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NOAA Fisheries Science Centers

Kristen Koch, Southwest Fisheries Science Center
Jeremy Rusin, Northwest Fisheries Science Center
Charles Littnan, Pacific Islands Fisheries Science Center
Robert Foy, Alaska Fisheries Science Center

Pacific States Marine Fisheries Commission
Annual Meeting | Boise, ID
September 9, 2025

Overarching Science Center Status



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Overarching Challenges & Opportunities

| Staffing | Reorganization | Budget Preparation | Recruitment |
|--|--|---|---------------------------------|
| <p>Employee reductions Plus, impacts of hiring freeze & loss of affiliates Regional losses variable → national response</p> | <p>National process to weigh value & risk in identifying priorities FY26 triage</p> | <p>Survey & innovative data collection priorities</p> | <p>Key leadership positions</p> |



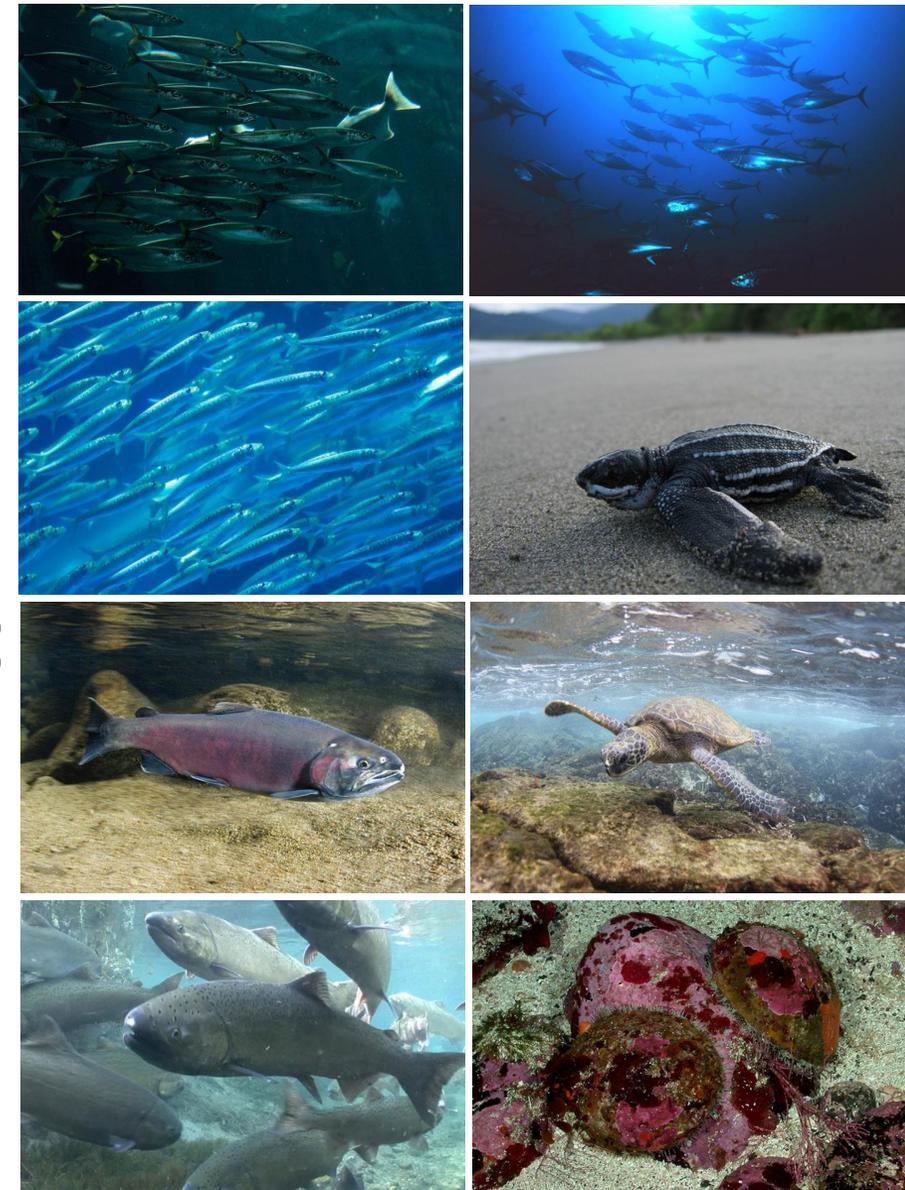


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Southwest Fisheries Science Center FY26 Priorities & Challenges

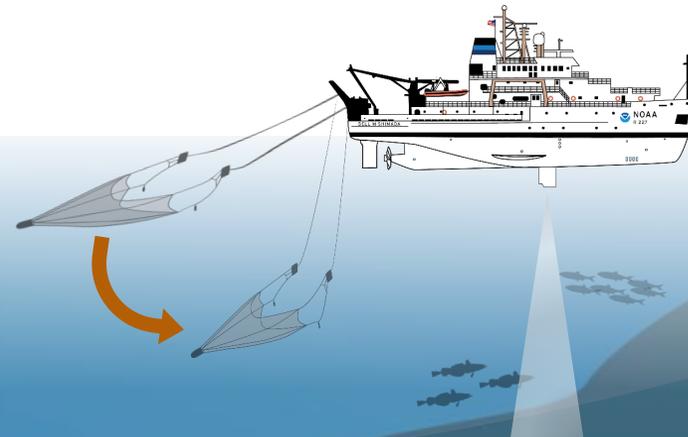
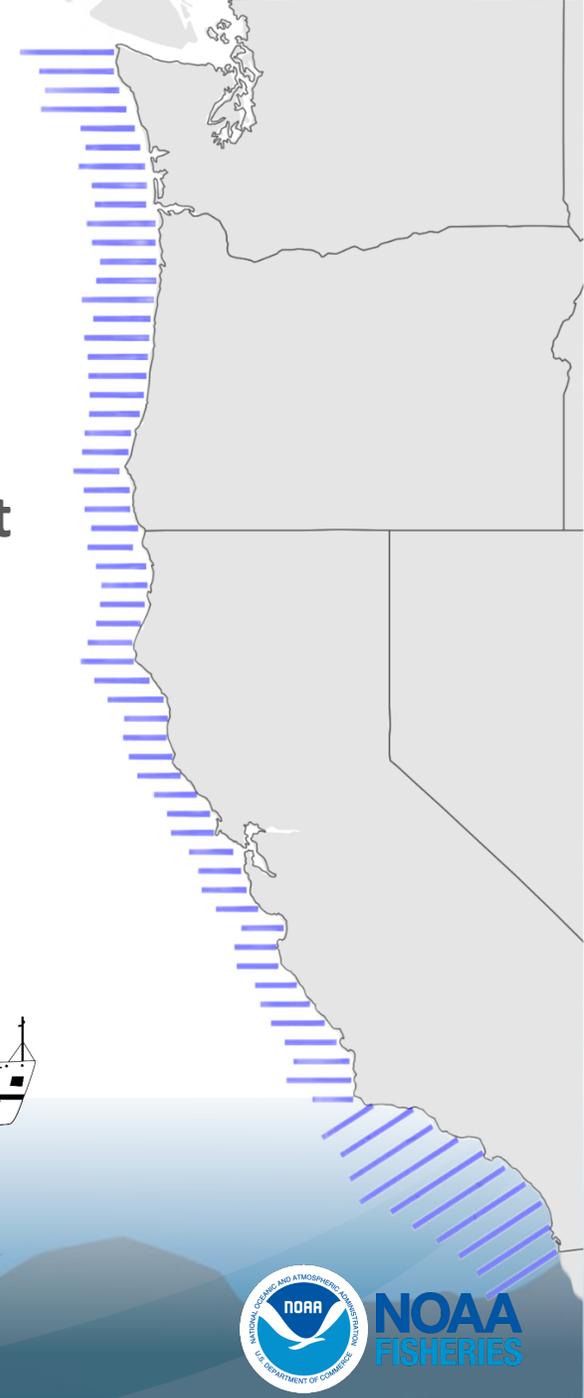
SWFSC FY26 Priorities

