

Alaska Fisheries Resilience Index:



Adapting to Environmental Change
Through Business Self-assessments

Syverine Bentz and Grace Allan

Kachemak Bay National Estuarine Research Reserve



Lowell Wakefield Fisheries Symposium May 7, 2019 • Anchorage, Alaska

Cooperative Research — Strategies for integrating industry perspectives and insights in fisheries science

Science Collaborative Project Overview



Need



Approach



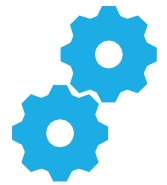
Methods



Findings



Lessons



Next Steps





National Estuarine Research Reserves: Living Laboratories for Science, Education, and Protection







Priority Coastal Management Issues

Ocean Acidification



Coastal Storms



Harmful Algal Blooms

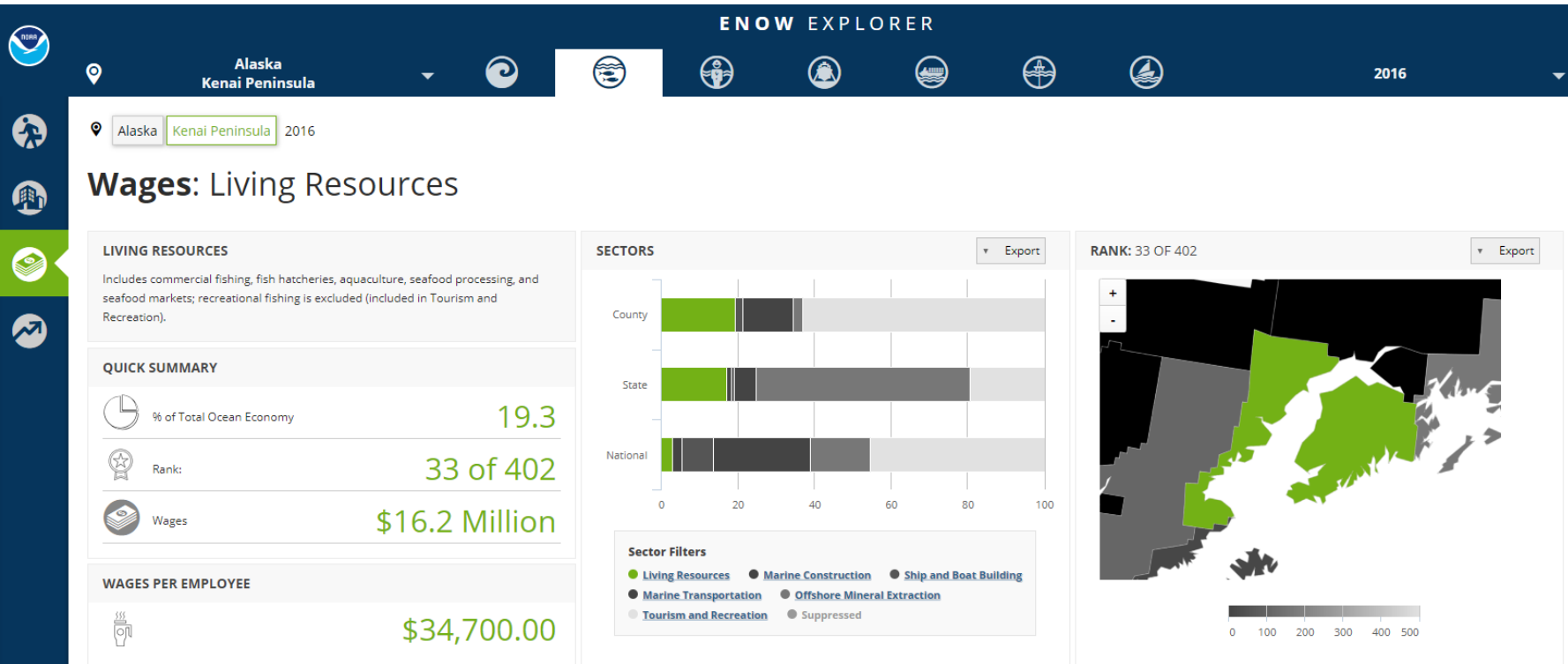


KBNERR and Fireweed Academy Art and Science Collaborative 2017

Rapid Changes, Uncertain Futures



Business Coastal Stakeholders

