

## General comments and responses

### **Goal 1: Amplify the economic value of commercial and recreational fisheries while ensuring their sustainability**

#### Strategy 1.1 - Manage stocks for Optimum Yield (OY)

*Rebuild overfished stocks, prevent overfishing, and find ways to increase the economic value of legally caught fish. Support the regional fishery management councils in developing management measures to achieve conservation objectives, improve economic performance, and provide recreational opportunities. Explore opportunities for alternative management strategies for recreational fisheries. Protect essential fish habitat and invest in non-regulatory habitat restoration to help maintain productive fisheries.*

#### Approaches:

- The Southeast Region, in collaboration with NOAA Fisheries' Office of International Affairs & Seafood Inspection as appropriate, will improve fisheries' ability to achieve MSY and fishery conservation objectives by:
  - Using Management Strategy Evaluation to prioritize data collection and test the extent to which potential harvest strategies are robust to major uncertainties (e.g. red tide, climate variability). Proposed testing approaches could include:
    - Identifying "reference" indicators for priority stocks that are well correlated with estimated abundance trends.
    - Developing robust "interim assessment" procedures that use reference indicators to adjust annual catch advice between assessments in response to observed fluctuations in catch rates and/or abundance.
    - Evaluating proposed harvest control rules to determine whether they produce results consistent with stated management objectives (e.g. eliminate overfishing, recover overfished stocks, reduce variability in harvest).
  - Developing and using Decision Support Tools to help scientists and managers, including the regional fishery management councils and intergovernmental organizations, evaluate the potential effects of proposed regulatory changes, and international conservation and management measures, on catch advice derived from stock assessments;
  - Identifying, developing, and testing through simulations approaches that foster robust management of data-limited stocks; and
  - Conducting research to better characterize the uncertainty of stock assessments and applying those findings in collaboration with the regional fishery management councils, their scientific advisors, or intergovernmental organizations, as applicable, to assist in modifying or developing harvest control rules to incorporate adequate precautionary buffers.
- The Southeast Region will increase fishery benefits by:
  - Studying the differing social and economic objectives of recreational and commercial fishers;

**Commented [1]:** SAFMC: You noted the Councils are concerned about which programs may not be continued and want to have input into that decision process.

**Commented [2]:** SER Response: Point noted and we will continue to discuss priorities with all three Councils during Council meetings.

- Continuing to develop and support Management Strategy Evaluation to evaluate trade-offs among competing objectives (sustainability, stability, profitability; or biological, economic, and social);
  - Working with the regional fishery management councils and relevant intergovernmental organizations to apply findings and insights to develop spatial and other innovative strategies which balance and advance those objectives, including hiring an outreach coordinator at the Southeast Fisheries Science Center who will work closely with Council and regional office staff to foster proactive communication with stakeholders; and
  - Continuing to work with NOAA's Office of Law Enforcement to evaluate the enforceability of proposed management measures to maximize the probability that their outcome is not biased by noncompliance.
- The Southeast Region, in collaboration with NOAA Fisheries' Office of Habitat Conservation, will maintain productive fisheries by:
    - Evaluating the relative contribution of various types of essential fish habitat in supporting managed stocks and protected resources;
    - Focusing essential fish habitat resources and engagement on projects that present the potential for the most impactful conservation gains through avoidance, minimization, mitigation, monitoring, and adaptive management measures; and
    - Working with federal, state and other partners to address priority habitat restoration needs related to increasing diadromous fish access to spawning and nursery habitat, recovering corals, restoring Louisiana wetlands through the Coastal Wetlands Planning, Protection and Restoration Act Program, and compensating for damages caused by the Deepwater Horizon oil spill and other events through the Natural Resources Damage Assessment process.