- **Surveys**
 - Integrated West Coast Pelagics Survey
 - Advanced Technologies on the IWCPS
- **Stock Assessments & Management Support**
- **Data Modernization**
- **SWFSC/PSMFC projects**
 - HMS
 - Groundfish



Integrated West Coast Pelagics Survey

- The inaugural **Integrated West Coast Pelagics Survey (IWCPS)** was conducted from June - September 2025 and spanned the entire U.S. West Coast
- The survey is a collaboration between the **Northwest and Southwest Fisheries Science Centers**
- Staff from all over NOAA participate, including PSMFC biologists working with the NWFSC observer program for cross-training
- **Learn more:**
[Integrated West Coast Pelagics Survey](#)
On Instagram: [@noaafisherieswestcoast](#)



The Inaugural Integrated Survey



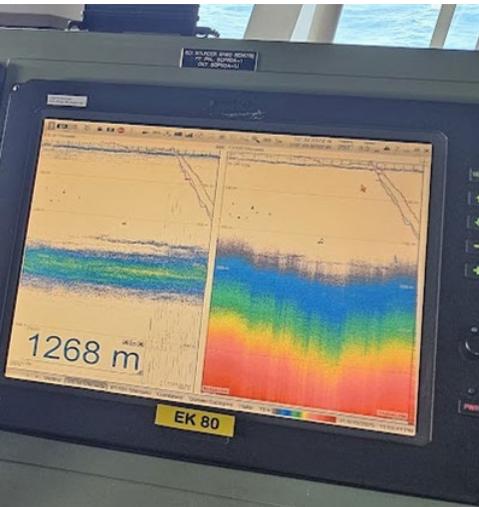
Active Acoustics Data



Biological Data via Trawling



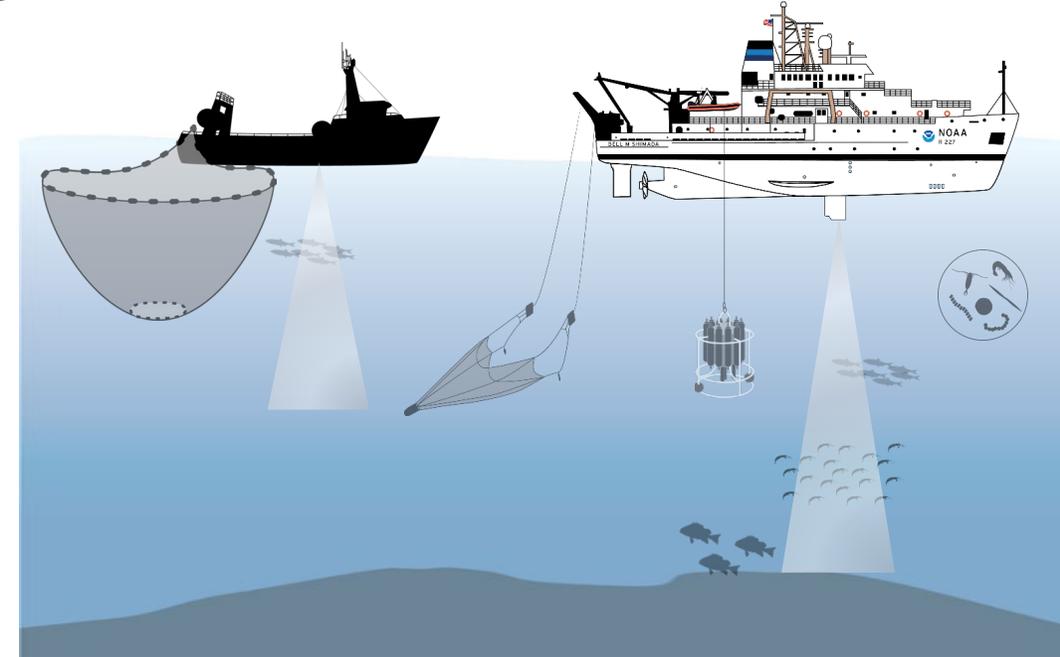
Ecosystem & eDNA Data



Nearshore Acoustics & Biological Data from Purse Seining

SWFSC FY26 Priorities: Surveys

- **CalCOFI**
 - Summer (July)
 - Fall (Oct)
 - Spring (Apr)
 - Winter (Jan)
- **Juvenile Rockfish Survey (May-Jun)**
- **White abalone outplanting (year-round)**
- **West Coast marine mammal & turtle aerial surveys (Jul-Dec)**
- **Integrated West Coast Pelagics Survey (Jun-Sept)**



Advanced Technologies on IWCPS

Multifunction Trawl Net - one of a kind fisheries research net designed and built in collaboration with fishing industry experts and NOAA scientists

Electronic data collection software - Adapted for hake and CPS, allows for fewer transcription errors, greater efficiency, and real time QA/QC, reporting, and analysis

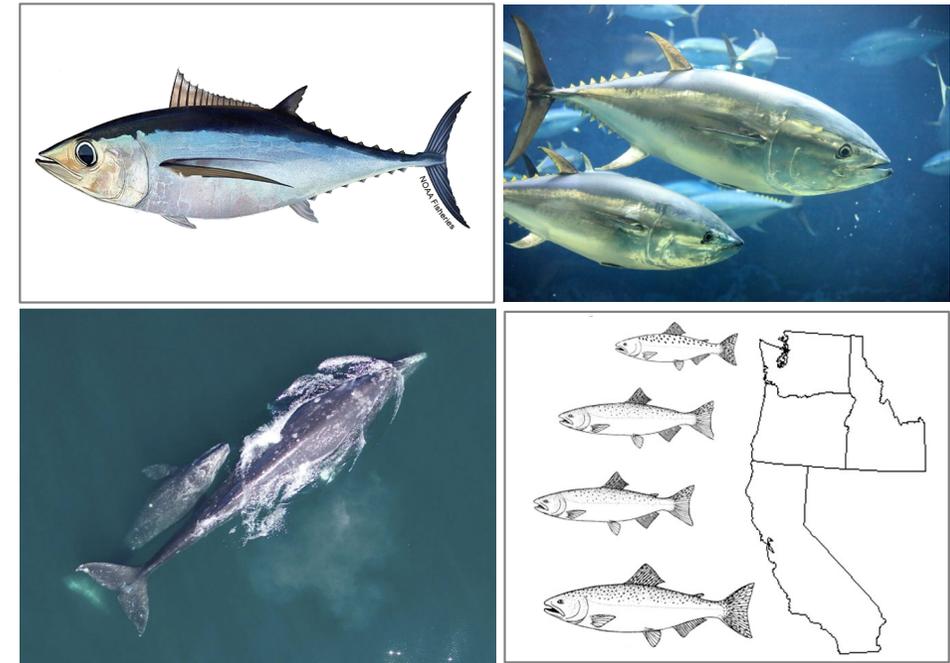
Ship to Shore Pipelines - reliable Starlink connectivity allows remote processing of data from shore and datasets to be pushed to the cloud for use in machine learning models.



