



SWFSC Guidance Memorandum for Fiscal Years 14-15

Purpose

The Southwest Fisheries Science Center (SWFSC) Strategic Science Plan¹ describes our 5-year vision, research themes, and foci. This Guidance Memo outlines our actions in Fiscal Years (FY) 14 and 15 to implement the plan within the constraints of our budget. In prioritizing our future activities, the primary factors considered will be scientific merit and management needs as specified in mandates contained in the Magnuson-Stevens Reauthorization Act (MSRA), the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), and the Antarctic Marine Living Resources Convention Act (AMLRCA). The prioritization must also follow congressional and agency direction²; therefore it is our responsibility to allocate the funding we receive in a way that meets the nation's highest scientific needs to manage trust resources under the stewardship of NOAA Fisheries.

FY13 in Review

FY13 was successful in many ways. The SWFSC published more than 250 peer-reviewed primary journal articles, books and book chapters, Technical Memoranda, and International Whaling Commission (IWC) and Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) reports. We completed the 26th year of our Antarctic survey, the 65th year of CalCOFI, the 15th year of annual leatherback research in Monterey Bay, the 22nd year of annual gray whale calf production survey, 33rd year of quarterly California sea lion diet sampling, 42nd year of marine mammal stranding data collection, and the 31st year of rockfish surveys, among other sustained campaigns. We published the 3rd Integrated Ecosystem Assessment³ of the California Current (CCIEA) and we continued to serve 100 Terabytes and 780 datasets through the Environmental Research Division's Data Access Program (ERDDAP). We completed the 2nd SaKe (sardine-hake) survey jointly with the NW Fisheries Science Center (NWFSC) and the Centers were recognized with a DOC Gold Medal Award. We successfully delivered over two dozen stock assessments for species managed under the MSRA, MMPA and ESA, plus approximately one dozen assessments of Antarctic stocks. Our methods reviewed well through external panels of experts such as Stock Assessment Report (STAR) and Center for Independent Experts (CIE) panels, and we fulfilled our international commitments to CCAMLR, the International Scientific Committee (ISC), IWC, Inter-American Tropical Tuna Commission (IATTC) and other regional fisheries management organizations. We contributed to a number of Biological Opinions, Biological Review/Status Review Teams, Take Reduction Teams, and Technical Review Teams, including those of the White Shark off the U.S. West Coast and several species of salmon. We continue to innovate and implement new methods in our genetic approaches to studying fish, marine mammals and turtles. We produced socioeconomic studies and reports addressing issues ranging from dam removals to the

¹ <http://swfsc.noaa.gov/uploadedFiles/Home/SWFSCStratSciencePlan-2013.pdf>

² http://home.nmfs.noaa.gov/organization/snippets/noaa_fisheries_priorities_2014_v2.pdf

³ <http://www.noaa.gov/iea/regions/california-current-region/>

interaction of swordfish and gear-types. We also maintained excellence in execution of over \$40M in budgets, procurements and travel, and under difficult conditions involving moves into new and complex facilities, we maintained uninterrupted high level Information Technology protocols and standards. In sum, the SWFSC excelled in all the necessary ways that allowed our peers, constituents and collaborators to continue to look to and trust us to deliver the best science available for addressing important decision-making processes.

Budget Outlook

After several years of uncertainty in planning, the NOAA budget appears to have stabilized for the next two years. The recently approved FY14 budget includes recognition of the importance of NOAA Fisheries science. It specifically addresses the following SWFSC program areas:

- ✓ Fisheries stock assessment
- ✓ National fisheries research
- ✓ Marine mammal and turtle recovery and research
- ✓ Pacific salmon recovery
- ✓ National habitat conservation and restoration
- ✓ Antarctic research

While the budget outlook is more positive and our work is recognized at the national level, we will continue to make calculated decisions regarding our programs. The cost of doing research continues to rise and budgets in many cases have remained flat or have only increased modestly. Positions will be filled in key areas, and we will manage budgets to allow greater flexibility than we have in recent years.