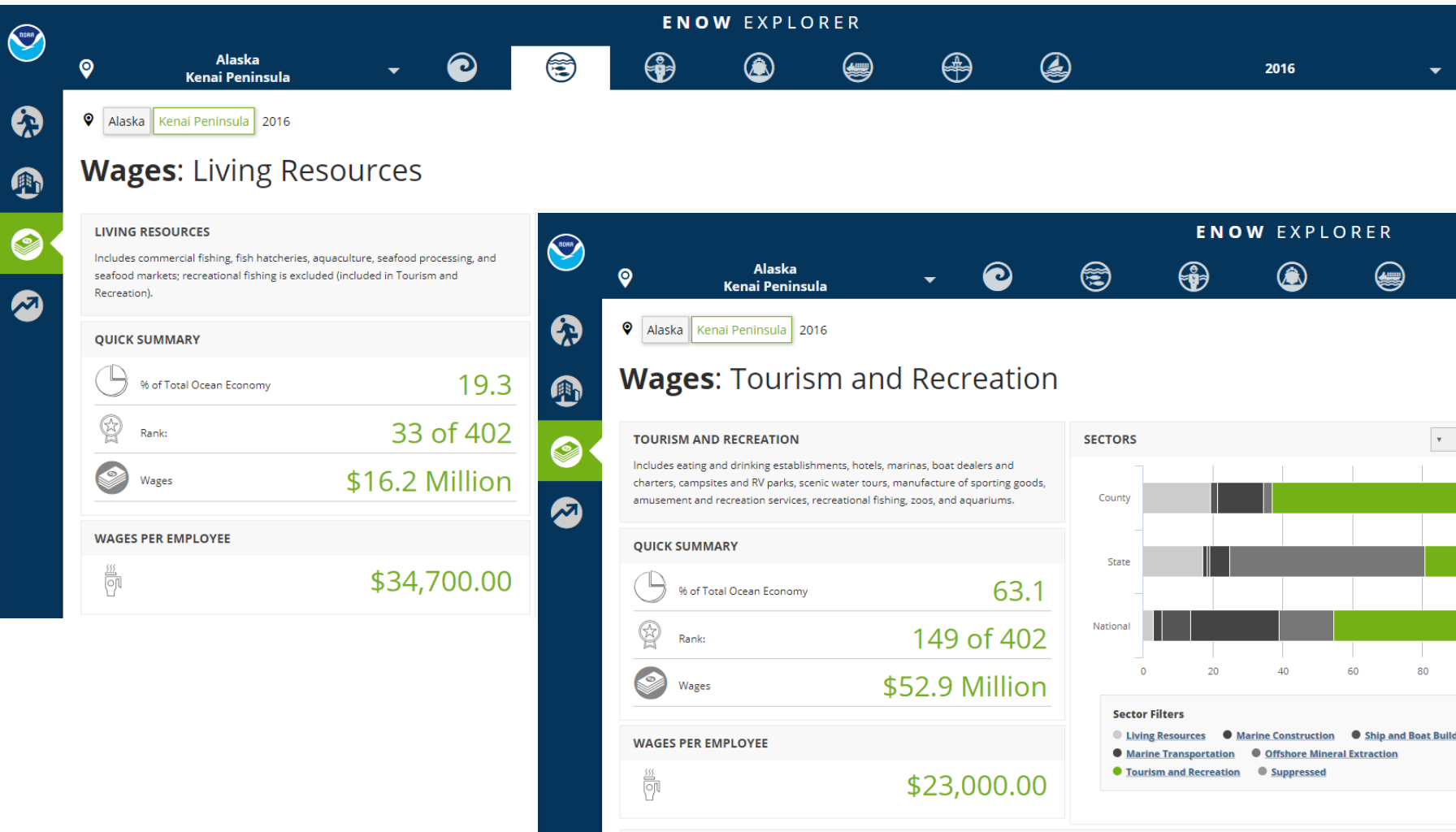


Living Resources:

- Fishing
- Fish Hatcheries
- Aquaculture
- Seafood Processing
- Seafood markets



Business Coastal Stakeholders



Living Resources:

- Fishing
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- Aquaculture
- Seafood Processing
- Seafood markets

Tourism and Recreation:

- Charter Businesses



Collaborative Approach: Science Transfer

- Coastal change, natural hazards
- Engage community
- Inform research and monitoring



The image shows the cover of a report titled 'FISHERIES RESILIENCE INDEX'. At the top, the title is written in white on a blue background. Below the title is a circular logo containing two blue fish. Underneath the logo, the text reads 'A Business Self-Assessment' in a large, bold, black font, followed by 'Understanding How Prepared Your Business is for a Disaster' in a smaller, blue font.

