

# **Closing the gap between OA research and decision making**

Sarah Cooley

February 19, 2015

MEOPAR Ocean Acidification Meeting

With contributions from L. Jewett, J. Reichert, L. Robbins,  
G. Shrestha, D. Weiczorek, and S. Weisberg



**Ocean Conservancy**

# Using the best OA science in policy

- What information is wanted? offered?
- How do we close this gap?
  - Options?
  - Who needs to be involved?
  - How does info need to be delivered?
- Things to keep in mind to conduct policy-relevant OA research

# Decision makers are asking...

Will ocean  
acidification  
hurt my  
community?

Policymakers  
Agencies  
Businesspeople

How  
soon?

How can  
we fight it?

# Researchers are reporting...

Synergistic stressors...  
Ocean CO2 uptake...

Community impacts?  
Business losses...  
Costs of adaptation...

Scientists  
Businesspeople

Population-scale changes?  
Life history changes...  
Species-specific responses...

Ecosystem  
impacts...?

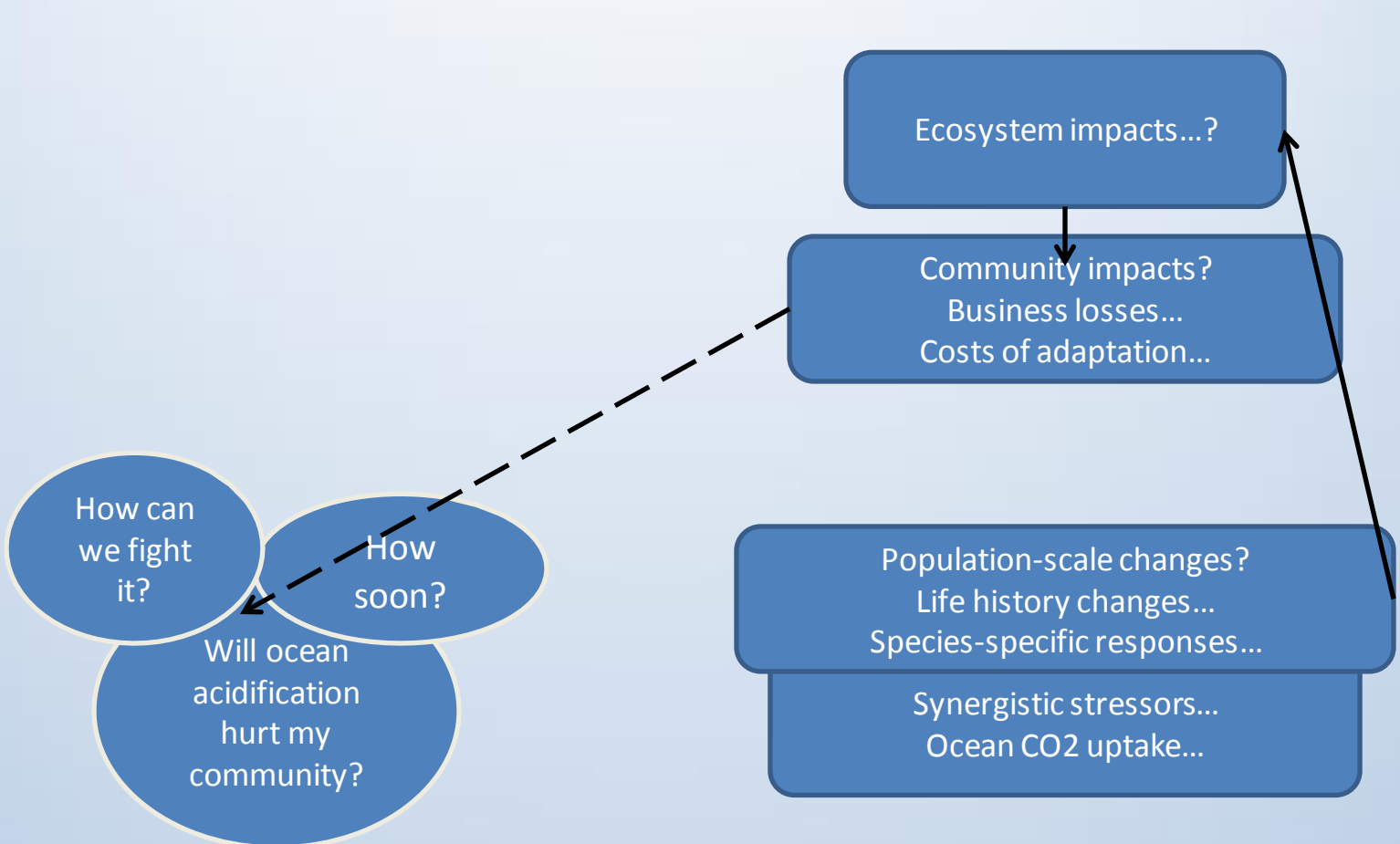
# Mismatch!

