State of Alaska's Salmon and People:
Alaska Board of Fisheries Proposal Dataset

SASAP

Meagan Krupa, PhD

NCEAS

NAUTILUS IMPACT

SASAP

State of Alaska's Salmon and People

AlaskaSalmonandPeople.org

Norton Sound resident processing salmon at her fish camp. Credit: Julie Raymond-Yakoubian. Used with permission.
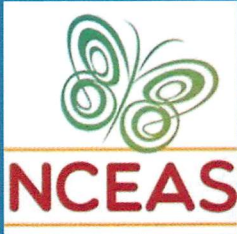
- Integrate knowledge across disciplines, between user groups, and across regions and cultures
- Provide a holistic view of the salmon/people system
- Generate institutional capacity
- Establish an ongoing, shared baseline of knowledge
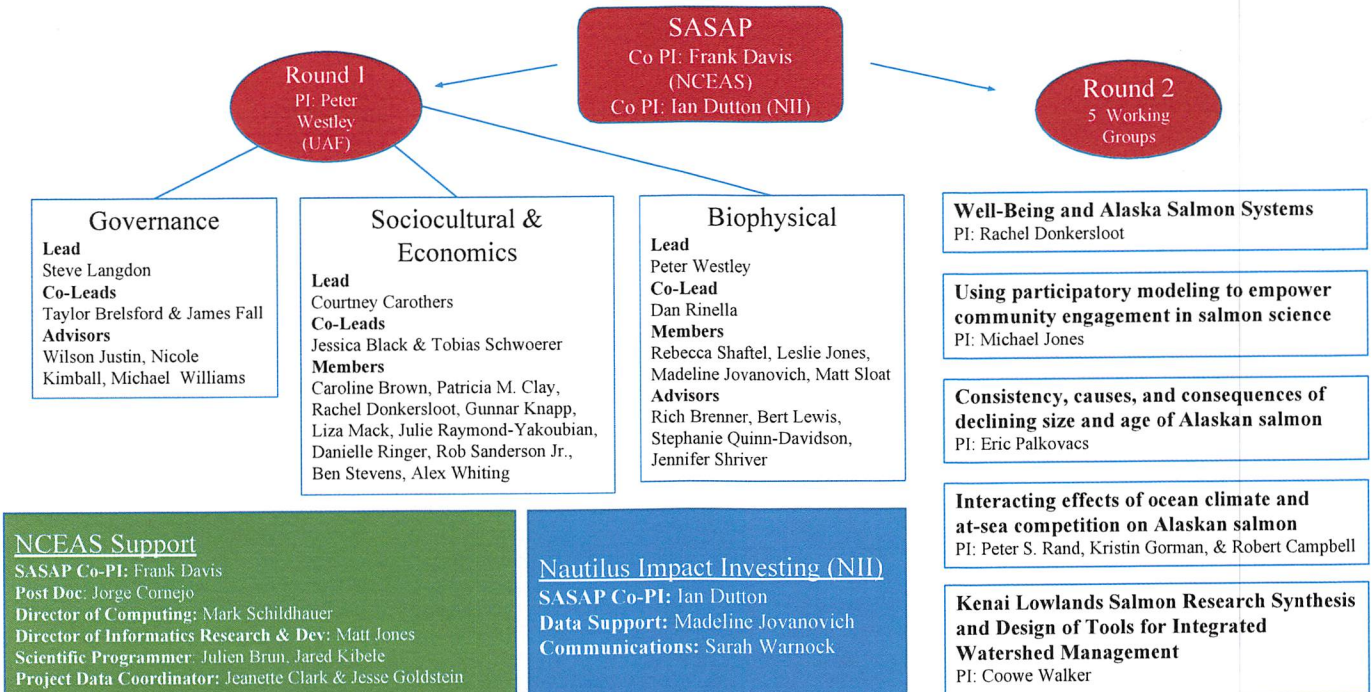
Why NCEAS?

NCEAS

www.nceas.ucsb.edu

- NSF Center 1995-2013
- UCSB Research Unit 2014
- >500 synthesis projects
- *NSF Long Term Ecological Research Network Communication Office*
- *NSF Arctic Data Center*
- *Science for Nature and People Partnership (SNAPP)*
- *Gulf of Alaska Synthesis*
- *Long-term Foundation partner*

Courtesy LTER Network Office

State of Alaska's Salmon and People (SASAP): 106 participants

SASAP
Co PI: Frank Davis (NCEAS)
Co PI: Ian Dutton (NII)

Round 1
PI: Peter Westley (UAF)

Round 2
5 Working Groups

Governance
Lead
Steve Langdon
Co-Leads
Taylor Brelsford & James Fall
Advisors
Wilson Justin, Nicole Kimball, Michael Williams

Sociocultural & Economics
Lead
Courtney Carothers
Co-Leads
Jessica Black & Tobias Schwoerer
Members
Caroline Brown, Patricia M. Clay, Rachel Donkersloot, Gunnar Knapp, Liza Mack, Julie Raymond-Yakoubian, Danielle Ringer, Rob Sanderson Jr., Ben Stevens, Alex Whiting

Biophysical
Lead
Peter Westley
Co-Lead
Dan Rinella
Members
Rebecca Shaftel, Leslie Jones, Madeline Jovanovich, Matt Sloat
Advisors
Rich Brenner, Bert Lewis, Stephanie Quinn-Davidson, Jennifer Shriver