Strategy 1.2 - Increase U.S. marine aquaculture production

*Lead the federal government in coordinating authorizations for growth of marine aquaculture. Provide advanced marine aquaculture science and technology for ready adoption by the U.S. aquaculture industry, and provide industry incentives.*

Approaches:

- The Southeast Region will continue to support design and permitting processes for a new pilot and commercial-scale operation in federal waters of the Gulf of Mexico by providing technical support to both applicants and permitting agencies, assisting in identifying and resolving any fishery conflicts, and streamlining NOAA Fisheries' consultation processes through early and active engagement in project design and environmental review.
- The Southeast Region will continue to communicate with regional fishery management councils and other partners regarding large-scale aquaculture program development.
- The Southeast Region will support federal partners in revising and updating current interagency guidance documents for permitting projects in Gulf federal waters to reflect new

agency roles and responsibilities, and will collaborate with federal and state agencies to develop new guidance documents to further streamline permitting processes in state and federal waters throughout the Southeast Region.

- The Southeast Region will consider how to build capacity for aquaculture research and commits to interacting with stakeholders, including other science centers, in coordination with SERO's Aquaculture Coordinator. Capacity building could include developing research collaborations and research foci in coordination with managers and other partners, and investigating the potential for aquaculture research at existing SEFSC facilities.

**Strategy 1.3** - Adequately assess all prioritized stocks and maintain information for currently assessed stocks

*Establish target stock assessment levels and strive to meet targets for priority stocks without compromising sustainable management of other stocks. Incorporate ecosystem considerations into management advice. Develop incentives for industry-based (commercial and recreational) data collection and reporting.*

Approaches:

- The Southeast Region will advance regional capacity to assess all priority fish stocks with sufficient frequency to inform sound management decision making by:
  - Continuing to collaborate with the regional fishery management councils, SEDAR, and relevant international organizations to develop and support NOAA Fisheries' "Stock Assessment Prioritization" process and provide leadership to the stock assessment and other scientific work of the International Commission for the Conservation of Atlantic Tunas and the Western Central Atlantic Fishery Commission;
  - Evaluating data gaps and developing assessment models with appropriate complexity;
  - Continuing to develop and evaluate "Interim Assessment" approaches that use near real-time information about stock abundance to adjust catch level recommendations and other appropriate international reference points between operational assessments (e.g. every 1-2 years). An interim assessment is a rapid approach that does not require updating the full suite of data inputs.
  - Continuing to document, streamline, and automate routine data extraction and analytical procedures; and
  - Streamlining and automating assessment documentation to the extent possible to facilitate increased throughput.
- In collaboration with the Office of Habitat Conservation, the Southeast Region will further integrate ecosystem assessment and ecosystem-based fishery management objectives, including these priorities:
  - Continuing to explore the effects of time-varying environmental attributes, including artificial reefs, fish aggregating devices, and climate, on MSY and other reference points;
  - Continuing to develop and incorporate ecosystem indicators (e.g., red tide) into stock assessments based, in part, on the Stock Assessment Improvement Plan; and

- Supporting the development and implementation of regional fishery management council and Atlantic highly migratory species Fishery Ecosystem Plans and Ecosystem-Based Fishery Management Implementation Plans.
- Supporting intergovernmental organizations to identify and prioritize forage species (e.g., small tunas and mackerels) for data collection, assessment and management; and to explore how best to address this need from an ecosystem standpoint within the domestic and international structure/competencies.
- The Southeast Region will increase fisher cooperation and engagement in fishery data collection, science and management by continuing to support and participate in regional Marine Resource Education Program initiatives as funding permits.

Strategy 1.4 - Modernize fishery information collection, management, and dissemination systems, and enhance cooperative data collection and sharing

*Support and coordinate with states to advance user-centered fishery information networks and data platforms, with greater efficiency and lower cost, to improve the ability to effectively manage stocks. Partner with industry to supplement the collection of additional valuable data and share fishery data (as appropriate) with the public and other industry partners.*

Approaches:

- The Southeast Region, in coordination with NOAA Fisheries' Office of Science and Technology, the Office of International Affairs and Seafood Inspection, and other NOAA Fisheries offices as appropriate, will continue to improve and expand fishery and protected species data collection partnerships by:
  - Developing data collection methods that include electronic reporting tools when appropriate to increase timeliness and accuracy and reduce reporting burden in collaboration with the Atlantic States Marine Fisheries Commission, Gulf States Marine Fisheries Commission, and the associated Fishery Information Networks (FINs). FINs include GulfFIN and the Atlantic Coastal Cooperative Statistics Program (ACCSP);
  - Working with state partners, through the GulfFIN and ACCSP, to develop robust marine recreational surveys to meet the Southeast Region's assessment and management needs and are certified through processes developed by S&T to be able to calibrate to existing surveys (e.g., MRIP);
  - Supporting Cooperative Research Proposals that engage regional fishing communities in data collection programs and research activities that improve domestic and international population assessments; and
  - Continuing to coordinate with other NOAA regions and the states to develop and implement electronic reporting programs for commercial and recreational fisheries and, where feasible and appropriate, artisanal fisheries on shared resources such as highly migratory species, factoring in the ability of enforcement to support the initiatives through accountability for illegal activity. This includes implementing for-hire and commercial electronic logbook programs in the Gulf of Mexico and South Atlantic in collaboration

with the Northeast Fisheries Science Center, Greater Atlantic Regional Office, ACCSP, GulfFIN, and other stakeholders as appropriate.

- The Southeast Region, in coordination with NOAA Fisheries' Office of Science and Technology, the Office of International Affairs and Seafood Inspection, and other NOAA Fisheries offices as appropriate, will increase the efficiency and cost-effectiveness of fishery and protected species data collection, management, and dissemination efforts by:
  - Continuing to collaborate with the FINs, both GulfFIN and ACCSP, and internationally through relevant intergovernmental organizations, to encourage the integration of reporting systems for the fishery-dependent data that are required by states, federal agencies, and international fisheries management organizations;
  - Streamlining data management, including presenting near-real time information on the Annual Catch Limits webpage, automating the compilation and delivery of data to assessment scientists and resource managers, and developing a shared non-disclosure agreement process;
  - Continuing to encourage cutting edge machine learning currently under development within NOAA Fisheries to support automated collection of fisheries monitoring data captured on video;
  - Considering eliminating a redundant reporting requirement for bluefin tuna discard information as a result of Vessel Monitoring System (VMS) data being integrated into the Individual Bluefin Quota (IBQ) data system;
  - Exploring ways to optimize methods of obtaining video images of discarded bluefin tuna;
  - The SEFSC and SERO will work with the Office of Science and Technology and across NMFS to identify priorities for modernizing fishery information management and tangible actions to streamline the flow of fishery information and increase its access and use; and
  - Collaborating with the Fisheries Information Systems (FIS) working groups and intergovernmental organizations to identify and share tools and techniques to streamline data collection and management and secure funds to help modernize our system and share data collaboratively.
- The Southeast Region will modernize their Catch Share and Permits database and front-end systems, taking into account the ability to provide a long-term stable solution for managing the Catch Shares system, and include updates and improvements that will increase system accessibility, compatibility, flexibility, and efficiency for constituents, managers, and NOAA Fisheries Office of Law Enforcement.

**Strategy 1.5** - Combat illegal, unreported, and unregulated (IUU) fishing and seafood fraud, and advance fair trade

*Continue U.S. leadership in international engagement to support fair trade, market access, and competitiveness for U.S. seafood products. Strengthen the capacity to monitor the foreign seafood supply chain, detect seafood fraud and mislabeling, and enforce import regulations.*

Approaches:

**Commented [3]:** SAFMC: You noted that ACCSP can provide significant cost savings with these tasks and has a process in place for access to confidential data that would be helpful.

**Commented [4]:** SER Response: Your comment is appreciated and we believe the first bullet in this series addresses the involvement of ACCSP here.

**Commented [5]:** GMFMC: You said you would like to see an added approach that addresses solutions to sharing and distributing data collected in these programs with the collaborating agencies.

**Commented [6]:** SER Response: We think the intent is included in this bullet.

- The Southeast Region will collaborate with NOAA Fisheries' Offices of International Affairs & Seafood Inspection and Law Enforcement, as appropriate, to conserve sea turtles in international waters by:
  - Ensuring the latest advances in turtle excluder device technology are transferred to nations seeking certification under section 609 of Public Law 101-162;
  - Training foreign government officials, shrimp fishers, and marine enforcement personnel how to properly inspect turtle excluder devices;
  - Providing technical review of fisheries and fishing methods to nations seeking exemption from section 609 requirements;
  - Identifying IUU fishing by countries that do not use turtle excluder devices and that fish in the waters of countries which require such devices as an area of concern for sea turtle conservation; and
  - Working with the U.S. Department of State, U.S. Customs and Border Protection, and countries that support the use of turtle excluder devices to identify IUU shrimp fishing by countries that do not require the use of such technology, and preventing shrimp from those countries from entering U.S. markets.
  