SWFSC FY26 Priorities:

Stock Assessments and Management Support

- **Stock Assessments** - North Pacific albacore, Pacific salmon, and west coast marine mammals
- **Reviews of:** Integrated Survey methods, 2024 Pacific Bluefin stock assessment
- **Management Support** - WCR, PFMC, Int'l bodies



SWFSC / PSMFC: Highly Migratory Species (HMS)

Two collaborative projects on HMS sampling yield the only length data we have for two US fisheries, used in ISC stock assessments.

- **North Pacific albacore** port sampling from commercial fisheries in collaboration with ODFW and WDFW
- **Pacific bluefin tuna** length sampling onboard the **recreational** CPFV fleet in collaboration with the Sportfishing Association of California (SAC)
 - First-ever [management strategy evaluation](#) completed in 2025



SWFSC / PSMFC: Pacific HMS Data

Now launched!

West Coast HMS Electronic Logbook Application

- **Collaboration between:** SWFSC, WCR, PSMFC, NMFS Fisheries Information Systems (FIS) Program
- **Summary:**
 - Application is now available on the [NOAA Fisheries webpage](#).
 - > 20 vessels have used the electronic logbook
 - 40 trips have been received for the current fishing season.
 - App is now an officially accepted method for logbook submission and is fully integrated with the PacFIN database and other logbook acceptance methods, including traditional paper logbooks.
 - Full compliance with federal regulations.

NOAA Fisheries West Coast Logbook Application

HMS Current Delivery

Vessel*
Vessel Operator*
Departure Date *
Monday, July 8, 2024
Departure Port*
LONG BEACH
Arrival Date *
Tuesday, July 9, 2024
Arrival Port*
SAN DIEGO

Unloadings

| Unloading Port | Unloading Date | Species |
|----------------|----------------|----------|
| SAN DIEGO | 07-09-24 | Albacore |

Sets Included in Delivery

Fishing Date: Monday, Jul 8, 2024 ✓

Set Info

Fishing Date *
Thursday, Jul 11, 2024
Gear *
B -- TrollLine
Fishing Mode*
Fishing
Latitude*
32° 52.17'N
Longitude*
117° 15.22'W
Hours Fished *
6

Catch

| Species | Retained | Released |
|----------|----------|----------|
| | Count | Count |
| Albacore | 35 | 2 |

Comments

4

SWFSC / PSMFC Groundfish Initiatives

Involving the recreational fishing industry and community in data collection

Groundfish Cooperative Data Collection

- Increase data available to inform stock assessments
- Vessels trained to measure whole fish before filleting
- Carcasses distributed to labs for processing
- **2022** Piloted with 5 vessels; focused on copper and quillback; data informed both assessments
- **2025** Sampling by 34 charter boats covering all major recreational ports
- >13,500 fish sampled to date
- Chartering vessels for targeted life history collections

Citizen science

- Received IRA funding for a pilot project to collect fin clips to differentiate vermilion and sunset rockfish
- Piloting and testing Fishtechy as a data collection platform
 - SWFSC entered a CRADA with Fishtechy
 - AI-trained fish lengths
 - AI-detected species identification



UPS picking up a box of frozen carcasses for overnight shipment to Santa Cruz.



Angler holding a “vermilion” rockfish and orange Fishtechy proof ball for AI length measurement aboard a charter boat.



Two of our north coast charter boat captains Mark Schmidt (left aboard his vessel, *F/V Scrimshaw*) Tim Klassen (right) participating in a research trip to collect female quillback rockfish.



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Northwest Fisheries Science Center FY26 Priorities & Challenges

NWFSC FY26 Priorities

- Aquaculture
- eDNA & 'Omics
- Data modernization
 - surveys - can we use advance tech to reduce time on white ships
- Assessment/Surveys
 - PacStates projects
- California Current Ecosystem Assessment Program





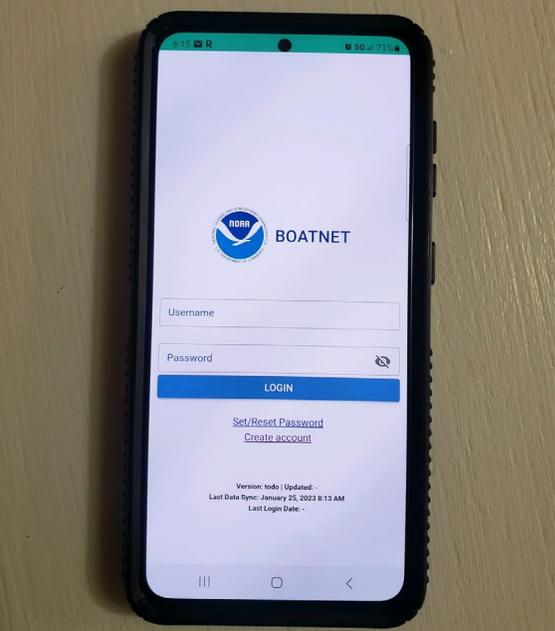
Aquaculture

- **Bipartisan NOAA priority to increase US seafood production**
 - Restoring America's Seafood Competitiveness EO (2025)
 - National Seafood Strategy (2023) & Implementation Plan (2024)
 - CRADA partnerships with industry, tribes, NGOs
- **Sablefish: addressing production bottlenecks**
 - Aquatic animal health
 - Sterility induction
 - Mono-sex culture
- **Pacific oysters: improving survival**
 - Sterility– triploidy alternative
 - OA resilience



eDNA & 'Omics

- eDNA used in 2025 hake assessment, plans for inclusion in future CPS assessment/s
- eDNA samples collected on Integrated West Coast Pelagics Survey, resulting in a 7 yr, coastwide dataset
- NWFSC & UW pushing forward eDNA methods and applications for marine mammal detection with Navy funding
- Genetic assays for species ID of cryptic species pairs, notably vermilion/sunset rockfish
- Design and validation of epigenetic ageing approach for vermilion/sunset rockfish
- Advancing potential of close-kin mark-recapture technology conceptually & at the bench
- Modernizing methods for genetic stock ID for salmon bycatch in the hake fishery



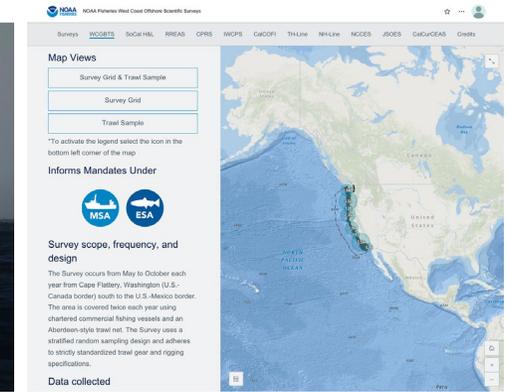
Data Modernization

- **Observing and Monitoring** - FY26 will be 25th year of collaboration between NWFSC and PSMFC. Collaborated with PSMFC to setup NWFSC Electronic Monitoring secondary review, implemented in 2025 (review capacity since reduced due to NWFSC personnel loss).
- **New Strategies**
 - Identifying and prioritizing threshold and optimal data requirements and related surveys, including critical data gaps
 - Integrating surveys and/or designing new strategies for sustainable data collections and analyses with diverse platforms and tools.
 - Strengthening and developing cost-effective partnerships and collaborations for cooperative data collection.
 - Streamlining and automating cloud-based data pipelines, reporting, analysis, and access.