Well-Being and Alaska Salmon Systems
PI: Rachel Donkersloot

Using participatory modeling to empower community engagement in salmon science
PI: Michael Jones

Consistency, causes, and consequences of declining size and age of Alaskan salmon
PI: Eric Palkovacs

Interacting effects of ocean climate and at-sea competition on Alaskan salmon
PI: Peter S. Rand, Kristin Gorman, & Robert Campbell

Kenai Lowlands Salmon Research Synthesis and Design of Tools for Integrated Watershed Management
PI: Coowe Walker

NCEAS Support
SASAP Co-PI: Frank Davis
Post Doc: Jorge Cornejo
Director of Computing: Mark Schildhauer
Director of Informatics Research & Dev: Matt Jones
Scientific Programmer: Julien Brun, Jared Kibele
Project Data Coordinator: Jeanette Clark & Jesse Goldstein

Nautilus Impact Investing (NII)
SASAP Co-PI: Ian Dutton
Data Support: Madeline Jovanovich
Communications: Sarah Warnock

Staff

Matt Jones, Director of Informatics and R&D *(Juneau)*
Responsible for deliverables. Driving the Data Task Force project; providing technical training and guidance on tools to assist Working Groups in managing, tracking, and archiving data.

Mark Schildhauer, Director of Computing (just retired) *(Santa Barbara)*
Drives how NCEAS infrastructure is used and assists Working Groups in utilizing infrastructure. Fosters a culture of sharing knowledge (codes, data formats, etc.) that have been useful to other WGs.

Julien Brun, Scientific Programmer *(Santa Barbara)*
Assists Working Groups in the use of NCEAS analytical & collaborative tools and infrastructure.

Jeanette Clark, Project Data Coordinator *(Santa Barbara)*
Jesse Goldstein, Project Data Coordinator *(Santa Barbara)*
Jorge Cornejo, SASAP Post Doc *(Santa Barbara)*

Graduate student interns
~6 FTE trained by the Projects Data Coordinator and responsible for GitHub ticketing, tracking down data, metadata cleaning, etc.
Jared Kibele, Scientific Programmer 50% SASAP, 50% DTF;
Software Developer Part time, to help develop the salmon data portal as a part of the KNB

Salmon Data Task Force
Co PI: Matt Jones (NCEAS)
Co PI: Ian Dutton (NII)

Ethnography Study *University of Washington*
Human Centered Design & Engineering

David Ribes, Associate Professor
Sarah Inman, PhD Student
Charles Hahn, PhD Student

Subcontracts
AK Dept of Fish & Game (ADFG)

US Fish & Wildlife Service (USFWS)

NOAA National Marine Fisheries Service (NMFS)

Board of Fish Records – Meagan Krupa & Molly McCarthy

Nautilus Impact Investing
Ian Dutton, SASAP & Data Task Force Co PI *(Tasmania)*
Responsible for securing data, integration of SASAP/Data Task Force
Sarah Warnock, SASAP Program Associate (Pt. Reyes)

Examples of Published Datasets

Data Description	Archive Link
CFEC Permit values	https://knb.ecoinformatics.org/#view/urn:uuid:a058c862-34be-4a99-a024-2027164c0eed
CFEC permit holder database	https://knb.ecoinformatics.org/#view/urn:uuid:cfb72b77-a8db-4555-8e01-63e346241e44
USGS Stream Temperature	https://knb.ecoinformatics.org/#view/urn:uuid:216759e1-8d13-49da-a7b4-8a6686a2c161
USGS Streamflow	https://knb.ecoinformatics.org/#view/urn:uuid:8f58a1fb-25fb-41c7-abf8-d708fb077b92
High-Seas Salmon Tag Recovery Database	https://knb.ecoinformatics.org/#view/urn:uuid:4ee77426-8633-4df4-ad0d-71756b8afe37
Well Locations	https://knb.ecoinformatics.org/#view/urn:uuid:4f136a49-2b6a-4918-a71f-100e92819689
Salmon Wholesale Prices (COAR)	https://knb.ecoinformatics.org/#view/urn:uuid:c24ca3d8-3390-4dd8-bef7-db97e14a0a39
Commercial Salmon Exvessel Values	https://knb.ecoinformatics.org/#view/urn:uuid:45e51431-83a0-47d2-975d-840537a337ed
Coastal Habitat Injury Assessment	https://goa.nceas.ucsb.edu/#view/doi:10.5063/F100001W
Salmon Commercial Harvest	https://knb.ecoinformatics.org/#view/urn:uuid:e6cf5331-a5c3-4e3b-889d-f44e15001780
Board of Fish Proposal Data 1959-2018	doi.org/10.5063/F1G73BVP

Resurrecting the Public Record: Assessing stakeholder involvement in Alaska's Board of Fish process from 1959 to the present