<http://masgc.org/coastal-storms-program/resilience-index>



Collaborative Approach: Science Transfer

- Coastal change, natural hazards
- Engage community
- Inform research and monitoring



FISHERIES RESILIENCE INDEX



A Business Self-Assessment

Understanding How Prepared
Your Business is for a Disaster

<http://masgc.org/coastal-storms-program/resilience-index>

SCIENCE COLLABORATIVE

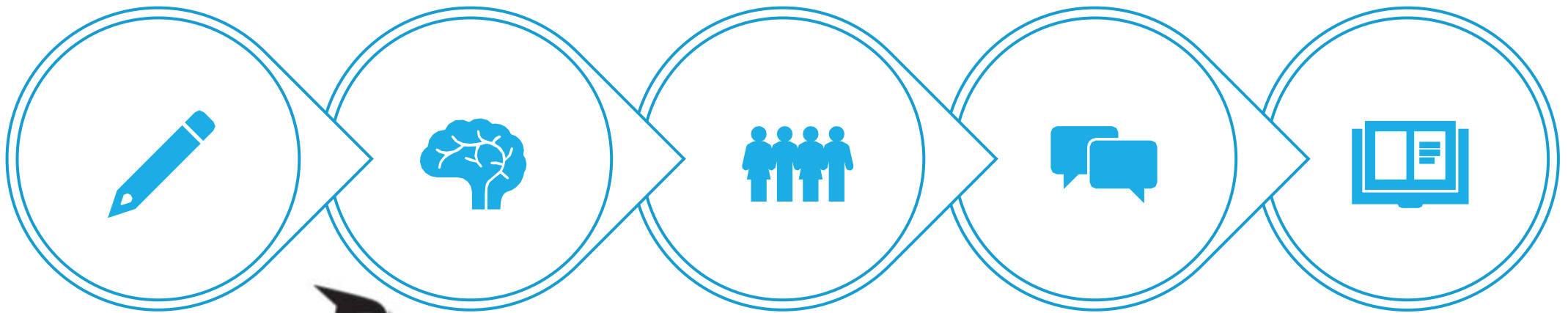


Promoting Coastal Community Resilience through Alaska Fisheries Business Self-Assessments

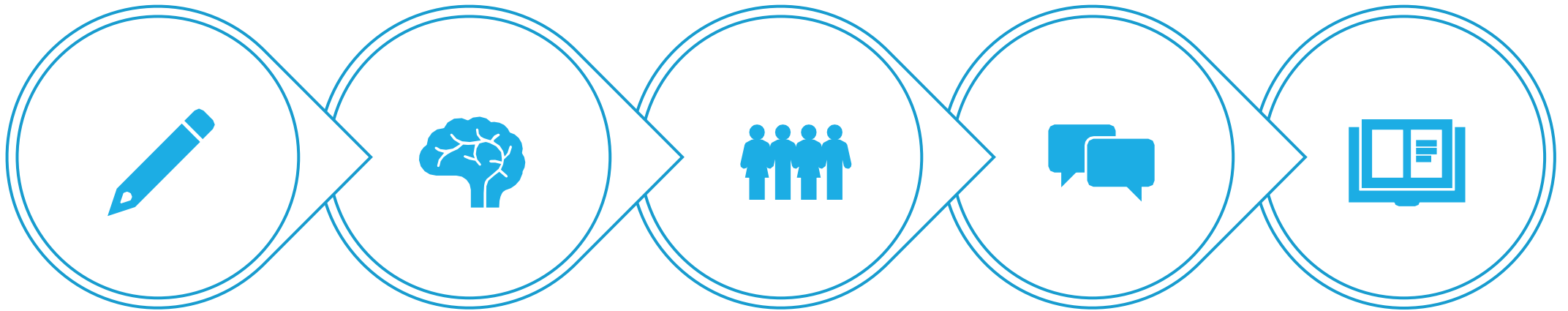




Tailoring the Index and Resources



Advisory Review





Alaska 2016



Employment: Living Resources

LIVING RESOURCES

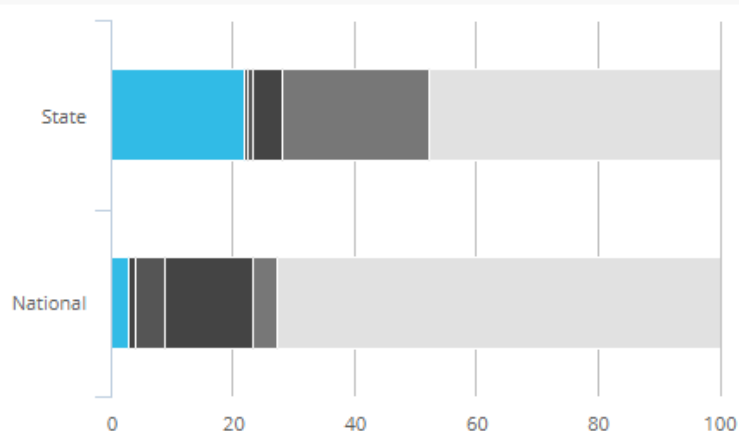
Includes commercial fishing, fish hatcheries, aquaculture, seafood processing, and seafood markets; recreational fishing is excluded (included in Tourism and Recreation).