Assessment/Surveys

- **Surveys** - 21st year of Cooperative Research funded S. CA Rockfish Hook and Line Survey with PSMFC
- **Stock Assessments** expected to evolve with FMP changes, reduced staff capacity; developing strategies to improve assessment process/efficiency
- **Cooperative Ageing Project** resourcing and priorities to evolve with changing groundfish FMP and budget. FT-NIRS pilot funding ending, NWFSC staff departures delaying FT-NIRS model development and implementation.
- **Advanced Technology**
- **Integrated West Coast Pelagics Survey**



Changing Ecosystems & Fisheries Initiative (CEFI)



- **New regional ocean model (MOM6) for the Northeast Pacific**

- Historical simulation done and paper published
- Seasonal and decadal forecasts under development
- Output available on [CEFI portal](#)



- **Decision support team projects**

- Climate-informed stock assessments
 - Northern yellowtail rockfish done, paper in review
 - Sardine recruitment modeling paper in review
 - Risk tables for multiple groundfish species
- Whale entanglement mitigation
 - Produced entanglement risk analysis for CDFW
 - Developing sablefish fishing activity summary for TRT
- CEFI forecasts included in Ecosystem Status Report
- Responses of fishing communities and fleets to changing ocean conditions

- **Partnerships with PSMFC, OSU, UW, UCSC, OSG, WSG, others**





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Pacific Islands Fisheries Science Center FY 26 Priorities & Challenges

Welcome to the Pacific Islands Region



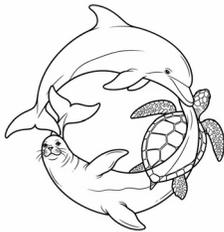
Diverse Fisheries



Coral Ecosystems



Pelagic Ecosystems



Protected Species

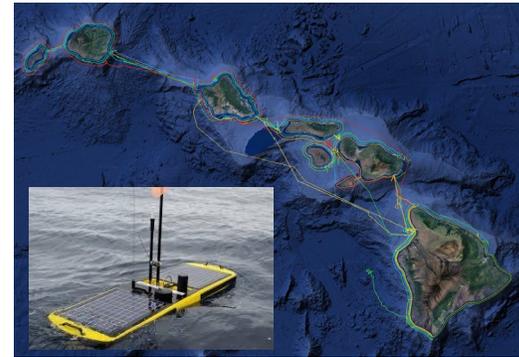


Island Communities



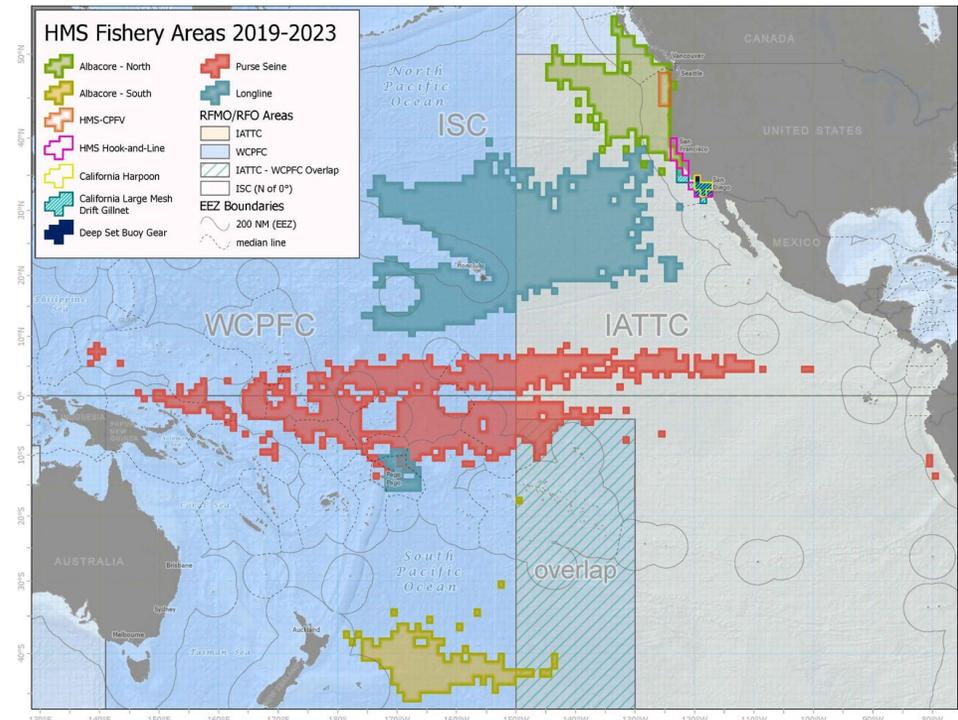
PIFSC FY26 Priorities

- Evolving Assessments/Surveys
- Deep Sea Mining
- Surveys
 - WHICEAS (cetacean survey)
 - FI Bottomfish GU/HI
 - AS BF life history
 - NCRMP AS
- PS Bycatch Advances
 - Post-release Survival Tags
 - eDNA/PA/Advanced Statistical Appr.
- Ecosystem Surveys (UxS-eDNA)
- Data Modernization
- Electronic Monitoring



PIFSC - Data Collection & Reporting Modernization

- **WPacFIN Support - FIN grant v2 approved**
 - Improve data systems and reporting capabilities (WPacFIN PWAs, Longline, Life History)
 - Bigeye & Striped Marlin quota monitoring, Annual bycatch estimation (HI LL)
- **Electronic Reporting**
 - Longline & SPTT thru VMS, PSMFC built an API
- **HMS PSG coordination for international reporting**
 - PIFSC/PIRO/SWFSC/WCR/PSMFC/CA/OR/WA/HI
 - PSMFC built coordinated data submission for WCPFC
 - PSMFC built tracking app for data products
- **FIS coordination**
 - Program Management Team, PSGs
 - Hawaii DAR project for improving data systems
- **BOEM coordination for mineral exploration**
 - PacFEM - Pacific Fisheries Effort Mapping



Transition to Electronic Monitoring in the Pacific Islands Region



Electronic monitoring provides future-focused tools for U.S. fishermen that strengthen American seafood competitiveness.

Critical Success Factors

Outreach to fishers & **joint development** of Vessel Monitoring Plans

Resources to ensure full implementation



Amendment to WCPFC conservation and management measure

Timely rulemaking Fishery Ecosystem Plan amendment and implementing regulations

By the Numbers

2 Fisheries

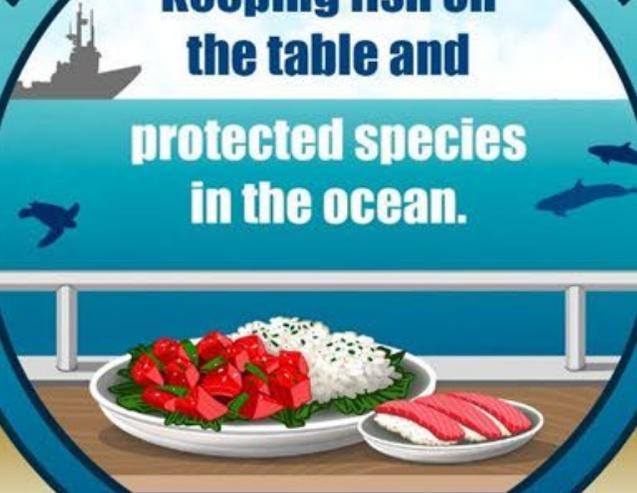


~160 Active Permit Holders

3 Years to Transition



Keeping fish on the table and protected species in the ocean.



Benefits



Delivers cost-efficient, world-class monitoring



Provides unbiased, accurate data



Protects livelihoods & food security



Unlocks AI potential

Observer Program



Timeline



Initial research, planning, and pilot study

Council final action on implementation

Fisher workshops on Vessel Monitoring Plan

Notice of Fishery Ecosystem Plan Amendment

Voluntary early adoption opportunity

Authorization of use in fishery management

Vessel selection and installation begins

System installations in American Samoa

Transition complete

2017-2024

June 2025

Fall 2025

January 2026

January 2026

March 2026

April 2026

February 2027

January 2029





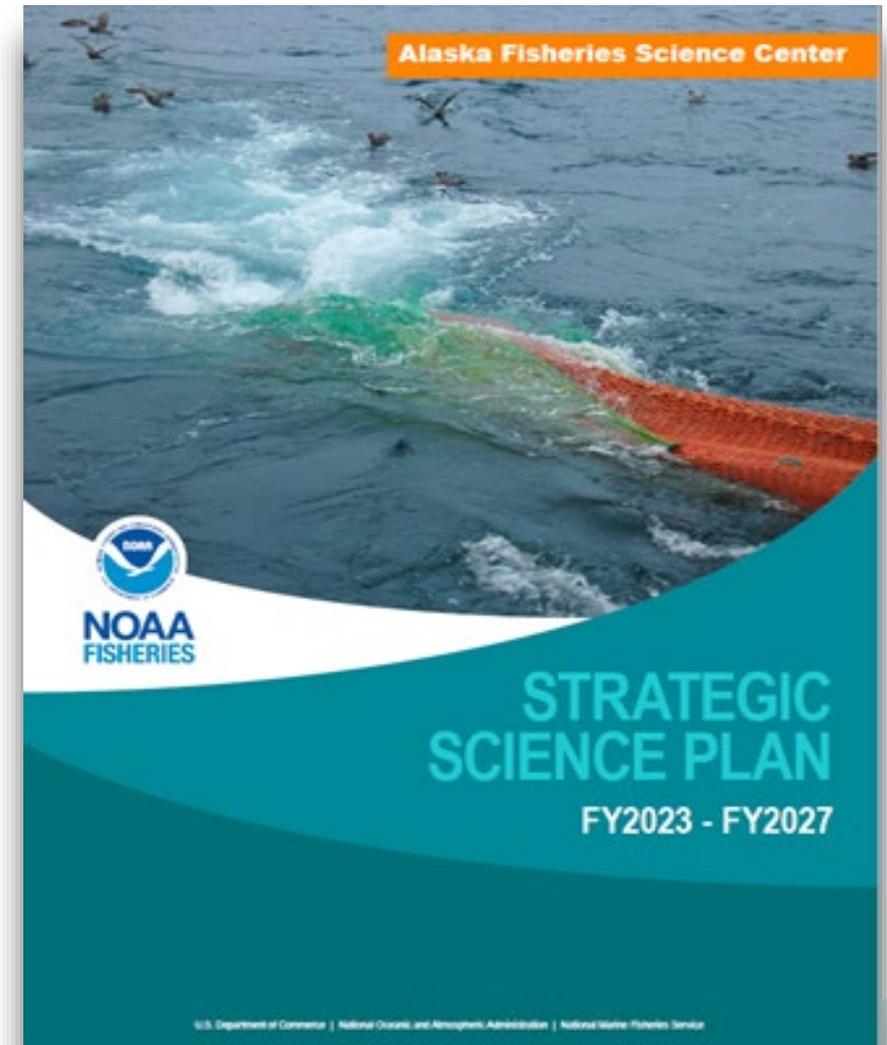
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Alaska Fisheries Science Center FY 26 Priorities & Challenges

Dutch Harbor, AK

AFSC Priorities

- **Staffing losses** (Probationary staff, Deferred resignation, Voluntary Early Retirement Authority)
- **Shifts** (prioritization) in mission execution

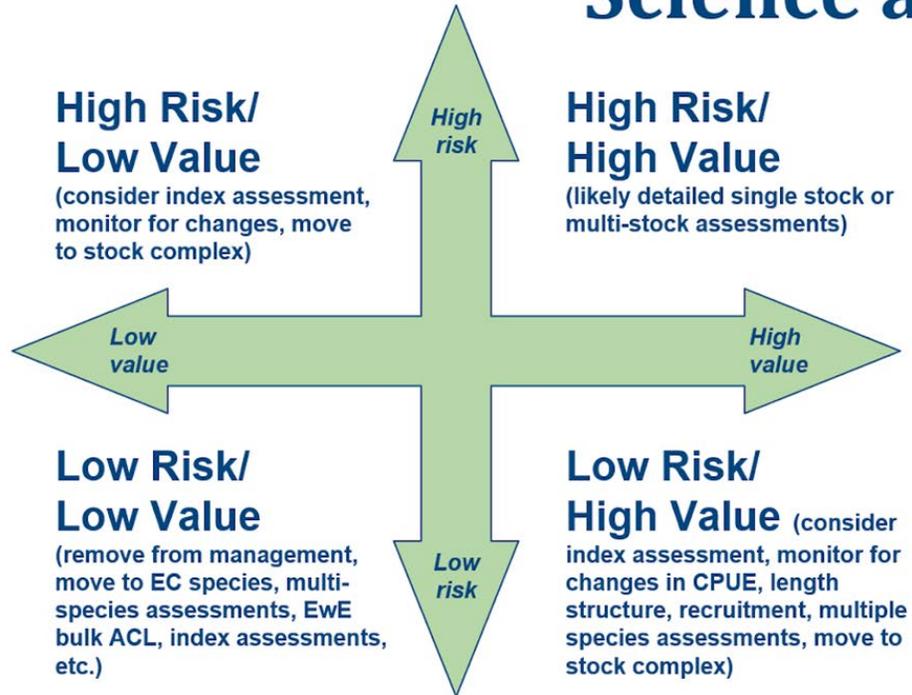


AFSC Priorities

Priority planning to meet intent of Executive Orders, staff losses, and resource expectations.

- Alaska survey and assessment
- Alaska ecosystem science
- Innovative data collection

Prioritization of Stocks/Complexes for Science and Management



Value Categories

- Commercial
- Recreational
- Social

Risk Categories

- Ratio of Catch:ACL
- Biomass/ Rebuilding Status
- Ecosystem Role
- Current / Forecast Ecosystem & Socio-economic conditions

AFSC Updates

Surveys

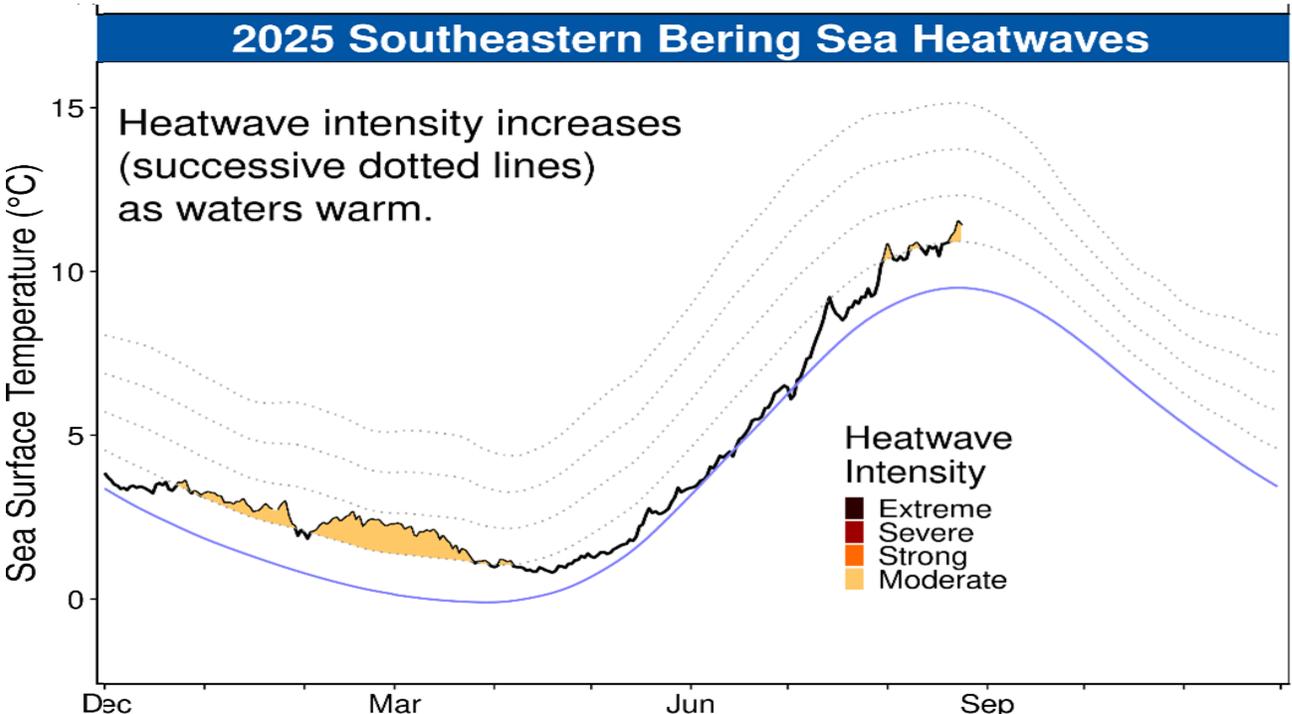
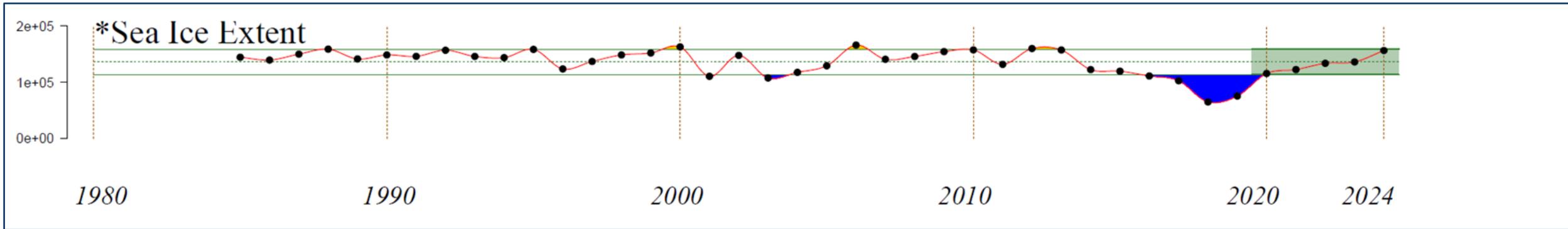
- Most FY25 surveys completed
- FY26 planning
- Survey modernization

NOAA Fisheries Alaska
★ Favorites · 23h · 🌐

The NOAA Fisheries Alaska groundfish and shellfish assessment surveys have officially set sail! 🚢
📍 🌊
O... See more

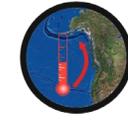


Eastern Bering Sea: a warm winter 2024/2025, low sea ice extent, and below-average cold pool in 2025



1. Long-term trends in oceanography and groundfish community

- Warming throughout water column
- Groundfish dominated by planktivorous predators
- 2014-2016 MHW still observed



2. Winter 2024: moderate El Niño



3. Above-average pelagic prey base (zooplankton, forage fish)



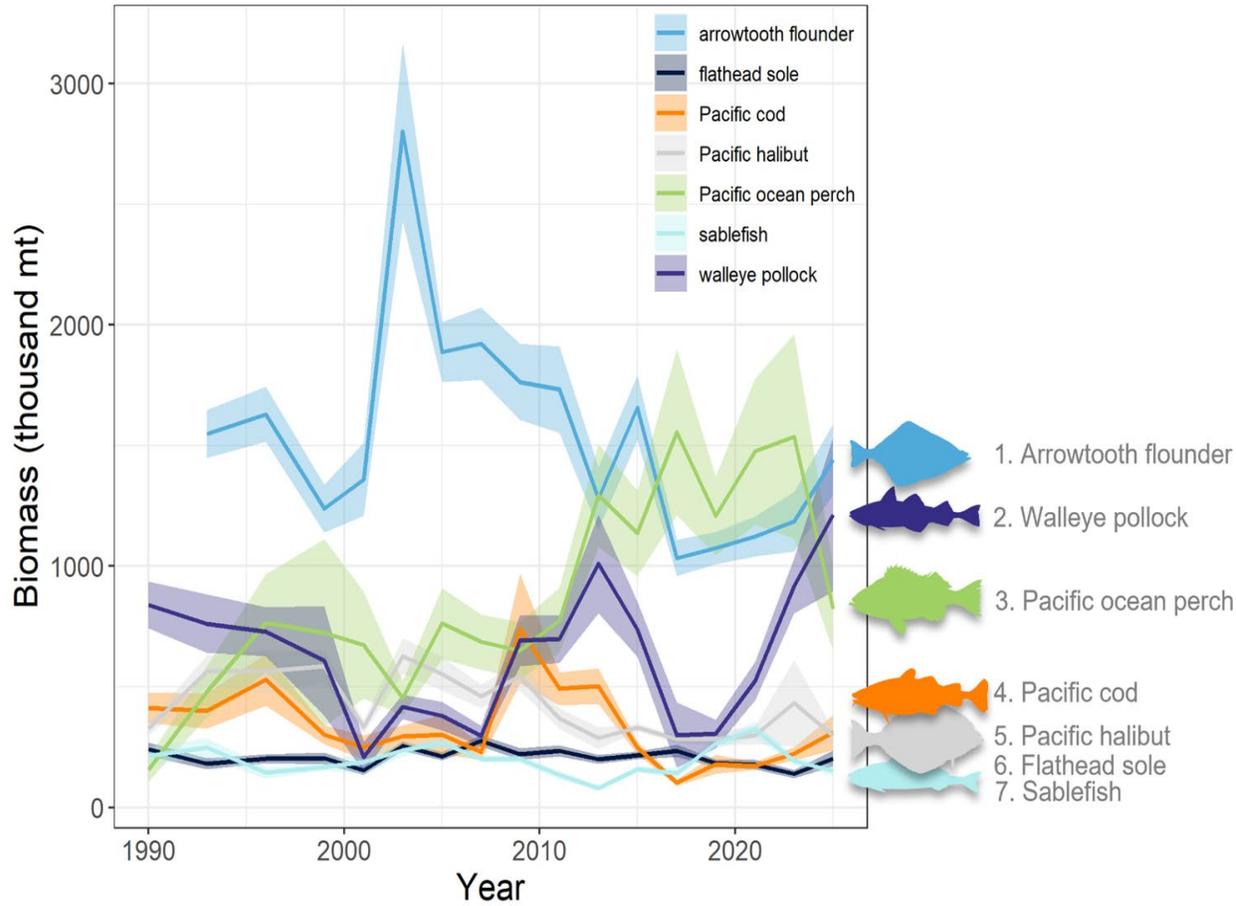
4. Low pink salmon returns



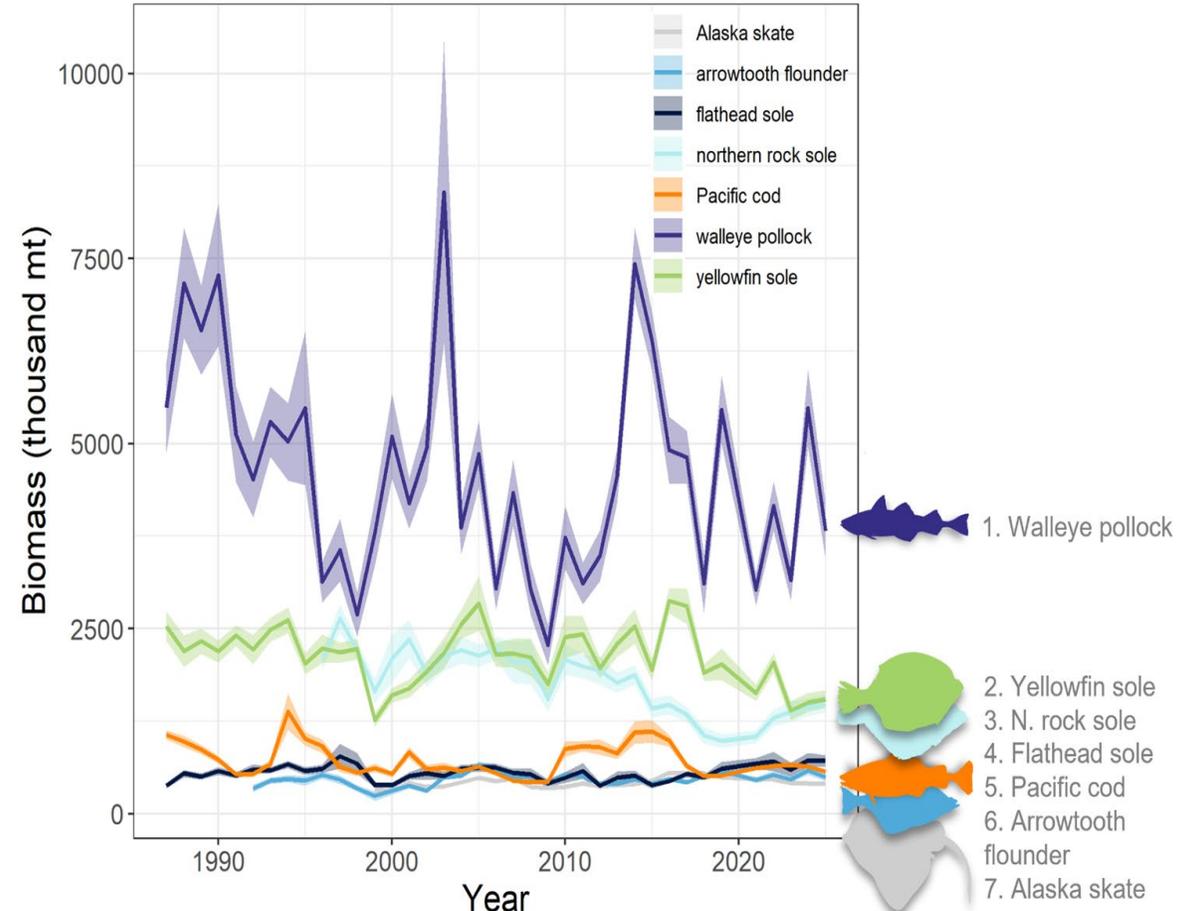


Groundfish Community Trends

NOAA bottom trawl survey-estimated biomass (thousand mt) top GOA species through 2025

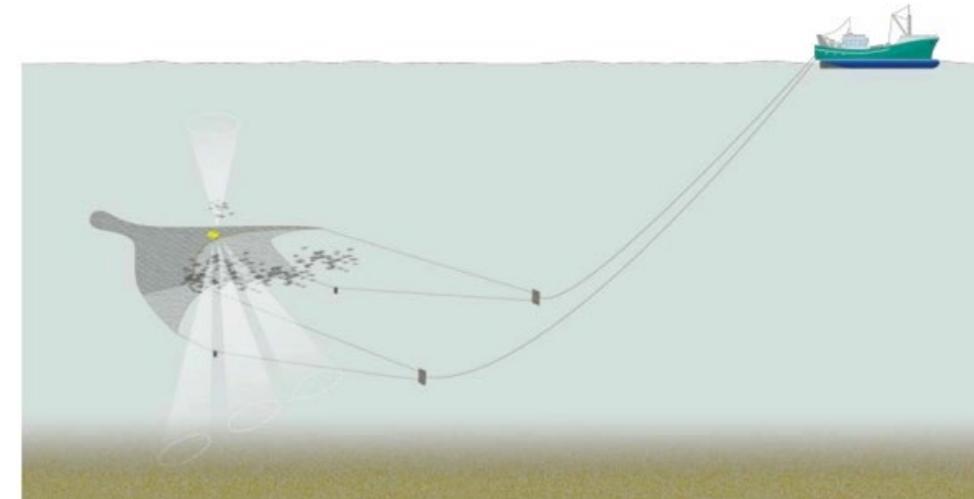


NOAA bottom trawl survey-estimated biomass (thousand mt) top EBS species through 2025



Bering Sea Survey Modernization - FY25 Update

- **Modernization of sampling net**
 - Successfully tested new prototype trawl design alongside models of currently used survey trawl designs (EBS/NBS 83-112 Eastern Trawl and GOA/AI Poly Nor'Eastern Trawl) in flume tank.
 - Additional flume tank testing planned for early FY26
- **Incorporation of new technologies**
 - Conducted beta testing of new Poseidon at-sea data acquisition software package during summer survey operations
 - Completed acquisition of new trawl monitoring sensors for use on all AFSC bottom trawl surveys
- **Modernization of survey design and methodology**
 - Completed analysis of side-by-side study for reducing tow duration from 30 minutes to 15 minutes.



Survey Modernization Efforts in 2025

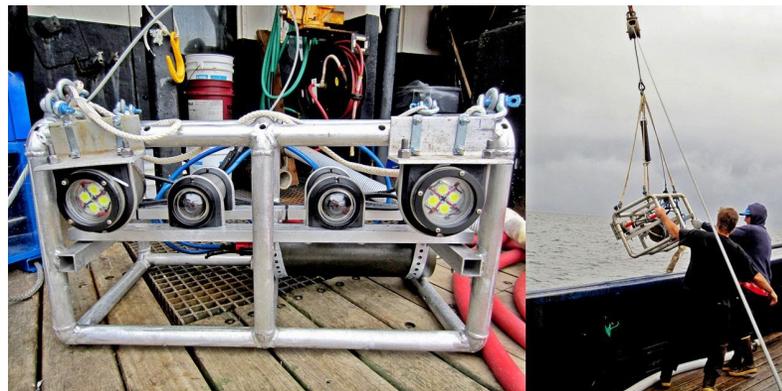
Improve Efficiencies and Respond to Changing Ocean Conditions



Enhanced Acoustics for Species ID Cloud-Computing & Acoustics Data Management



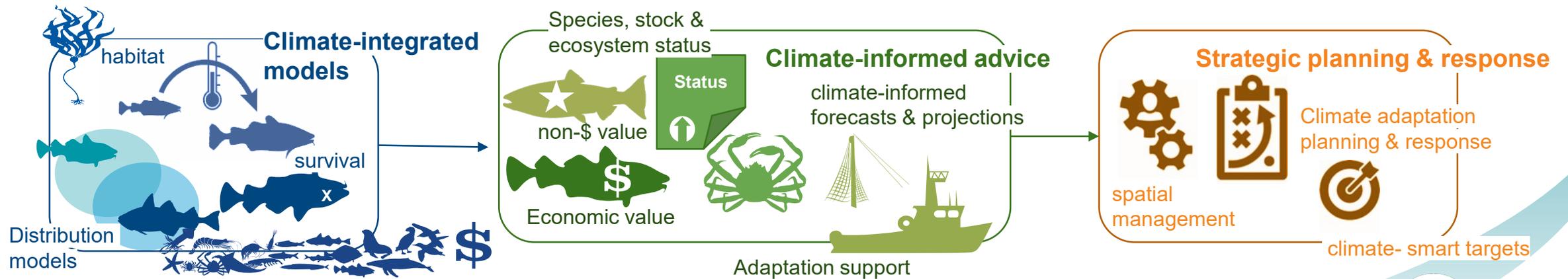
Low-Cost echosounder Moorings to track fish movements



AI & zooplankton data collection

Towed Camera Systems for Fish Estimation

AK Changing Ecosystems and Fisheries Initiative



AK Seafood Snapshot

AK Seafood Industry

The AK seafood industry is:

- An important way of life, sense of place, community, and identity
- A prominent food security provider for many Alaskans

Recent changes:

- Caused significant revenue losses in AK (state, towns, communities)
- Threaten the sustainability of AK fisheries-dependent communities and that way of life

Revenue Losses, 2024

Largely driven by low seafood prices across nearly all AK species

The result of global market forces:

- Exchange rates and tariffs
- High inventories, high levels of global supply
- Lower global consumer demand for seafood due to inflation
- Lower cost of seafood production and processing in countries that compete with U.S. seafood products

Not disaster-eligible causes for federal fisheries disaster support

Total Losses (Preliminary 2025 SAFE)

<1% change in total catch of groundfish, 2023-2024

15% decline in the real aggregate ex-vessel price per pound

- Lowest recorded real aggregate ex-vessel price per pound in data (prior to 2003)

\$143 M and **\$225 M** reduction in groundfish ex-vessel and first-wholesale value, respectively

105 (-17%) fewer vessels that caught groundfish in Alaska

- Primary losses from the sablefish and Pacific cod fisheries

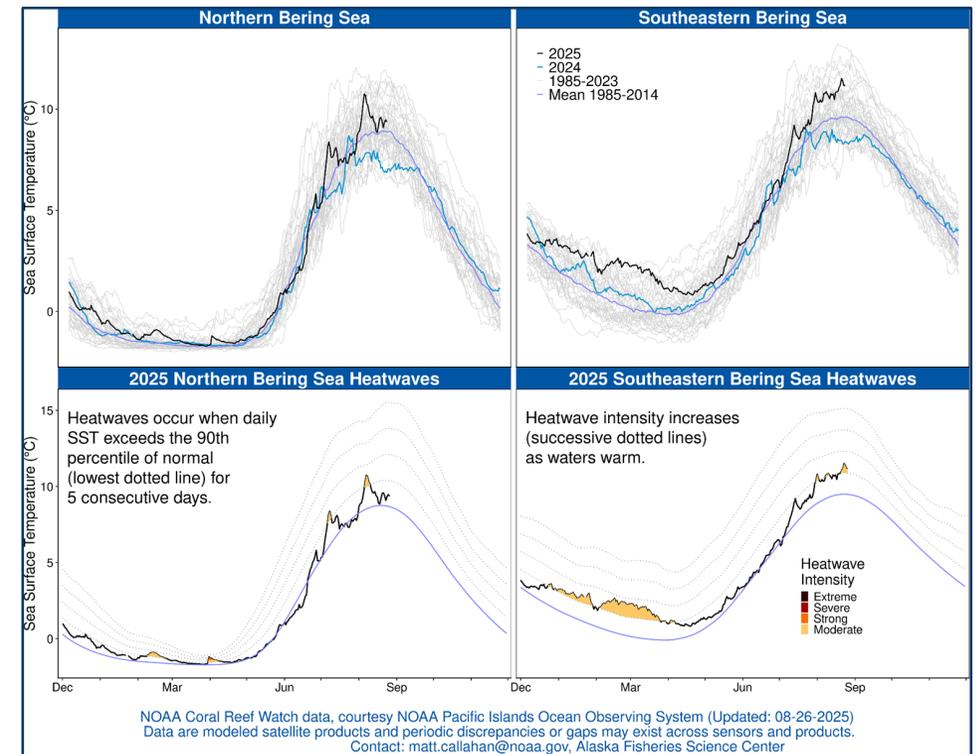
AFSC/PSMFC

- **AFSC works with PSMFC on 24 projects**
- **The Composite award includes 16 projects which provide expertise on a range of topics including:**
 - Groundfish Ageing Assistance
 - Genetics Research on Salmon and Rockfish
 - Climate and Communities in the Gulf of Alaska
 - Bridging Traditional Knowledge and Western Science to Inform Bering Sea Ecosystem Management
- **AFSC also has three stand-alone awards with PSMFC (next slide)**



AFSC/PSMFC

- **AKFIN**
 - Advancing Climate Informed Decision-Making Tools
 - Catch Estimation Design and Integration
 - Modernizing, Integrating, Streamlining Data Access
- **Economic Data Reports**
- **Electronic Technologies**
 - Fixed Gear EM Video Review
 - Pelagic Trawl Electronic Monitoring
 - EM Innovation



Thank You!!

AKFIN is simply comprised of amazing rockstars and we could not complete our ecosystem applications to stock assessment (ESP/ESR) without their dedication and support throughout the season. Special mahalo to Camille and her team for sticking with me during my oopsie moments, to Matt and Jean for their lightning query responses, and to Bob and Caren for their help making the dream happen. We could not do this without you all!!!

Thanks to Caren Braby and Geana Tyler for their help with contracting and hiring, and for treating the Pac States employees we work with superbly.

A great success transitioning our Ecosystem Status Report website from AFSC to AKFIN!

Matt Callahan for development of the gf synopsis products

Thank you to Kathrin Bayer for all that you do for A&G and for being so helpful, flexible, hard working, and dependable! You are such an asset to the team!



Thanks to Martin Park, Jennifer Cahalan, Matt Kerr, and Graeme LeeSon for all your efforts to ensure IT and analytical services are top notch! Kudos!

Shout-out to Matt Callahan for his AWESOME support and positive energy to AFSC's Ecosystem Status Reports!!

Thanks Caren, Geana, Rob and Bob for always being solution minded and creatively developing pathways forward. Thanks to ALL of the analytical staff for the amazing work they do!