

## Pacific Islands Fisheries Science Center Priorities and Annual Guidance Memo for Fiscal Year 2022

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### *Purpose*

The purpose of the Pacific Islands Fisheries Science Center (PIFSC or Center) Annual Guidance Memorandum is to describe specific programmatic undertakings the Center plans for the coming year and strike a balance between execution of statutory mandates, current stakeholder priorities, and budget realities. This document highlights several ***priority initiatives***<sup>1</sup> for the year which will position the Center to address near-term challenges and opportunities. While they may not be specifically named in this document, PIFSC's other new and recurring activities, including unforeseen priorities, are also essential to the Center's science and operations and will be detailed in PIFSC's annual milestones and accomplishments.

### *PIFSC Core Values, Strategic Goals, and Annual Initiatives*

PIFSC's mission centers on producing science to support the preservation and management of fisheries and living marine resources by studying fisheries and ocean ecosystems throughout the Pacific Islands Region and dedicating efforts to the recovery and conservation of protected species. The Center's core values of ***science integrity*** and ***mutual respect*** along with its guiding principles<sup>2</sup> provide a strong foundation from which PIFSC can continue to make scientific advancements, achieve organizational excellence, and support individual success and leadership growth. As NOAA Fisheries evolves its Ecosystem-Based Fisheries Management model, our science reflects a shift from single-species management to a more holistic and multidisciplinary approach. PIFSC leadership is committed to dedicating the assistance and resources necessary to ensure the success of these Center-wide strategic initiatives, including identifying and supporting PIFSC staff to lead cross-divisional teams through project implementation.

In fiscal year 2022, the Center's priorities include multi-year commitments launched in prior years and multidisciplinary team-based projects that are developed with strategic input from the PIFSC Science Council. Internally, the Center will continue efforts to develop and conduct research and operational activities that bolster both short- and long-term objectives. Externally, PIFSC will continue to work with partners, stakeholders, and communities throughout the Pacific Islands region to ensure our work is relevant and responsive. For FY22, a new foci has been added under 3. RESEARCH TO SUPPORT ECOSYSTEM-BASED FISHERIES AND LIVING MARINE RESOURCE MANAGEMENT (EBFM), 3.c. "Strategic investment in climate science research". This addition highlights the new administration's dedication to researching climate science and holistically understanding the subsequent impacts on ecosystems and living marine resources. Aligned with the NOAA Fisheries strategic goals and scoped appropriately to fit into the Center's annual activities, the focus areas outlined in italics in the following pages fall within

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<sup>1</sup> ***Priority initiatives*** are strategically developed activities that align with the Center's long-term direction and carry a Center commitment of support to ensure the project's successful completion.

<sup>2</sup> See [PIFSC Core Values and Guiding Principles](#) for explanation of the Center's Core Values and Guiding Principles.

one or more of the Center's four RESEARCH THEMES and relevant foci detailed in the [PIFSC Science Plan, 2019 - 2023](#):

1. PROMOTE SUSTAINABLE FISHERIES
    - a. Fishery-independent science and -dependent data streams in support of stock assessments.
      - i. Prepare for a next generation stock assessment in the Pacific Islands Region
        1. Explore the feasibility of conducting fishery-independent camera surveys in the territories to obtain size composition and abundance data in support of territorial bottomfish stock assessments, including identifying mapping data needs.
        2. Develop eDNA surveys for bottomfish management unit species (BMUS) indices of abundance and compare eDNA-based abundance estimates with established survey-based estimates (BFISH).
        3. Examine stock structure and connectivity of Marianas Archipelago BMUS species in support of stock assessments and fisheries management.
      - ii. Support a territorial science initiative to enhance the quality of data used in stock assessments.
        1. Replace database management systems that are no longer supported, and advance electronic reporting of fisheries-dependent data.
    - b. Stock assessments for priority insular and pelagic species.
      - i. Quantify how uncertainty and missing data in territorial creel surveys affect BMUS management advice within a MSE framework.
      - ii. Provide information on the impact of the U.S. longline tuna fishery relative to international fisheries using common fishery metrics, such as yield-per-recruit, following the stock assessment cycle for bigeye and yellowfin tuna.
    - c. Catch and bycatch estimation and management relevant analyses.
      - i. Implement the use of electronic technologies, including electronic monitoring and artificial intelligence, in conjunction with human observer coverage in the longline fisheries to improve monitoring of both catch and bycatch.
2. CONSERVE PROTECTED SPECIES
  - a. Protected species population assessments.
    - i. Continue collaboration with the longline fleet to research acoustic cues that may be leading to depredation and bycatch by false killer whales and

- expand other false killer whale research efforts to inform fisheries management. Expand the use of passive acoustic data for cetacean assessments.
    - ii. Proactively invest in international collaborations to better understand turtle nesting trends and abundance for endangered populations that interact with Hawaii- and American Samoa-based fisheries.
  - b. Conservation science research to improve protected species status, including identifying threats and design, implement, and evaluate threat-mitigation measures.
    - i. Develop a strategic approach to bycatch mitigation research that addresses ongoing and planned activities which better inform stock assessment and management needs and enhance conservation of protected species.
    - ii. Conduct Hawaiian monk seal and turtle assessment and recovery field camp surveys in the Northwestern Hawaiian Islands (NWHI) with an increased emphasis on assessing climate driven impacts to habitat and species' biology and mitigating entrapment threats and exploring habitat restoration needs at French Frigate Shoals.
- 3. RESEARCH TO SUPPORT ECOSYSTEM-BASED FISHERIES AND LIVING MARINE RESOURCE MANAGEMENT (EBFM)
  - a. Ecosystem and human community dynamics.
    - i. Advance efforts to forecast and project future trends in environmental, ecological, and socioeconomic drivers affecting species distribution and fisheries activities to inform management strategies and to reduce bycatch.
    - ii. Coordinate PIFSC cruises to collect habitat characterization data and information from remote sampling technologies wherever possible.
  - b. Status and trends of ecosystems, habitat, and socioeconomic indicators.
    - i. Examine impacts of multiple stressors (e.g., climate change, habitat loss, fisheries-related injury/mortality, disease) on living marine resources and develop analyses necessary for priority indicators/metrics arising from the EBFM workshop. Leverage areas of overlap between the EBFM roadmap and PIRAP/NCSS to enhance execution of both where possible.
    - ii. Monitor and assess economic and social performance metrics for regional fisheries and fishing communities.
  - c. Strategic investment in climate science research.
    - i. Develop a protocol to initiate data streams in support of agency climate priorities through maintaining historic time series, collecting and analyzing new data, incorporating climate change into our research and scientific advice, and identifying data gaps and needs.

4. ORGANIZATIONAL EXCELLENCE<sup>3</sup>
  - a. A high-performing and inclusive workforce.
    - i. Engage PIFSC staff across all levels via groups such as PIFSC Employee Council, DE&I Committee, and HALEA to improve employee engagement, morale, and interaction.
  - b. Enhanced partner, stakeholder, and public engagement.
    - i. Increase science-policy communication, coordination, and collaboration among PIFSC, PIRO, WPFMC, and territorial agencies and stakeholders.
    - ii. Work within NMFS to identify and implement opportunities to make operations, management, and information technology processes more effective and efficient, including where appropriate, sharing resources for common functions and emphasizing OCIO transition.
  - c. Successful Center-wide coordination, communication, and collaboration.
    - i. Develop novel and forward-thinking ways of improving communication between leadership and staff, and successfully coordinate reintegration of staff to the IRC.
  - d. Strategic investment in infrastructure and data management.
    - i. Advance a regional data governance model for the Pacific Islands Region by bringing on a regional data officer who will provide hands-on strategic direction and leadership in developing and implementing a data governance framework that may utilize cloud storage and processing.
  - e. A holistic and strategic approach to expanding the Center's science endeavors.
    - i. Continue advances in the use of Artificial Intelligence (AI), Machine Learning (ML), and uncrewed systems. Increase strategic and efficient use of AI/ML, including cloud-based solutions, to continually improve data extraction, processing, and analysis pipelines. Priority domains may include surveys (fish, reef, cetacean) and electronic monitoring.

### *Fiscal Year 2022 Budget Scenario*

Each year, the Center aims to balance budget realities with mission priorities and line-item integrity. Line-item integrity refers to ensuring that funds are spent in accordance with congressional intent (e.g., fish funds for fishery research and monitoring, protected species funds for protected species research and monitoring). Because PIFSC's mission and broader goals persist through time, much of PIFSC's base budget for fiscal year 2022 will be allocated similarly to the \$27.1 million enacted budget for fiscal year 2021. As such, funding decisions will rely heavily on the Center's priority-based resourcing process to guide allocations while remaining flexible to adjust for increasing costs, realizing additional gains for our core program activities, as well as supporting new and important initiatives that emerge.

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<sup>3</sup> The [DOC Strategic Plan - 2018-2022](#) defines organizational excellence as: strengthening capacity to achieve objectives, maximizing return on program investments, and delivering quality, timely service.

## *PIFSC Annual Planning and Prioritization Process*

The Center's planning and prioritization process strives to increase transparency, develop projects inclusively and holistically, and collect and review detailed information on the suite of activities proposed annually, including staffing needs, budgetary considerations, and their relevance to national and Center priorities, mandates, and mission. Much of the Center's fiscal year 2022 commitments will be scoped through the activity planning and prioritization process and result in a Fiscal Year 2022 Implementation Plan that aligns with the long-term strategic vision for the Center.

In fiscal year 2022, partner and stakeholder engagement, particularly with the Pacific Islands Regional Office and Western Pacific Regional Fisheries Management Council, will continue to take precedence as enhancements are made to the Center's planning and prioritization process.