QUICK SUMMARY

	% of Total Ocean Economy	21.8
	Rank	2 of 30
	Employed	10,364
	Self Employed	7,709

SECTORS

Export

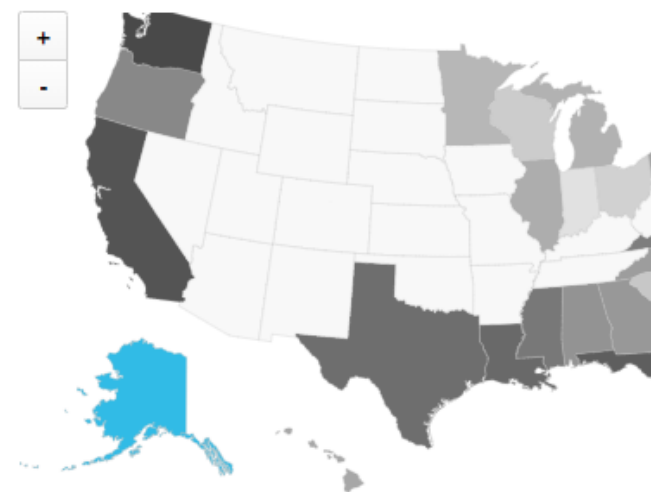


Sector Filters

- Living Resources
- Marine Construction
- Ship and Boat Building
- Marine Transportation

RANK: 2 OF 30

Export



Alaska 2016

Employment: Living Resources

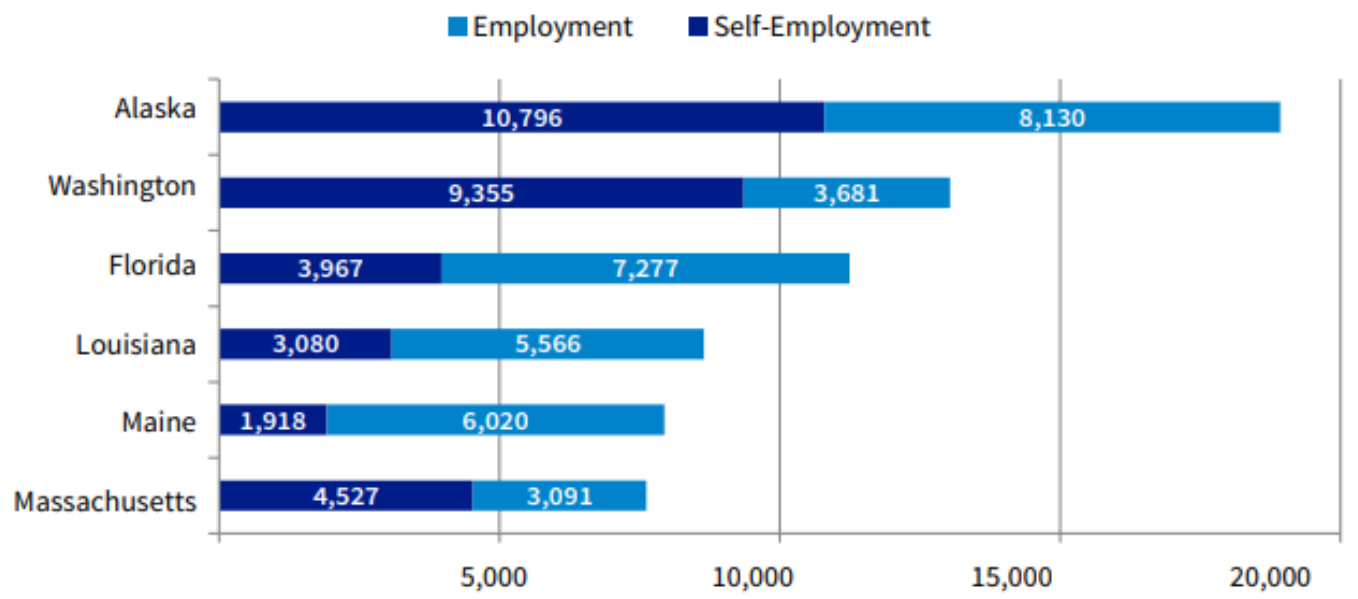
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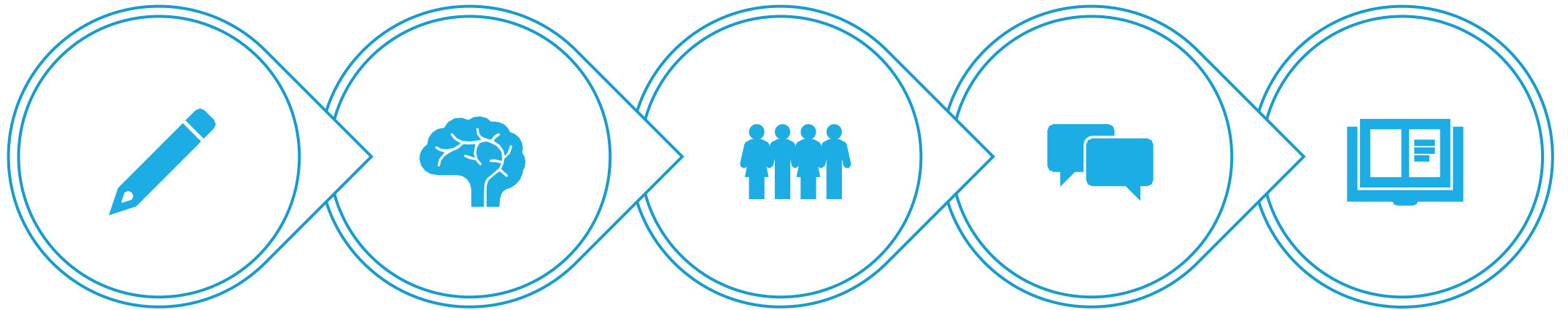
Leading States in the Living Resources Sector, 2015