- The Southeast Region will further highly migratory species conservation objectives by:
  - Identifying possible IUU fishing activities in highly migratory species fisheries per requirements of the International Commission for the Conservation of Atlantic Tunas and other domestic law;
  - Ensuring that certain commercial vessels comply with requirements to obtain an International Maritime Organization number and transmit that information to the International Commission for the Conservation of Atlantic Tunas; and
  - Conducting gap analyses and identifying methods to address gaps related to data reporting for shark, billfish and other fisheries, as needed, under the competence of regional fishery bodies.
  
- The Southeast Region will support efforts to monitor IUU vessels and associated seafood product, board/investigate vessels entering U.S. ports or arriving from international convention areas, and investigate credible reports of false labeling, mislabeling and misbranding violations.

Strategy 1.6 - Increase consumer confidence in the quality and safety of U.S. seafood  
*Promote consumer confidence in the quality of domestic seafood products by providing timely information on the sustainability, quality, and safety of U.S. seafood. Advance seafood safety and quality management practices, and improved processing techniques and delivery to market by U.S. seafood producers.*

Approaches:

- The Southeast Region will continue to add users from NOAA Fisheries' Offices of Law Enforcement and International Affairs & Seafood Inspection to the data warehouse at the

SEFSC, so users can access fisheries data as needed during the course of investigations of seafood harvested from areas closed to harvest for reasons of human health and transported in interstate or international commerce.

## **Goal 2: Conserve and recover protected species while supporting responsible fishing and resource development**

### Strategy 2.1 - Stabilize highest priority protected species

*Focus science and recovery actions, and recruit partners to collaborate on actions to stabilize declining populations. Protect and restore habitat where it limits species recovery.*

Approaches:

- The Southeast Region will work to stabilize and recover priority protected species by:
  - Investing in research to improve understanding of the support functions provided by habitats to conservation of protected species to guide essential fish habitat and Endangered Species Act consultations, recovery plans, and habitat restoration;
  - Continuing to develop population evaluation tools and health assessments for the North Atlantic right whale; conducting surveys to delineate and understand the Gulf Bryde's whale's distribution, habitat needs, behavior, and status; assessing the status of other priority marine mammal, sea turtle, and coral species; and evaluating potential threats and risks to their recovery;
  - Collaborating with NOAA Fisheries' Greater Atlantic Regional Fisheries Office, Northeast Fisheries Science Center, state and federal partners, and other stakeholders to explore the potential benefits of merging the Northeast and Southeast Implementation Teams for North Atlantic Right Whale Recovery into a coast-wide effort and to implement "Species in the Spotlight" for that species;
  - Focusing limited staff resources for Gulf of Mexico Bryde's whale conservation on high priority areas, such as early engagement in Gulf restoration, advising on the siting of offshore activities that could impact the species, and recovery planning;
  - Collaborating with OLE/SED to set enforcement priorities regarding protected species considering resource limitations of the division.
  - Leading the Natural Resources Damage Assessment project, *Population Consequences of Multiple Stressors*, to advance the scientific framework for assessing and managing the cumulative stressors impacting the Bryde's whale, sperm whale, and estuarine marine mammal stocks, like bottlenose dolphins, in the Gulf, due to the heavy use and industrialization of those waters for trade, oil and gas exploration and production, and military activity;
  - Responding to stranded and entangled priority protected species;
  - Continuing to collaborate with NOAA Fisheries' Office of Habitat Conservation, NOS, and others to respond to and research the major disease outbreak affecting corals along the Florida reef tract; support coral nursery genetic management; collaborate with partners to implement reef-scale coral restoration initiatives that build on recent restoration successes; and research other new interventions, review their policy

implications, and develop decision-making frameworks for their use as recommended by the National Academies of Science, and;