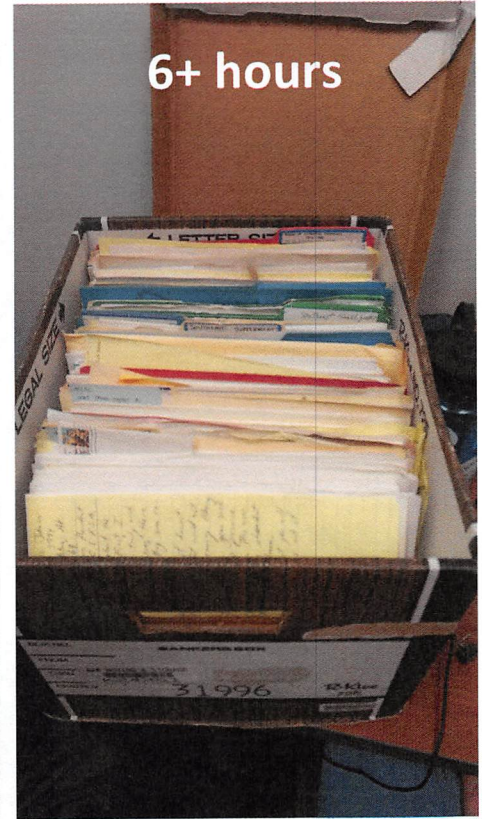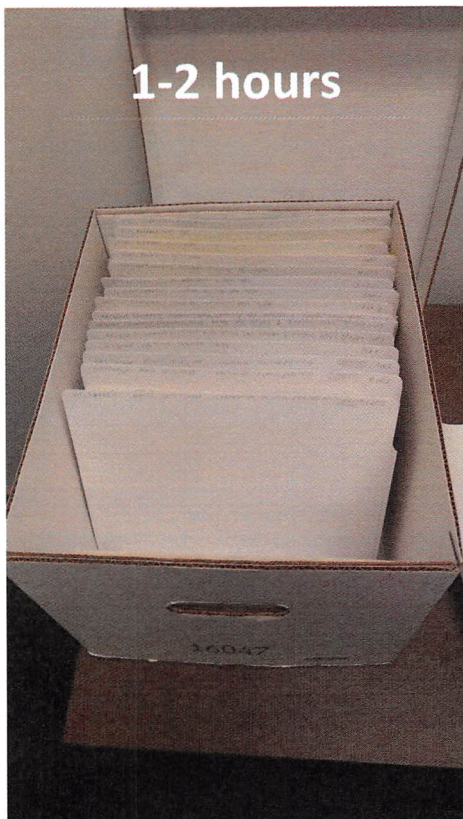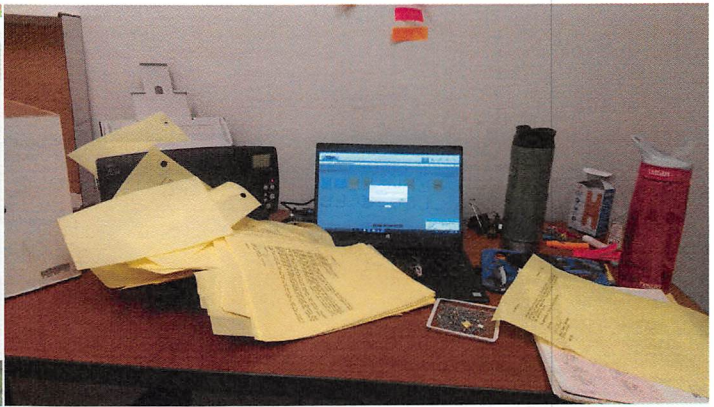Meagan Krupa, Molly Cunfer, Jeanette Clark, Emily O'Dean

Methods

Methods: Downloading/Digitization

2003-present   Pre-2003

1-2 hours   2-4 hours   6+ hours

24,731 proposals

96,781 scanned pages

181.5 digitizing hours

185 boxes

#staples removed < 3.7 billion

#paper cuts = 430

Gallons of coffee consumed >150
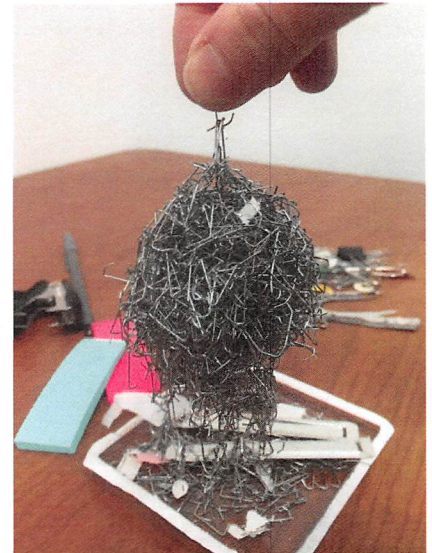
- Date
- Area
- Meeting
- Species
- Sector
- Proposal #
- Regulatory Proposal Summary
- Statute
- Category
- Action
- Action 2
- Proposed By (M/F)
- Group
- Gender
- Board Action
- Board Positions
- Board abstains, absences
- ADF&G position

