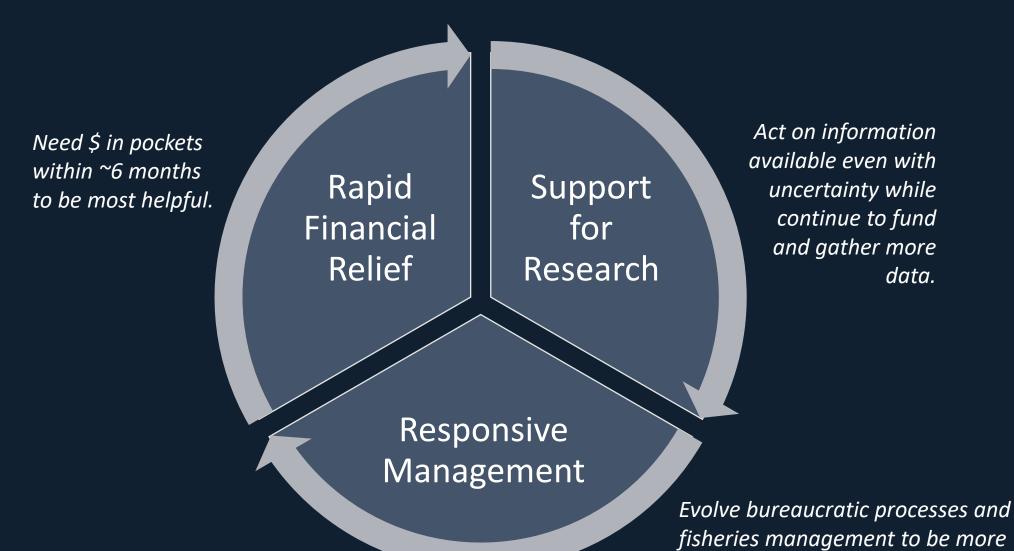


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3-prong approach to crisis management



adaptive and responsive \rightarrow TOUGH!

What is Resilience?

BUSINESSES - quickly adapt to disruptions while maintaining continuous business operations and safeguarding people, assets and overall brand equity.

ECOSYSTEMS - ability of an ecosystem to **maintain** its normal **patterns** of nutrient cycling and biomass production **after being subjected to damage** caused by an ecological disturbance.

PEOPLE - ability of an individual to bend but not break, to bounce back, and "to adapt well in the face of adversity, trauma, tragedy, threats or even significant sources of stress."

DRAFT resilient crab fishery action plan

- Recent history
 - All major Bering Sea crab fisheries at historic lows
 - Bristol Bay red king crab closed starting in 2021, first time in 25 years
 - Snow crab closed for the first time in US history in 2022
- The current management approach includes devastating fishery closures that will irrevocably impact fishing communities in Alaska.
- We propose that over-emphasis on the role of climate change in the recent crab fishery declines may distract from near-term actions necessary to save the crab fleet and crab resource today. Focusing on climate change means that scientists and managers emphasize climate modeling to predict inherently unpredictable fishery changes, rather than responding quickly to support fishing communities & fish resources. There are lessons that we learned from other fishery disruptions, like the COVID-19 pandemic, that are pertinent to addressing current crab fishery challenges. As an example, during the pandemic, fisheries managers on the West Coast acted quickly and outside of the norm by temporarily lifting constraints on harvesting restrictions to mitigate revenue losses. We advocate for a shift in mentality more broadly to resilience or disaster planning no matter the disruption, rather than strictly climate change planning.
- We've developed a strategy to increase crab fishery resilience, with activities for all major stakeholders (managers, scientists, and industry) [SEE MATRIX ON NEXT PAGE]. Managers include state managers, federal managers, Fishery Management Council, and, in Alaska, the Board of Fish. Industry activities focus on the harvester perspective. In the future, we could expand this strategy to include other industry sectors (e.g., processors and communities).
- The strategy includes actions to stabilize the fleet, create opportunity, and look towards the future.
- The activities in the strategy are interrelated, and advancing individual activities will also advance others. The action recommendations
 are based on peer-reviewed literature, conversations with scientists and managers, and feedback gathered through a poll of ABSC crab
 harvesters. The goal for these strategies is to keep everyone, including small independent harvesters, fishing while the crab stocks recover.
- We hope that portions of this strategy can apply to fisheries in other regions of the country that may face similar disturbances in the future.

DRAFT resilient crab fishery action plan

| | Managers | Scientists | Industry |
|-----------------------|---|--|---|
| Stabilize the fleet | *Solidify trust with industry *Identify funding to cover minimum individual vessel business costs *Create a crisis roadmap of existing available resources | *Prioritize partnering with industry on research (and compensate industry) *Look beyond stock assessments *Use best scientific information available to act, even when uncertain | *Identify minimum individual vessel business costs *Find off-season work, cross training opportunities, or benefits to keep crew working and incentivize them to return |
| Create opportunity | *Diversify *Clearly state guiding [socioeconomic] principles *Implement actions to address fishing impacts to crab and crab habitat | *Invest in social scientist capacity *Identify research priorities and sustained funding | *Coordinate & identify ways to keep operating as a fleet (diversify) |
| Look to the future | *Prioritize proactive management measures to address a range of disturbances *Adjust management representation to reflect all fishery participants *Evaluate emergency rule timing *Evaluate NS1 rebuilding provisions *Create and subsidize fleet insurance (not tied to climate) or reform fishery disaster process to be timely | *Research crab enhancement *Evolve and adapt to new research priorities and needs | *Pre-analyze information to populate disaster requests *Connect to carbon policy initiatives, like incentive programs or mitigating ocean acidification impacts *Create a trust to support independent harvesters |