- Supporting status reviews of Kemp's ridley sea turtles and Johnson's seagrass to determine if those species meet delisting or downlisting recovery criteria; and
  - Incorporating recommendations of the Fish Passage Program Review to formalize, through proactive coordination with broadened external partnerships, a watershed approach to fish passage by integrating hydropower and non-hydropower barriers into prioritization frameworks informed by the best available science.
- The Southeast Region will research ways to further reduce bycatch of protected species, increase the survival rate of bycaught animals, and improve the precision of bycatch monitoring estimates in domestic and international fisheries, and will continue to provide required data and scientific expertise to relevant intergovernmental organizations with respect to bycatch of protected species.
  - The Southeast Region will support efforts to compensate the public for injuries to protected resources by collaborating with NOAA Fisheries' Office of Habitat Conservation to inform injury assessments and determine appropriate restoration measures.

Strategy 2.2 - Review and streamline permitting and authorization processes for energy development and national defense, while maximizing conservation outcomes  
*Promote energy independence and economic growth by creating efficiencies in our environmental review processes, including implementing guidance and policies that support conservation and effectively address major infrastructure and energy projects important to our nation's energy independence, economy, and defense.*

Approaches:

- The Southeast Region will support the Maritime Administration in processing three new applications for deepwater ports in the Gulf of Mexico by providing early engagement and technical advice on ways to avoid and minimize impacts to marine mammals, other threatened and endangered species, critical habitat, and essential fish habitat, to facilitate expeditious decisions on these novel, massive infrastructure projects.
- The Southeast Region will prioritize engagement in the large number of infrastructure and coastal protection projects Congress directed the U.S. Army Corps of Engineers (USACE) to permit in the wake of the 2017-18 hurricane seasons, many of which are also covered under special procedures such as One Federal Decision or FAST-41. We will jointly explore with the USACE novel mechanisms to deliver conservation advice and consultation services (e.g., direct staff exchanges, new FWCA agreements, direct contracting for consultation analyses).
- The Southeast Region will continue its Early Warning System partnership with the Navy, U.S. Coast Guard (USCG), and USACE, to protect the highly endangered North Atlantic



right whale where its calving area intersects with important military areas and ports, and work to expand the intensity and geographic scope of the Early Warning System flights, which will lead to greater protection of right whales, greater operational security for the Navy, USCG, and USACE, and enhanced scientific monitoring of this critical population.

- The Southeast Region will enhance regulatory efficiencies on high priority Infrastructure projects (such as wind energy, export of liquefied natural gas, oil and gas exploration and development, hydropower, port deepening and expansion, flood protection, and transportation) through coordination with other federal agencies and by providing clear and concise updates to guidance documents and testing innovative approaches.
- The Southeast Region will enhance the recovery and protection of endangered and protected species in the Gulf of Mexico by ensuring preparedness, capacity, and training among partners to facilitate effective and rapid response to disasters and oil spills.

Strategy 2.3 - Minimize bycatch and entanglement of protected species while supporting fisheries

*Support continued fishing opportunities and aquaculture by understanding and minimizing protected species interactions and mortality. Work with the fishing industry, scientists, environmental organizations, academia, and other stakeholders to develop bycatch and entanglement prevention measures domestically and internationally.*

Approaches:

- The Southeast Region will improve protected species bycatch and injury estimates by:
  - Examining current programs to determine if data are collected consistently and effectively for monitoring protected species bycatch, injuries, and mortalities, with the goal of standardizing data to better understand risk levels across fisheries and prioritize conservation efforts;
  - Continuing to coordinate stranding network organizations and prioritize collection of data on human interactions; and
  - Continuing to refine bycatch and serious injury/mortality estimation methods for a range of fisheries and protected species taxa, in consultation with NOAA Fisheries Office of International Affairs & Seafood Inspection and the International Commission for the Conservation of Atlantic Tunas, as appropriate.
- The Southeast Region will further reduce bycatch by:
  - Developing spatial tools that could be used to predict and perhaps avoid bycatch “hotspots”;
  - Working with industry and other stakeholders to develop new gear technologies, fishing configurations, or deterrents to reduce or eliminate incidental captures; and
  - Collaborating with the regional fishery management councils and NOAA Fisheries Office of International Affairs & Seafood Inspection, as appropriate, to apply a full range of

bycatch reduction measures, including broad education efforts, targeted technology transfer, encouragement of voluntary changes, and, when necessary, new regulations.