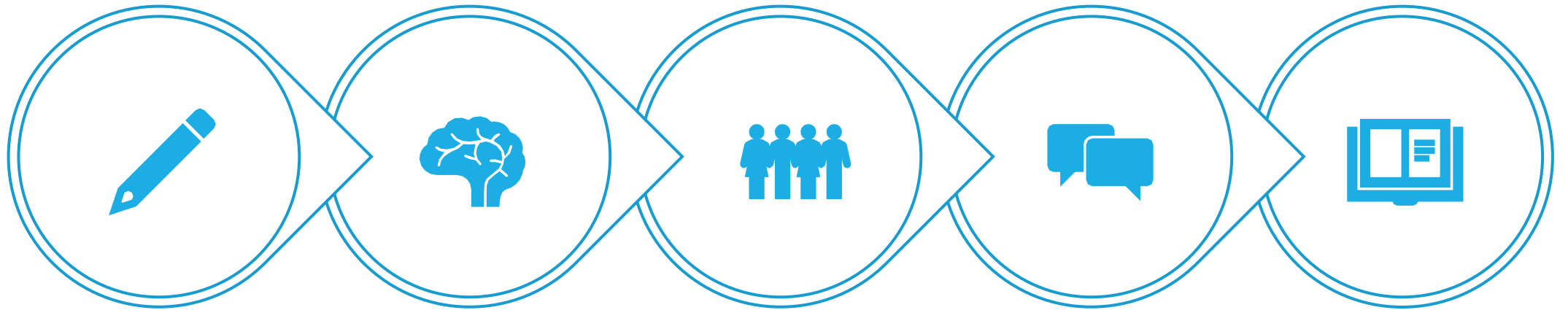
<https://coast.noaa.gov/digitalcoast/training/econreport.html>

<https://coast.noaa.gov/digitalcoast/tools/enow.html>

Engaging Businesses



Focus Groups



Focus Groups





A Business Self-Assessment

Understanding How Prepared
Your Business is for a Disaster



"A fisherman must be resilient"

DRAFT



Results: Alaska FRI Tool



Business Operations



Disaster Preparedness



Marketing



Workforce



Disaster Response



Resource Access



Section Questions

Related Resources



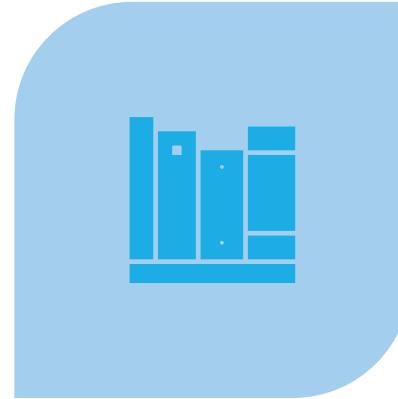
BUSINESS AND OPERATIONS PLANS

Having a up to date business plan can help identify what your next steps are to be more resilient and successful, it can also help when applying for loans or making investments.

Does your business have the following business and operations plans in place? Rate your business from 1-3 for each indicator.

Business and Operations Plans	Score 1 to 3
Example: Business summary None: 0 pts Summarizes key points clearly and concisely: 3 pts	
Do you have a business plan containing the following:	
Business summary (brief summary consisting of a business description, goals, financial plan, and time line)	
Business overview (legal structure, products or services, location, management, insurance)	
Industry analysis (projected prices, availability of product, environmental issues, forecasted change)	
Customer analysis (customer demographics, target markets, needs of target customers)	
Processing or marketing plan (target markets, customer needs, pricing, distribution, and promotions plan)	
Employee plan (organization of management, employee roles, salaries, projected raises)	
Operations plan (equipment, fishing methods, delivery or processing methods, regulations)	
Financial plan (historical performance, future income projection, sources and uses of funds, summary of financial needs, and profits/losses)	
Risk Management Plan (diversification of fisheries, outside employment, other investments)	
Has your business plan been updated in the last 12 months?	
Do you have reliable access to necessary products and services (boat maintenance, construction, food, fuel, and ice)?	
Does your current equipment and technology maximize your profitability (e.g. fuel-efficient engine, auto-baiter, refrigeration system)?	
Do you have an exit plan (retirement needs, tax implications, business transfer strategies)?	
Total Score:	