FY14-15 Priorities: Research, Collaboration, Partnerships and Infrastructure

For FY14-15 we have two categories of priorities – Focus Areas and Core Research Areas. Focus Areas are cross-divisional and have been selected based on NOAA's stated priorities, our constituents' needs, and near-term prime opportunities. Core Research Areas are our ongoing activities that we must fund and staff to accomplish our responsibilities mandated under the MSA, MMPA, ESA and AMLRCA. Both Focus and Core Research Areas will require and benefit from coordination with the NWFSC, PIFSC, and AFSC to meet the science and management needs of the West Coast and Pacific Islands Regional Offices (WCRO, and PIRO, respectively), the Pacific Fishery Management Council (PFMC) and the Pacific Scientific Review Group (PSRG). To ensure the most efficient and effective collaborations, we will convene informal groups to examine existing capabilities, assess future needs, and make strategic recommendations on how we move forward.

Our long-standing collaborations with colleagues at the Scripps Institution of Oceanography, University of California Santa Cruz, Humboldt State University, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), and other institutions along the west coast will continue through research partnerships and adjunct appointments, as well as through programs such as Center for Stock Assessment Research (CSTAR), Center for the Advancement of Population Assessment Methodology (CAPAM) and the Cooperative Institute

for Marine Ecosystems and Climate (CIMEC). Such interactions are essential to advancing our scientific mission and for the training of next-generation research scientists.

In addition to our research and collaborative efforts, we have several facility priorities for FY14-15 that will influence our work. As we take further steps to consolidate our Pacific Grove (PG) Laboratory in FY14, we will focus on relocating PG staff to our Santa Cruz Laboratory and other Monterey-area locations to ensure smooth continuation of programs. In La Jolla, we will investigate opportunities to partner with external organizations to use our Technology Tank. With the arrival of the NOAA Ship *Reuben Lasker* in San Diego we begin a new partnership with the Port of San Diego as we initiate the lease for port facilities for the new ship.

Focus Areas

1) SWFSC Strategic Science Plan Theme 3: Observations, measurements and surveys: Provide information and data to support population assessments and analyses of ecosystem variability and change

California Current Ecosystem Monitoring. The SWFSC conducts annual and biennial surveys of the California Current Large Marine Ecosystem (CCLME) working in collaboration with the NWFSC and Mexican and Canadian partners. While maintaining fisheries stock assessment surveys, we will also conduct surveys for abundance and trends of key marine mammal species and surveys to investigate changes in overall ecosystem productivity. This year, we will develop a tactical plan for funding and staffing these mission-critical surveys, identify how to incorporate wider ecosystem- and climate-based perspectives, and improve the efficiency and coordination of current survey efforts with the NWFSC and our international partners to survey the CCLME. Field operations will provide needed information on fisheries components such as Coastal Pelagic Species (CPS), Highly Migratory Species (HMS), rockfish and salmon; higher trophic components such as marine mammals, turtles and seabirds; and supporting ecosystem components such as primary and secondary production and abiotic variables.

2) SWFSC Strategic Science Plan Theme 2: Ecosystem Analysis: Assess and predict how environmental changes and human activities affect ecosystems, and design new management paradigms for fisheries management and recovery of protected species.

Ecosystem Science. Our ecosystem science capabilities are valued regionally, nationally, and internationally for providing valuable advice for fisheries and protected species management. We will work to solidify our role in this area through systematic and strategic approaches to these programs. We will work to define coast-wide ecosystem science needs for commercially-fished stocks and protected species, characterize staff and operational assets we have available to meet those needs, and identify how those efforts can support regional and national objectives. We will continue our efforts in the CCIEA and our work in bringing together status and trends of ecological indicators, oceanographic, climatic, and anthropogenic drivers and pressures, and risk assessments at sub- and regional scales of the California Current. In FY14-15 we will maintain our habitat work in the California Central Valley in partnership with the U.S. Bureau of Reclamation and others, as well as our work on the SW Habitat Blueprint project. We will also make efforts to link our ongoing research on Antarctic krill and the Southern Ocean's ecosystem to our findings in the California Current ecosystem.

3) SWFSC Strategic Science Plan Theme 4: Technological innovation and development: Improve ecosystem observations and survey methodologies through a variety of advanced technologies and sensor development

Ocean Technologies Development Tank, Aquaria, Laboratories, and Field Sampling Innovation. Our new facility in La Jolla will be a significant asset to NMFS in the coming years. Adequately staffing, resourcing and using the Ocean Technologies Development Tank (“Tech Tank”), aquaria and state of the art molecular genetics, stable isotope, and hormone laboratories will require close attention internally, as well as in the fostering of external partnerships. Moving CoastWatch and our data access functions to our Santa Cruz Lab will allow enhanced and expanded services and data access capabilities. At the same time, our ability to conduct needed field sampling will be enhanced by the arrival of the NOAA Ship *Reuben Lasker* to the U.S. West Coast, as well as through innovation and increasing use of platforms, such as Unmanned Aerial Systems (UAS), animal-borne tags, and passive acoustics.

Core Research Areas

The following activities are the highest funding priorities for the SWFSC in FY14-15 and must be properly resourced to meet regional and national needs. In some cases accomplishing these activities will require a commitment to securing needed resources, while others will require a change in how we do business. Exclusion from this list does not mean an activity will not be funded, but rather this list includes the highest priorities (in no particular order).

- ✓ Support the PFMC and international Regional Fisheries Management Organizations (RFMOs) (such as the WCPFC, ISC, and CCAMLR) by conducting stock assessments for sardine and other coastal pelagic and forage species, highly migratory species (tunas and sharks), groundfish and salmon; continuing to answer specific questions on fisheries bycatch; and providing support to continued development of the ecosystem fishery management plan.
- ✓ Conduct stock assessments (abundance and trends, population structure, health and condition, environmental context) for marine mammals, as required by the MMPA.
- ✓ Provide biological, social, and economic science to support the recovery of listed species and stocks, including Pacific salmon, marine mammals, sea turtles, abalone, and sturgeon.
- ✓ Fulfill our commitments to provide scientific support to important Biological Opinions, and Status Reviews concerning federally listed species and stocks.
- ✓ Support CCAMLR by conducting stock assessments for Antarctic krill and evaluate broader impacts on Southern Ocean ecosystems.
- ✓ Focus efforts on scientific computing and data management in support of MSRA stock assessment in response to 2013 MSRA data review⁴.
- ✓ Using the CCIEA and CalCOFI State of the California Current assessments as templates, create web interfaces to allow consistent and up to date access to regional data analyses, indices and other products.
- ✓ Work with the National Aquaculture Program to secure funding for FY14-15 projects, including expanding experiments for developing marine species for aquaculture.

⁴ <http://swfsc.noaa.gov/2013DataManagementReview/>

- ✓ Work across Divisions to fully staff all high priority fieldwork for fish, marine mammals, and marine turtles. We will staff and provide operational funding for SWFSC use of all NOAA ship time and high priority charter vessel-based surveys.

Annual Science Plan Implementation Process – The Future

During 2013, SWFSC leadership worked to establish a foundation for future strategic planning and implementation. This included designing and populating the first version of a new Activities Database which will be used to assess research activities across the Center and initiate research prioritization. This will position us to take an approach to implementation that meets regional and national needs, maintains or improves necessary infrastructure and support services, and aligns our workforce capabilities with strategic priorities in the Focus and Core Research mission areas. Our implementation process is evolving and will continue to mature over the next few years. The goal is to conduct programmatic planning that is more transparent to staff, agency leadership, and constituents.