**Strategy 2.4** - Address the challenge of balancing water management for protected species with other uses

*Collaborate with federal, state, and tribal partners to improve predictive water management and accommodate protected species' needs among those of agriculture and municipalities.*

Approaches:

- The Southeast Region will advise and support water management research and science by:
  - Supporting the South Florida Ecosystem Restoration Task Force and the USACE with advice and consultation on the management of South Florida water resources, primarily the management of water storage and discharges to sensitive estuaries that are core habitats for three different ESA-listed species: Caloosahatchee (smalltooth sawfish), St. Lucie (Johnson's seagrass), and Biscayne Bay (seagrass and multiple coral species);
  - Providing advice, coordination, and, in some cases, research support, to help mitigate the impacts of large-scale Mississippi River diversion projects in Louisiana on NOAA trust resources;
  - Working with partners (e.g., states, non-governmental organizations, Federal Energy Regulatory Commission (FERC), USACE) to restore access of diadromous fish to spawning and nursery habitat and examine the impacts of large infrastructure projects with potential ecosystem-level effects; and
  - Collaborating with internal and external partners (e.g., the National Water Center, the U.S. Coral Reef Task Force, the National Resource Conservation Service, territorial agencies, and others) to facilitate the development of improved methods to forecast and mitigate major hydrological introduction of land-based sources of pollution and to assess the impact of changes in land use in the Caribbean.
  
- The Southeast Region will continue to support NOAA's Regional Collaboration Network in the Gulf of Mexico, Southeast, and Caribbean and their work with NOAA's Water Initiative to identify regional water issues for evaluation and potential modeling.

### **Goal 3: Improve organizational excellence and regulatory efficiency**

**Strategy 3.1** - Match a diverse workforce to mission needs

*Plan and deploy the workforce strategically to ensure flexibility and agility in support of evolving mission functions and continuity of operations. Emphasize prioritized workforce composition and succession planning (i.e., the right people in the right place), diversity, competency-based management, and cross collaborative approaches in a sexual assault- and sexual harassment-free environment, promoting an inclusive and safe workplace.*

Approaches:

- The Southeast Region will increase workforce flexibility and agility to meet evolving management and science needs by:
  - Annually developing staffing plans and initiatives to fill priority vacancies;
  - Providing training opportunities for both supervisors and staff to enhance performance;
  - Preparing annual succession plans for SERO and SEFSC leadership;
  - Empowering the growth and professional development of employees; and
  - Sharing and exchanging expertise among SERO, the SEFSC, Atlantic HMS Division, NOAA Fisheries Office of International Affairs & Seafood Inspection, intra- and inter-agency partners, and, where possible, relevant international partners, through temporary personnel assignments (i.e., details, secondments, sabbaticals, or other mechanisms).
  
- The Southeast Region will enhance the diversity of its workforce by:
  - Training hiring managers about special hiring authorities and opportunities to select and hire a diverse workforce with a wide range of experience and skills; and
  - Developing partnerships with local organizations, academic institutions, and national and regional internship programs, to increase opportunities to recruit and hire candidates from underrepresented groups within NOAA.
  
- The Southeast Region will promote an inclusive and safe workplace by completing workplace improvement initiatives, recognizing and rewarding innovation and excellence, empowering professional growth and leadership development, maintaining a harassment-free workplace and swiftly addressing prohibited personnel practices if they occur, and emphasizing effective communication and collaboration within and across SERO and SEFSC programs.

Strategy 3.2 - Recapitalize infrastructure and facilities

*Conduct facility condition assessments to evaluate properties, and prioritize and address critical maintenance needs. Evaluate the infrastructure needs for workspace in light of an evolving workforce, and propose cost-effective strategies to modernize facilities to NOAA and the Department of Commerce.*

Approaches:

- The Southeast Region will maximize strategic investments by:
  - Ensuring the rigorous and integrated assessment of facility conditions, utilization requirements, and maintenance, restoration, and modernization needs;
  - Investing in a flexible and sustainable facility portfolio that extends to facility replacement, including planning for the future of the Lafayette facility;
  - Conducting thorough reviews and cost-benefit analyses (including geographic and remote locations and mobile work/occupancy arrangements) when deciding whether or not to construct or lease Federal office space; and
  - Employing industry standards such as Enterprise Asset Management systems for managing and maintaining facilities throughout their lifecycle (from design to decommissioning & replacement), predictive approaches (i.e., going beyond

reactive and preventative approaches) for forecasting and addressing maintenance problems, and energy audits to reduce costs and support sustainability.

- The Southeast Region will provide access to facility-related services (e.g., information technology systems) that ensure productivity at field, mobile, and off-site work locations.

Strategy 3.3 - Institutionalize prioritization and performance management practices  
*Use priority-based methodologies to optimize investments for maximum economic return while meeting conservation mandates. Analyze performance, risk and opportunities to ensure the best value to the American public.*

#### Approaches

- The Southeast Region will optimize the application of limited resources to maximize the organization's value to the public by:
  - Holding annual work plan meetings, and collaborating with regional fishery management councils on annual planning and prioritization, to align management needs and science priorities with available resources;
  - Institutionalizing annual priority-based resourcing processes to ensure management and research investments meet conservation mandates and enable acquisition of the best available science, while maximizing economic return; and
  - Establishing clear performance goals, along with the objectives and activities needed to achieve these goals, assessing risks at both the agency-wide and activity levels (within and external to the agency), and applying internal controls (detective and preventive tools & procedures) to mitigate risks based on severity.

Strategy 3.4 - Review agency regulations and remove or modify rules that unnecessarily burden businesses and economic growth  
*Implement Executive Order 13771 by reviewing regulations to identify and modify or repeal rules that are outdated, unnecessary, or ineffective. Continue to work with the regional fishery management councils to identify additional potential flexibilities for regulated entities that maximize fishing opportunities, while continuing to meet conservation objectives.*

#### Approaches:

- The Southeast Region will evaluate and reduce regulatory burdens where possible by:
  - Continuing to meet the objectives of E.O. 13771 section 610 reviews to determine whether rules with a significant economic impact on a substantial number of small entities are working as originally intended and whether they should be continued as is, amended, or rescinded;
  - Reviewing Limited Access Privilege Programs (LAPPs), per section 303A(c)(1)(G) of the Magnuson-Stevens Act, to determine whether they are meeting program goals; and

- Soliciting input from regional fishery management councils and commercial and recreational stakeholders to facilitate the development of necessary, but less burdensome regulatory actions.

**Strategy 3.5** - Institutionalize the use of innovative technologies

*Support the development, leveraging, and use of powerful technologies (e.g., artificial intelligence and machine learning, UAS platforms, advanced sensors, molecular genetics, digital platforms, electronic reporting/monitoring, mobile applications, cloud computing, and other emerging technologies) for conducting surveys, enhancing and improving the accuracy of observing systems, and collecting and sharing data in cost effective, transparent, and real-time approaches. Work with industry, academia, and other partners to test, deploy, and use these technologies.*