## Information sought

## Information offered

Vague/  
uncertain

Detailed/  
certain



# Options to close the gap

- Have a crisis

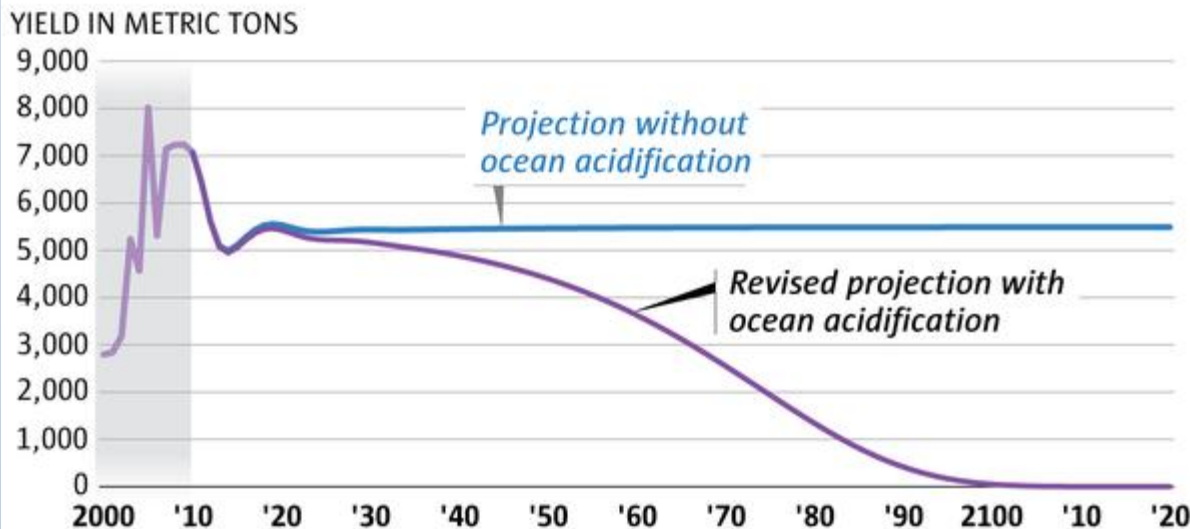


# Options to close the gap

- ~~Have a crisis~~
- Do targeted research:
  - Will OA hurt this community? When? Options?



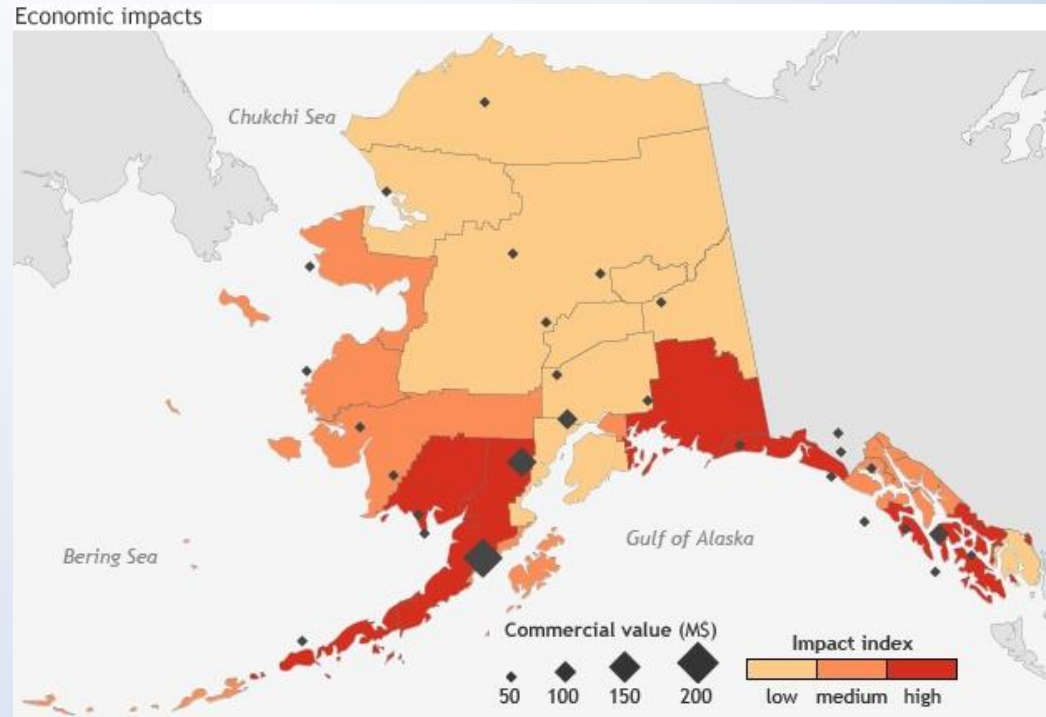
S. Ringman Seattle Times



## AK King Crab Fishery

# Options to close the gap

- ~~Have a crisis~~
- Do targeted research
- Do synthetic research:
  - Dependence on resources at risk?  
Decision making scenarios?