ADDITIONAL NOTES



RESOURCES FOR BUSINESS AND OPERATIONS PLANNING

Sea Grant FishBiz Project: <http://fishbiz.seagrant.uaf.edu/>
Financial and business tools for Alaska commercial seafood harvesters created by the Alaska Sea Grant Marine Advisory Program. This site provides comprehensive information on how to start, manage, and grow a successful fishing business. Here you can find helpful tips such as: fishery specific excel spreadsheets to analyze various "what if" scenarios for your fishing business, information on how to initiate a permit sale, a fish ticket excel spreadsheet, and much more.

FishBizPlan: <https://fishbizplan.org/>
FishBizPlan is a powerful website developed to help rural businesses develop a business plan. It is free of charge for anyone to use individually or in education programs. Each business type has an outline designed specifically for that business, tips or questions that help you develop each section of the plan, sample business plans, and links to additional resources for each section of the plan.

Fishery statistics-participation and earnings: https://www.cfec.state.ak.us/fishery_statistics/earnings.htm
The Alaska Commercial Fisheries Entry Commission produces standard data tables with information pertaining to fisheries, permits and vessels. These quartile tables can be useful for sourcing information when creating a financial plan.

Alaska Division of Economic Development: Commercial Fishing Loan programs
<https://www.commerce.alaska.gov/web/ded/FIN/LoanPrograms/CommercialFishingLoanProgram.aspx>
The Alaska Department of Commerce, Community, and Economic Development provides long-term, low interest loans to promote the development of predominantly resident fisheries, and continued maintenance of commercial fishing vessels and gear, to improve the quality of Alaska seafood products.

NOAA Fisheries Finance Programs: http://www.nmfs.noaa.gov/mb/financial_services/ffp.htm
Provides long term financing for the cost of construction or reconstruction of fishing vessels, fisheries facilities, aquaculture facilities and individual fishing quota in the Northwest Halibut/Sablefish and Alaskan Crab Fisheries.

NOAA Capital Construction Fund: http://www.nmfs.noaa.gov/mb/financial_services/ccf.htm
The purpose of the Capital Construction Fund (CCF) Program is to improve the fishing fleet by allowing fishermen to accelerate their accumulation of funds with which to replace or improve their fishing vessels. The CCF Program enables fishermen to construct, reconstruct, or under limited circumstances, acquire fishing vessels with before-tax, rather than after-tax dollars.

IRS Fishing Tax Center: <https://www.irs.gov/businesses/small-businesses-self-employed/fishing-tax-center>
There are certain tax laws that pertain to fishing businesses. This website provides information on how to treat fishing income, assets, and deductions according to U.S. tax law.

Alaska Vessel Fuel Efficiency Resources: <https://seagrant.uaf.edu/map/recreation/fuel-efficiency/>
Saving money on boat fuel can be as easy as simply slowing down or as complicated as replacing a boat engine, and results vary greatly depending on the vessel. This site offers tips for conserving fuel, results of a commercial fishing fuel survey, links to news stories about reducing fuel costs, a downloadable poster and brochure on fuel efficiency, and more.

Fishing Vessel Energy Efficiency: <https://www.afdf.org/projects/current-projects/fishing-vessel-energy-efficiency/>
The Alaska Fisheries Development Foundation provides a series of modules that explore how to save energy and fuel when it comes to DC and AC loads, propulsion loads, refrigeration, and hydraulics.

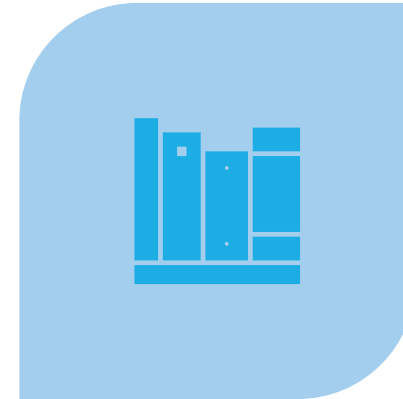


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-Bristol Bay Setnetter**



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Alaska FRI Changes

- Not focused on formal written business plans
- Elements needed for prospective investors, loan applications and asset evaluation.