Methods: Coding 19 categories
>500,000 data over 18 months
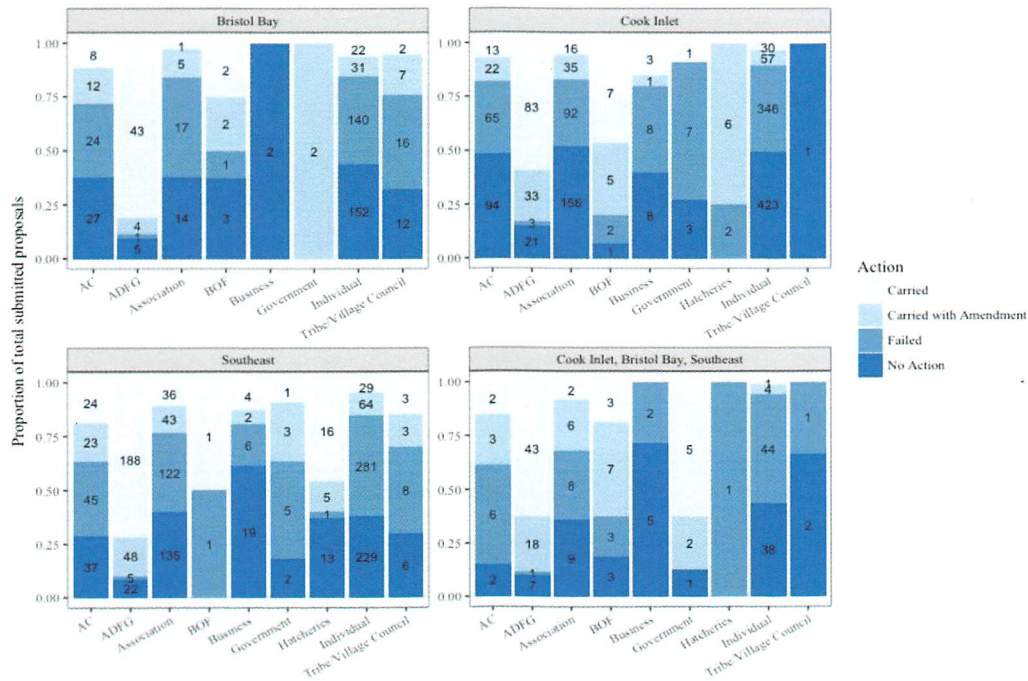
Proportion of submitted proposals by group and region for Bristol Bay, Cook Inlet, and Southeast from 2000-2015

(Krupa et al. 2018)

https://knb.ecoinformatics.org/view/doi:10.5063/F1G73BVP

Files in this dataset   Package: resource_map_doi:10.5063/F16D5R7K

	Name		File type	Size		
						Download All ⬇
📄	Metadata: Alaska Board of Fisheries Proposals 1959-2016.xml		EML v2.1.1	39 KB	4 views	Download ⬇
▦	BOF_Proposals.csv	More info	text/csv	7 MB	1545 downloads	Download ⬇
▦	BOF_Coding_Manual.pdf	More info	PDF	617 KB	454 downloads	Download ⬇

General

Identifier   doi:10.5063/F16D5R7K

Abstract   Every three years, the Alaska Board of Fish (Board) calls for regional fisheries management proposals, inviting the public to directly participate in fisheries governance. Anyone can submit a proposal and provide written or oral testimony on any of the proposals, which constitute potential regulatory changes and are accessible in an online proposal book. Proposals are logged by Board staff and recorded in the meeting documents, which are stored online and archived at the State, Library, Archives, and Museum (SLAM) in Juneau. Each proposal

Board of Fisheries Proposal Data: R Shiny App

Alaska Board of Fisheries Proposals

Visualize the number of proposals with comparisons and optional filters.

Proposals by:

SECTOR

Compare by:

YEAR

Filter by:

Years:

1960   to   2017

Sector:

NOTHING SELECTED

Region:

NOTHING SELECTED

Proponent group:

NOTHING SELECTED

Species:

NOTHING SELECTED

Action:

Sector
- Commercial
- Personal U
- Sport Fish
- Subsistenc
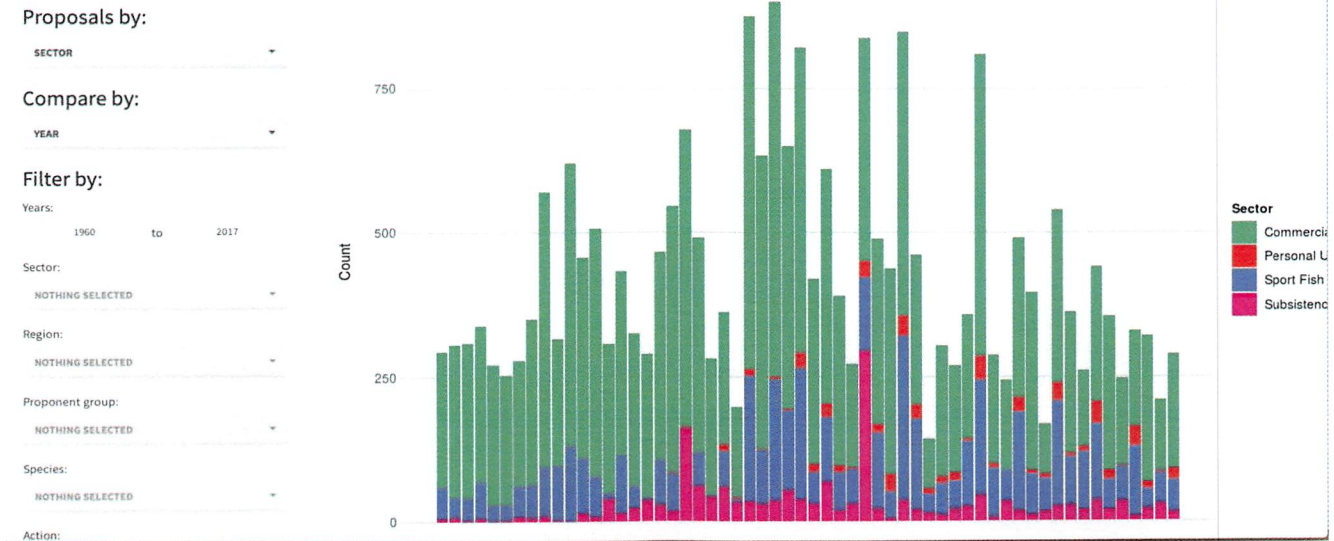
https://sasap-data.shinyapps.io/board_of_fisheries/

Publications

Published Datasets & Papers:

- Krupa, M. B. and M. M. Cunfer. 2017. Alaska Board of Fish Proposals 1959–2016. Knowledge Network for Biocomplexity (KNB), 10.5063/F1G73BVP

- Krupa, M., M. Cunfer, G. Haight, J. Clark. 2018. Alaska Board of Fisheries Meetings. Knowledge Network for Biocomplexity. Doi:10.5063/F1S75DKG.

- Krupa, M.B. and M.M. Cunfer. 2018. Resurrecting the Public Record: Assessing stakeholder participation in Alaska's Board of Fish process. Marine Policy 96:36-43, https://doi.org/10.1016/j.marpol.2018.07.010

In Prep:

- Clark, J., M. Krupa, M. Jones. *In prep.* Socializing Datasets: How to transform archived public documents into accessible data. Scientific Data.

- Cunfer, M., M. Krupa, J. Clark. *In Prep.* Analyzing the Efficiency of Board Processes in Natural Resource Management: using the Alaska Board of Fisheries dataset to determine frequency and success rates of regulatory statutes.

- Krupa, M. B., J. Clark, and M. Cunfer. *In prep.* The Gender Dimension: exploring the relationship between women's governance participation and permit ownership in Alaska's fisheries. Ecology and Society.

- Krupa, M., M. Cunfer, J. Clark. *In prep.* Who's winning the public process? How to identify diversity and inclusion gaps within natural resource management. Applied Anthropology.

- Krupa, M., M. Cunfer, J. Clark. *In prep.* The Big Dig(itization): Using historical public documents to more effectively guide natural resource management. Society and Natural Resources.

- ...

Other research questions...


Ship Creek, Anchorage, Alaska

- Which regulations solicit the most proposals over time?
- Where have Board of Fisheries meetings been located over time?
- Which regions are the most successful?
- How many "repeat" proposals are submitted?
- Is participation increasing or declining in each group and region?
- Are women participating in the proposal submission process?
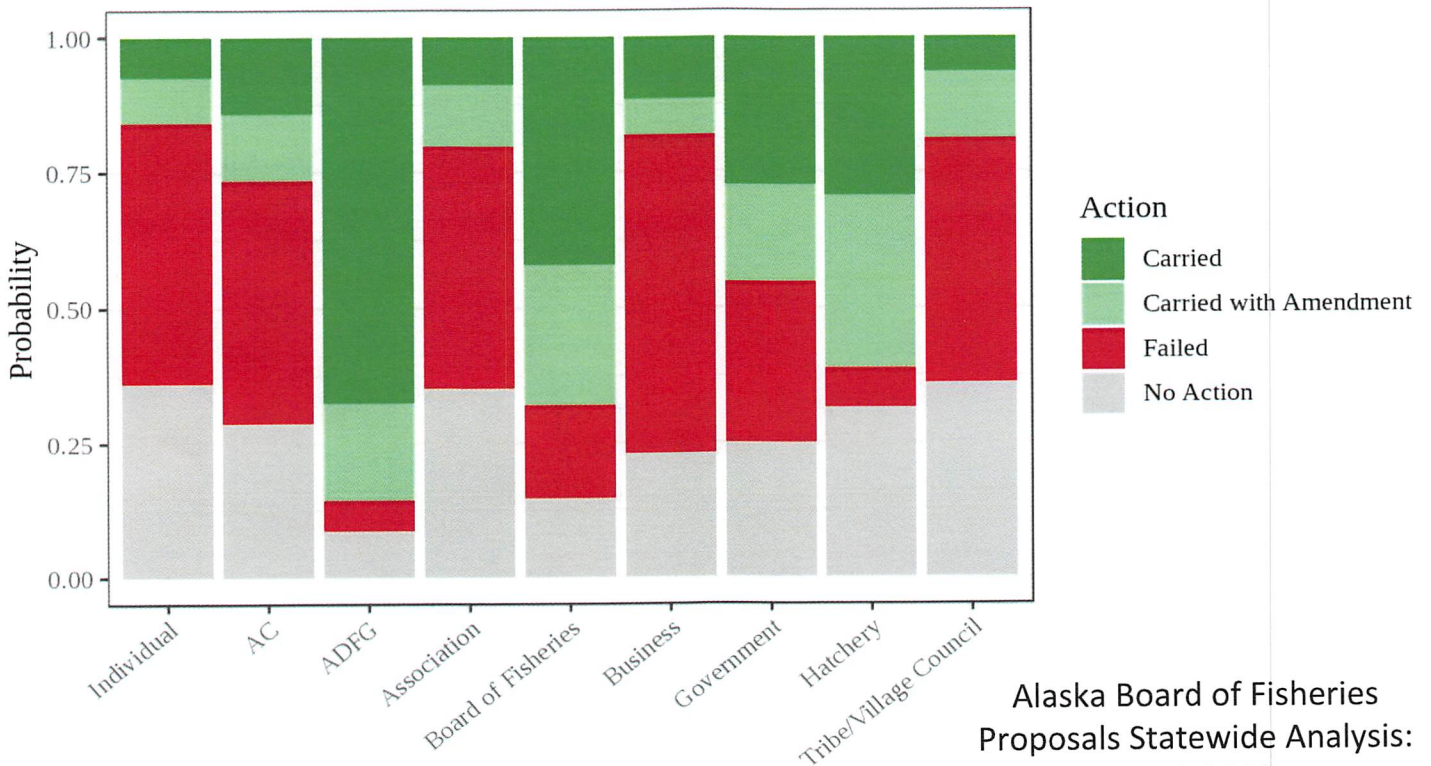
Alaska Board of Fisheries
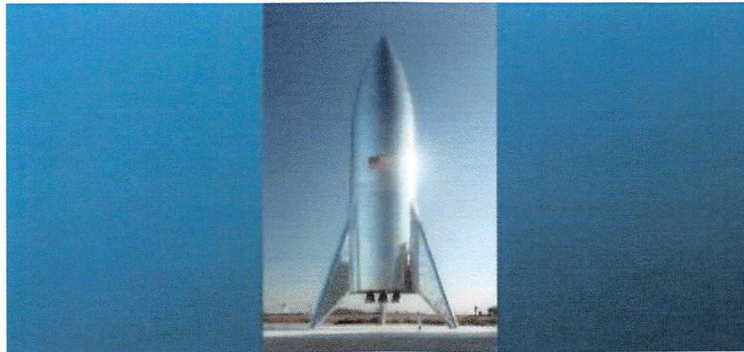Proposals Statewide Analysis:
1959-2018
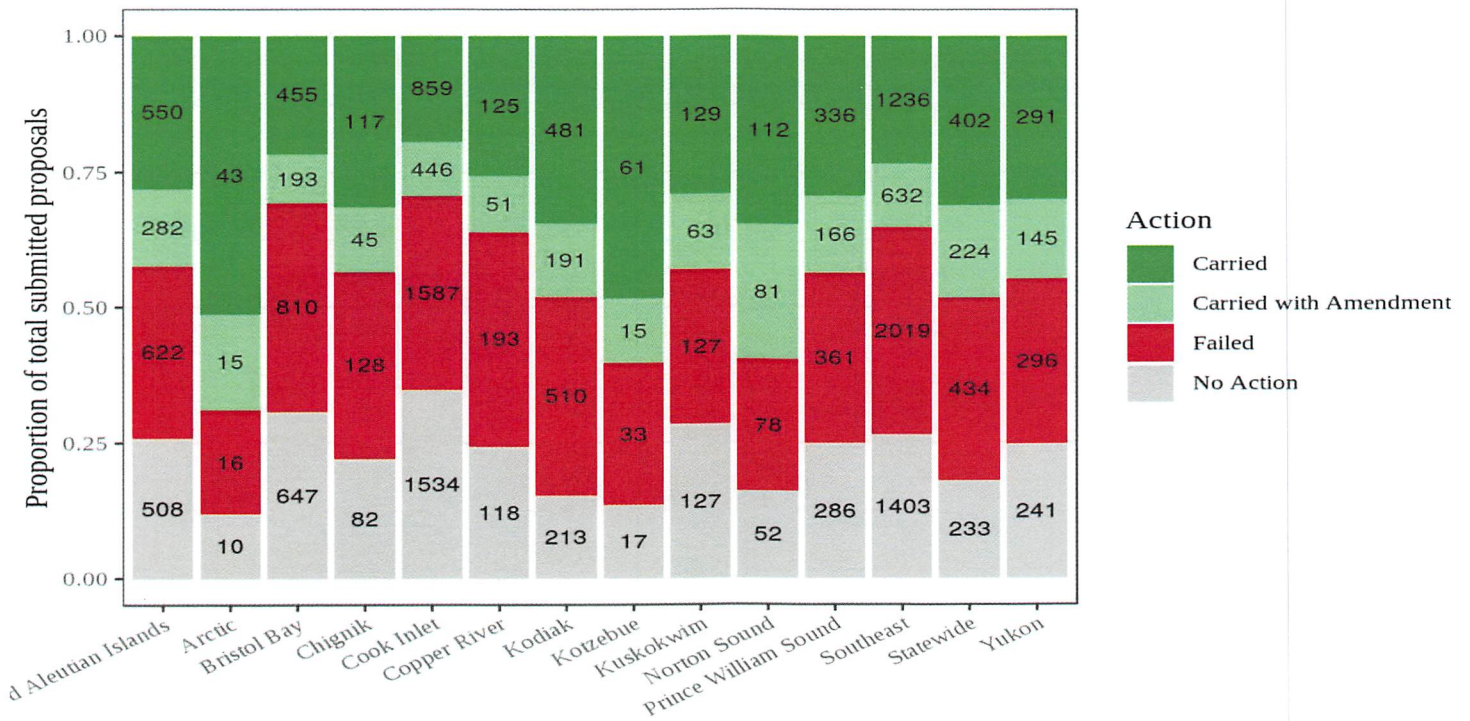
Statewide Analysis: 1960 - Present
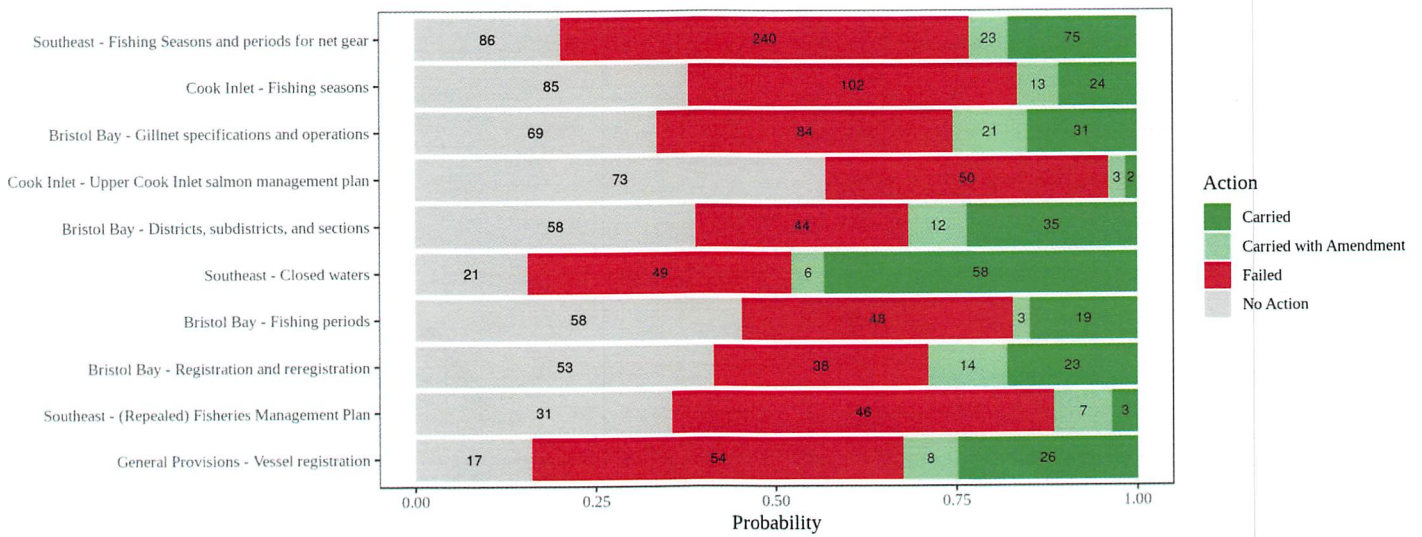
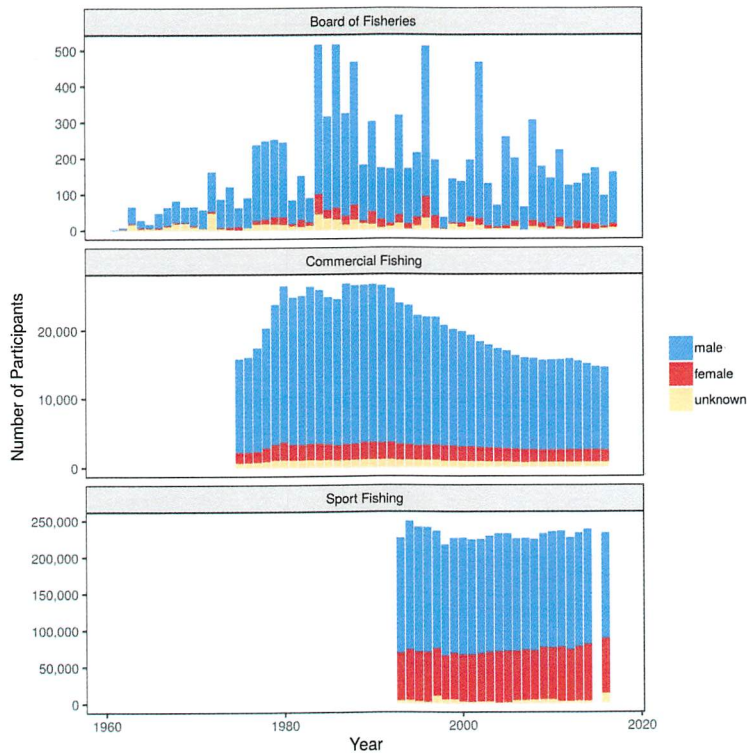**The Probability and Number of Most Common Regulations: 1959-2017**

An individual is as likely to survive a return trip from Mars than to change the Upper Cook Inlet Salmon Management Plan (<4%)
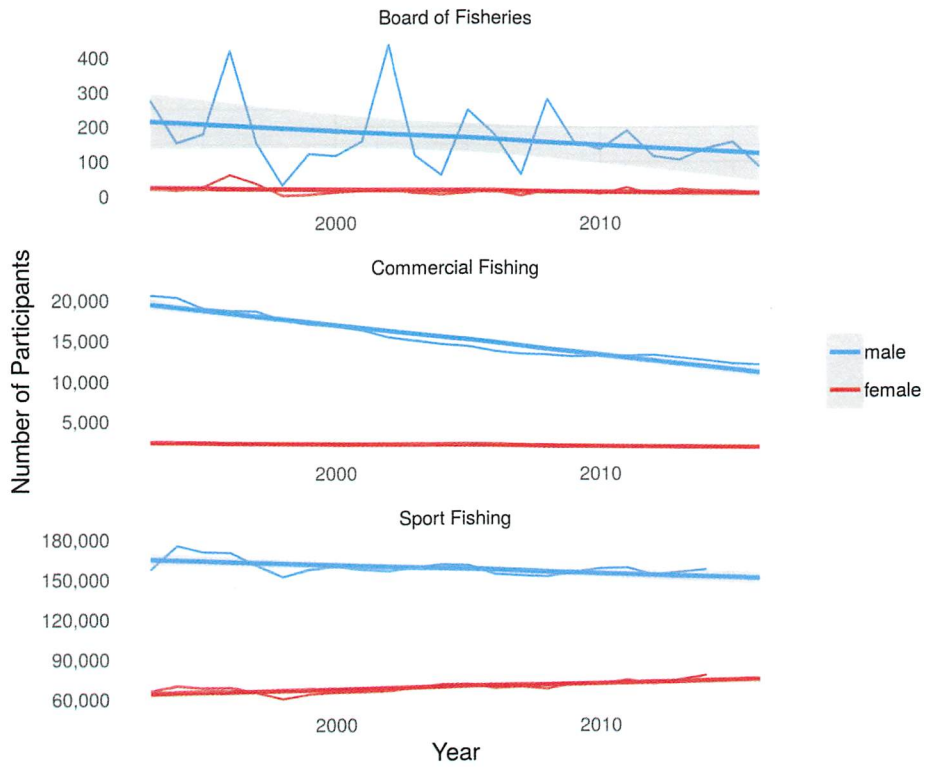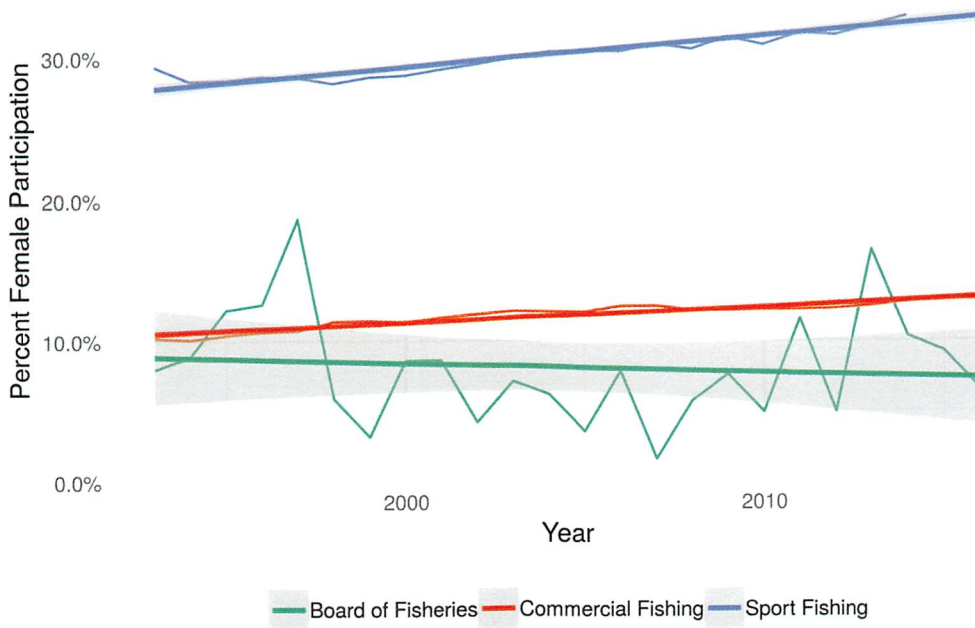

https://www.wmfe.org/spacex-seeking-launch-approval-for-shiny-new-rocket/9882

3

https://pages.github.nceas.ucsb.edu/NCEAS/sasap-data/action_analysis.html

The Gender Dimension:
exploring the relationship between women's permit ownership and governance participation in Alaska's fisheries

(Krupa et al. 2019)

Board of Fisheries

Commercial Fishing

Sport Fishing

male
female

Number of Participants

Year

Krupa et. al. 2019

Percent Female Participation

Year

Board of Fisheries   Commercial Fishing   Sport Fishing

Krupa et. al. 2019

Thank you!

We would like to thank:

- Glenn Haight, Executive Director of the Board of Fisheries
- Dr. Ian Dutton, Sarah Warnock, NII
- Matt Jones, Dr. Frank Davis, Jeanette Clark, Shelby Oliver, Naomi Louchouarn, Patrick Foran, Dominic Mullen, Ginger Gilquist, NCEAS
- Chris Hieb, Wayne Norlund, and Micah Sommers, SLAM

Related Projects:

- National Pacific Research Board, Grant #126-1680, Data Rescue: Digitizing and Disseminating Historical Board of Fisheries Documents and Commercial Fisheries News Releases, ADFG, Winter 2018-2019

- Alaska State Library, Archives, and Museum, Oral Testimony to the Board of Fish 1959-1975 Digitization and Rescue Project, 2018-?