Mathis, Cooley et al. 2014 Prog Oceanogr  
Via climate.gov

# Options to close the gap

- ~~Have a crisis~~
- Do targeted research
- Do synthetic research:
  - Dependence on resources at risk?  
Decision making scenarios?

Economic impacts



g Oceanogr  
climate.gov

# Who needs to be involved?

- Everyone. Not just “interdisciplinary” or even “transdisciplinary.”
- Scientists
- Businesses
- Policymakers
- Agencies
- NGOs
- Citizens



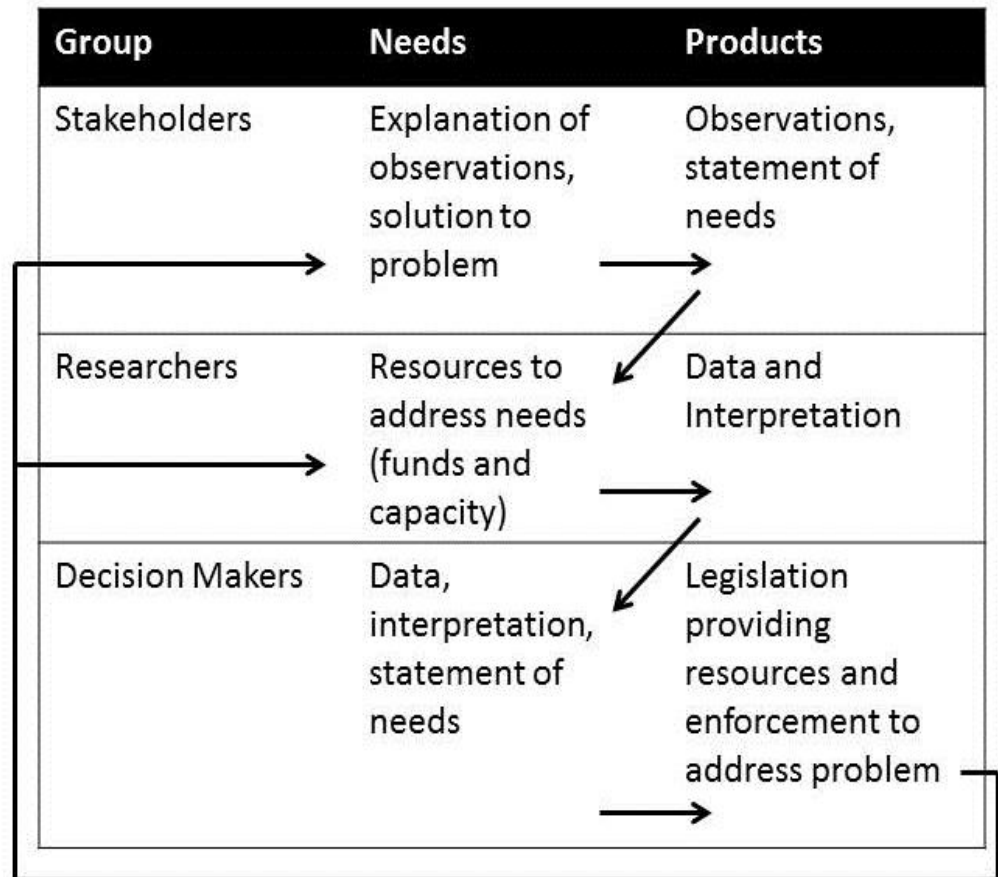
# How to deliver the information?

- Align & leverage
  - Relate to “upstream/ downstream” issues like economics or water quality
  - Feed into existing precautionary planning
  - Line up with existing priorities/development goals



# Repeating yourself is sometimes OK

- Agree on target outcomes at the beginning.
- Revisit them at the end.
- Refine.
- **Repeat.**



Cooley et al. in review *Oceanography*

# Closing the gap: review

1. Targeted and/or synthetic research
2. Include representatives of all perspectives
3. Align with pre-existing priorities
4. Repeated cycles of decision making OK

# Closing the gap: review

1. Targeted and/or synthetic research
2. Include representatives of all perspectives
3. Align with pre-existing priorities
4. Repeated cycles of decision making OK

U.S. state action on OA:

