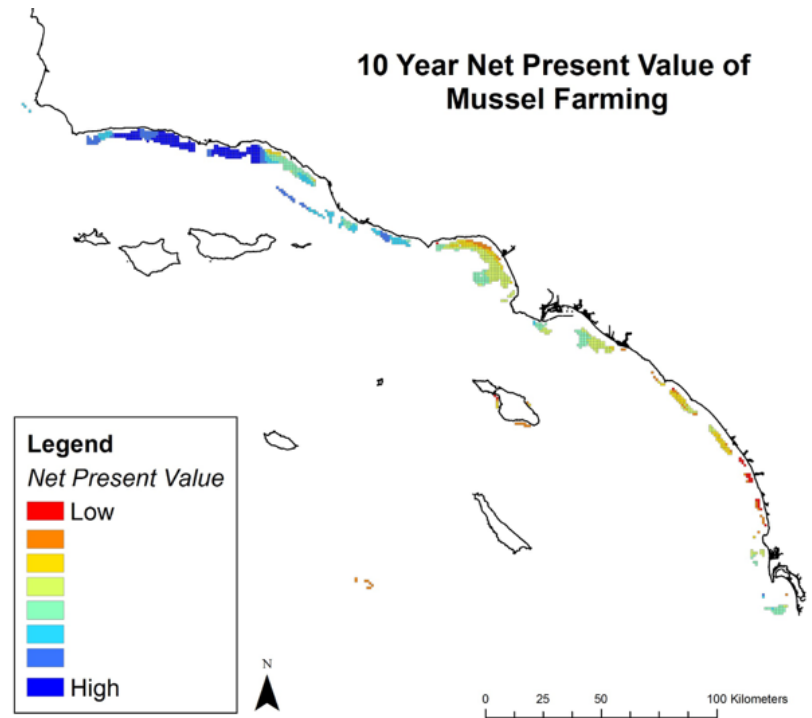
California's Marine Life Protection Act



30% increase in fish conservation*

20% increase in fishery profit*

**Actual results. A. Rassweiler et al., UCSB*



Science Exploring All Options:

**Galapagos Marine Park,
Aquaculture in So Cal,**

Wind in NE & Bermuda,
Aquaculture in Chile

Science to Drive Solutions

- Obsess about Solutions
- Embrace Social Scientists
- Help Everyone Win (if possible)