**Approaches:**

- The Southeast Region will continue to expand existing and implement new technologies and methodologies to increase the efficiency, timeliness, and effectiveness of data collection initiatives, including:
  - Collaborating with NOAA Fisheries' Office of Science and Technology, state partners, and regional fishery management councils to evaluate the current and future utility of our fishery-independent surveys and explore the potential for using additional surveys, gear modifications, new survey methodologies, and/or advanced technologies to improve or enhance the surveys;
  - Better aligning fishery-independent survey data with stock assessment data requirements;
  - Expanding fishery-independent surveys to collect environmental and habitat information needed to model species abundance;
  - Collaborating with NOAA Fisheries' Office of Law Enforcement to explore and type approve innovative alternatives to Vessel Monitoring System (VMS) devices, which provide location information at reduced cost to fishermen (e.g., store and forward units that collect data at sea but only transmit in cellular range);
  - Collaborating with the ACCSP to allow fishermen to report landings once to meet different regional or state requirements;
  - Continuing the use of electronic monitoring systems in the Atlantic pelagic longline fishery to obtain video imagery and metadata to verify vessel reported bluefin tuna data, as well as the disposition of live/dead shortfin mako sharks;
  - Collaborating with NOAA Fisheries' Office of International Affairs & Seafood Inspection to explore ways to advance the use of electronic monitoring technology within the International Commission for the Conservation of Atlantic Tunas;
  - Partnering with NOAA's Regional Collaboration Teams, in collaboration with NOAA Fisheries Office of Habitat Conservation, to explore co-hosting with the Southeast Coastal Ocean Observing Regional Association a workshop that would explore the use of autonomous vehicles with acoustic and environmental sensor packages (AUVs, sail drones), towed systems (acoustic and optical), self-contained environmental sensors

**Commented [7]:** SAFMC: You noted you fully support this approach, and recommended we also include MARMAP personnel because MARMAP is a very cost effective program to collect data and conduct analyses; this will only become more important as resources remain flat or decrease.

**Commented [8]:** SER Response: We agree that we should include MARMAP in this work, but believe that program is covered by the term "state partners".

- attached to fishing gear (sondes), and remote sensing platforms to reduce the cost of collecting and processing environmental and habitat data, and produce more accurate and timely scientific products;
- Implementing barcoding technologies to modernize the collection, processing, tracking, and archiving of biological data; and
  - Continuing to work toward the development of Video and Image Analytics for a Marine Environment (VIAME) to automate reef fish video identifications and evaluate the application of this technology for processing videos collected on commercial fishing vessels.
- The Southeast Region will continue to explore and apply new technologies to improve resource assessment, resilience, and adaptation, including:
    - Collaborating with NOAA’s Atlantic Oceanographic and Meteorological Laboratory to conduct ‘omics research (e.g., genomics, proteomics, etc.) to support classification of the genetic characteristics of individuals, populations, and communities, which will help improve the accuracy of population assessments, map the presence and distribution of organisms (particularly cryptic species), understand species associations (including predator/prey interactions), and assess disease exposure and resistance;
    - Collaborating with NOAA’s Atlantic Oceanographic and Meteorological Laboratory on a suite of climate-related initiatives, including completion of climate vulnerability analyses, identification of opportunities to increase climate data collection through collaborative field work, development of hindcasts to establish environment-species relationships, and exploration of climate projection models for use in fishery forecast products, which will reduce scientific uncertainty, for example, by helping to predict undesirable bycatch interactions, or by informing climate-driven species distribution shifts or range expansions; and
    - Exploring, in coordination with other NOAA Fisheries science centers, the use of Near-Infrared spectroscopy (NIRS) for estimating fish ages, which could increase assessment data throughput by significantly reducing the time to age fish by 50% or more.
  - The Southeast Region will continue to expand and create new technology solutions for managing, storing, and sharing data, and supporting NOAA Fisheries’ Office of Law Enforcement, including:
    - Evaluating new ways to modernize the region’s Online Catch Share system to ensure continuous operation of the system through local outages (e.g., hurricanes, infrastructure maintenance windows), while addressing a growing need to access the system through mobile devices;
    - Using cloud storage for catch shares, permits, and highly migratory species data; and
    - Investigating the use of HTML5 (or similar) technology to develop online Highly Migratory Species Safe Handling, Release, and Identification and Atlantic Shark Identification training workshops.

**Commented [9]:** SAFMC: You advised we include partnering with ACCSP to make use of their systems and realize cost/time savings, noting there is no need to reinvent the wheel.

**Commented [10]:** SER Response: This is about the ability to connect our existing systems to partners like ACCSP. These systems are already built but need to be modernized (we are in the process of doing so with Catch Shares and later with Permits). The nature of the Catch Shares data requires it to be kept in house, with direct access to the database and raw data. Furthermore, the IFQ system does not fit into the general database structure of ACCSP.