Business Planning Resources

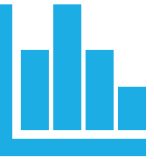
- SeaGrant’s FishBiz Planning Tool
- Commercial Fishing Loan Programs
- NOAA’s Fisheries Finance programs

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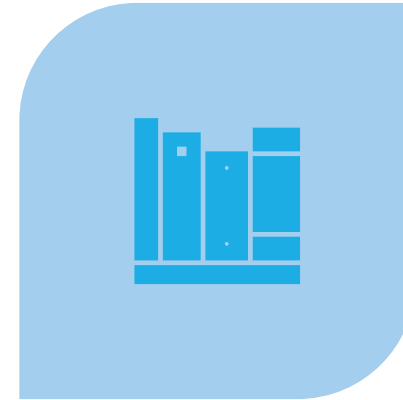


DISASTER PREPAREDNESS PLANS



2. Does your business have the following disaster preparedness plans in place? Rate your business from 1 to 3 for each indicator

Disaster Preparedness Plans	Score 1 to 3
Example: Do you consistently practice and review your emergency plan with your employees? Never=0 pts Every month with scenario practice=3 pts.	
Do you have a response plan for your employees for both large and small-scale disasters containing at least the following:	
Designated on-shore contact to enact emergency plan and coordinate emergency services if you are unable to be reached	



**“Hope for the best and plan for the worst.”
–Homer Charter Fisherman**



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<p>Designated on-shore contact to enact emergency plan and coordinate emergency services if you are unable to be reached</p>	

Alaska FRI Changes

- Includes general vessel operational safety training and practices to prepare for some environmental disasters.
- Preemptive trainings and insurance options

Disaster Planning Resources

- AK Sea Grant’s Risk Management Strategies
- Vessel Insurance Options
- Ready Business Emergency Planning

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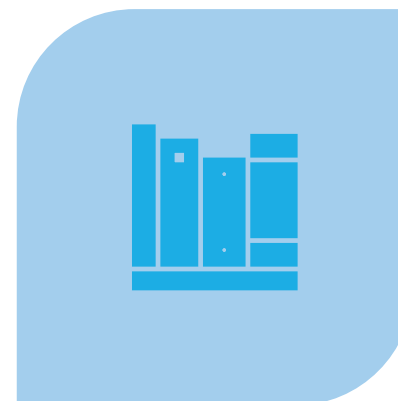


MARKETING



- 3.** Does your business have the following plans related to communications procedures and strategies?
Rate your business from 1 to 3 for each indicator.

Marketing	Score 1 to 3
Example: Are you a member of a local professional industry association? No= 0 pts Yes, Regularly attend and provide input= 3 pts	
If you direct market you have a marketing plan containing: market research, strategies, and timeline? If you sell to a processor do you have a marketing plan containing: alternate markets, contacts, and timeline?	



**“Educating your customer is the top priority.”
–Kodiak Salmon Seiner**



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Alaska FRI Changes

- Focuses direct marketing questions and resources, but also addresses those who sell to an outside processor
- Includes how to maintain and grow reliable relationships with processors

Marketing Resources

- AK Sea Grant’s Direct Marketing Manual
- Alaska Seafood Marketing Institute’s Toolkit
- ADF&G direct marketing and catcher/seller permitting processes

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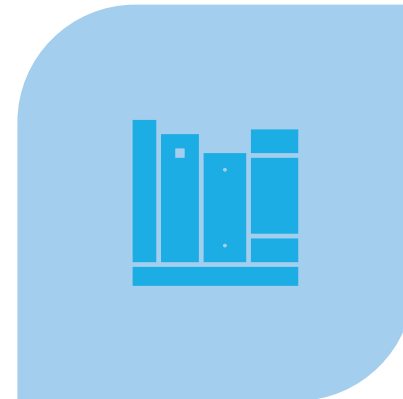


WORKFORCE



4. Does your business meet the following criteria with relation to your workforce? Rate your business from 1 to 3 for each indicator

Workforce		
Example: Do you actively recruit new employees? No, they must come to you= 0 pts Yes, online and community resources to recruit= 3 pts		
Do you have enough crew for normal operations under regular working conditions (including brief absences of a crewmember)?		



**“Investing in good crew can reduce your risk in dangerous situations.”
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Alaska FRI Changes

- Focuses on small crews with high turnover as in most Alaskan fishing businesses
- Important to explore new ways of recruiting crew
- Put effort into retaining competent crew to help ensure the profitability and safety of the business

Workforce Planning Resources

- Crew Contract Template
- Alaska Crew Finder job board
- Wage & Labor laws for fishing businesses

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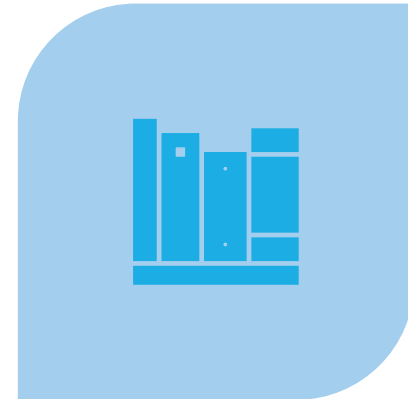


DISASTER RESPONSE RESOURCES



5. Is your business actively engaged with your local government regarding the following plans and procedures it provides? Rate your business from 1 to 3 for each indicator

Disaster Response Resources	Score 1 to 3
Example: Do you initiate or participate in any area-wide or emergency management agency (EMA) sponsored disaster drills with your employees? Never= 0 pts Every year and when a new crewmember is hired= 3 pts	
Have you identified resources to obtain up-to-date emergency information within your area? (local emergency management hotline, local municipalities' website)	



**“You can’t always count on outside response, your operation has to be prepared.”
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<p>Have you identified resources to obtain up-to-date emergency information within your area? (local emergency management hotline, local municipalities' website)</p>	

Alaska FRI Changes

- Include Alaska Specific emergencies, eliminate the focus on resources not available in Alaska
- Enable your business to be involved in disaster response efforts through trainings

Disaster Response Resources

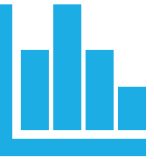
- NOAA Fishery Disaster Assistance
- U.S Small Business Administration
- Oil Spill Response and Marine Debris Cleanup Training

“You can’t always count on outside response, your operation has to be prepared.”

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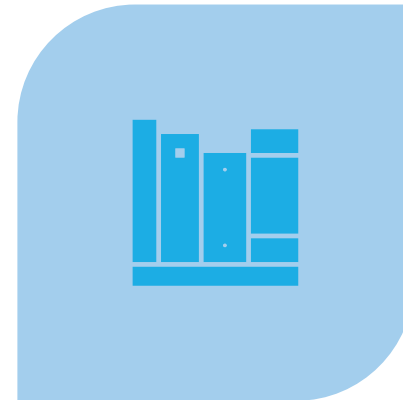


RESOURCE ACCESS AND KNOWLEDGE



6. Does your business support local resource sustainability efforts? Rate your business from 1 to 3 for each indicator

Resource Access and Knowledge	Score 1 to 3
Example: Do you use your knowledge and experience to influence fisheries policies? No= 0 pts Are a member and participate regularly at regulatory meetings= 3 pts	
Do you support local efforts on natural resource sustainability (habitat conservation and restoration, erosion prevention, renewable energy)?	



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Alaska FRI Changes

- Make your voice heard with your legislature and regulatory agencies
- Promote sustainable fishing practices
- Work with other small businesses to advocate for change

Access and Knowledge Resources

- Fishery Advocacy Associations
- Regulatory Agency information
- Tutorial on how to navigate the Board of Fish

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Themes and Outcomes

Overarching Themes of Focus Groups:

- Fisheries business have experience with uncertainty and adaptation
- Adapting and reviewing business practices year by year rather than a static plan
- Diversify both in fisheries and business strategies
- Safety first, maintain both physical and mental health

Recurring Adaptation Concerns:

- Regulations not advancing with environmental change
- Competition with Alaskan markets
- Uneducated consumers
- Unsustainably high bycatch





Participant Takeaways

- Loan applications
- Investment planning
- Family succession planning
- Young fishermen getting into business
- Advocating for change in regulation
- Strategies for processor and marketing relationships



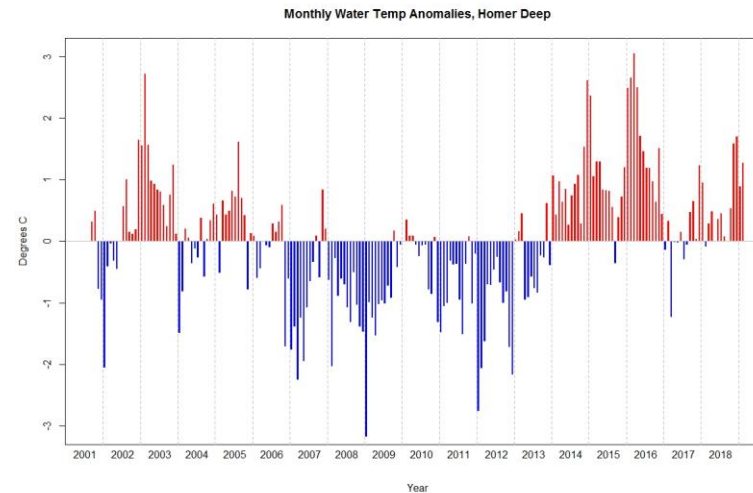


Informing Reserve Priorities

Connect to Monitoring



Develop Products



New Research Areas





A Business Self-Assessment

Understanding How Prepared
Your Business is for a Disaster



"A fisherman must be resilient"

DRAFT



Tool Delivery

- Web Publish and Print Index
- Companion “Lunch and Learn” Kit
- Deliver Trainings and Workshops in Alaska Coastal Communities



THANK YOU



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<http://accs.uaa.alaska.edu/kbnerr/>