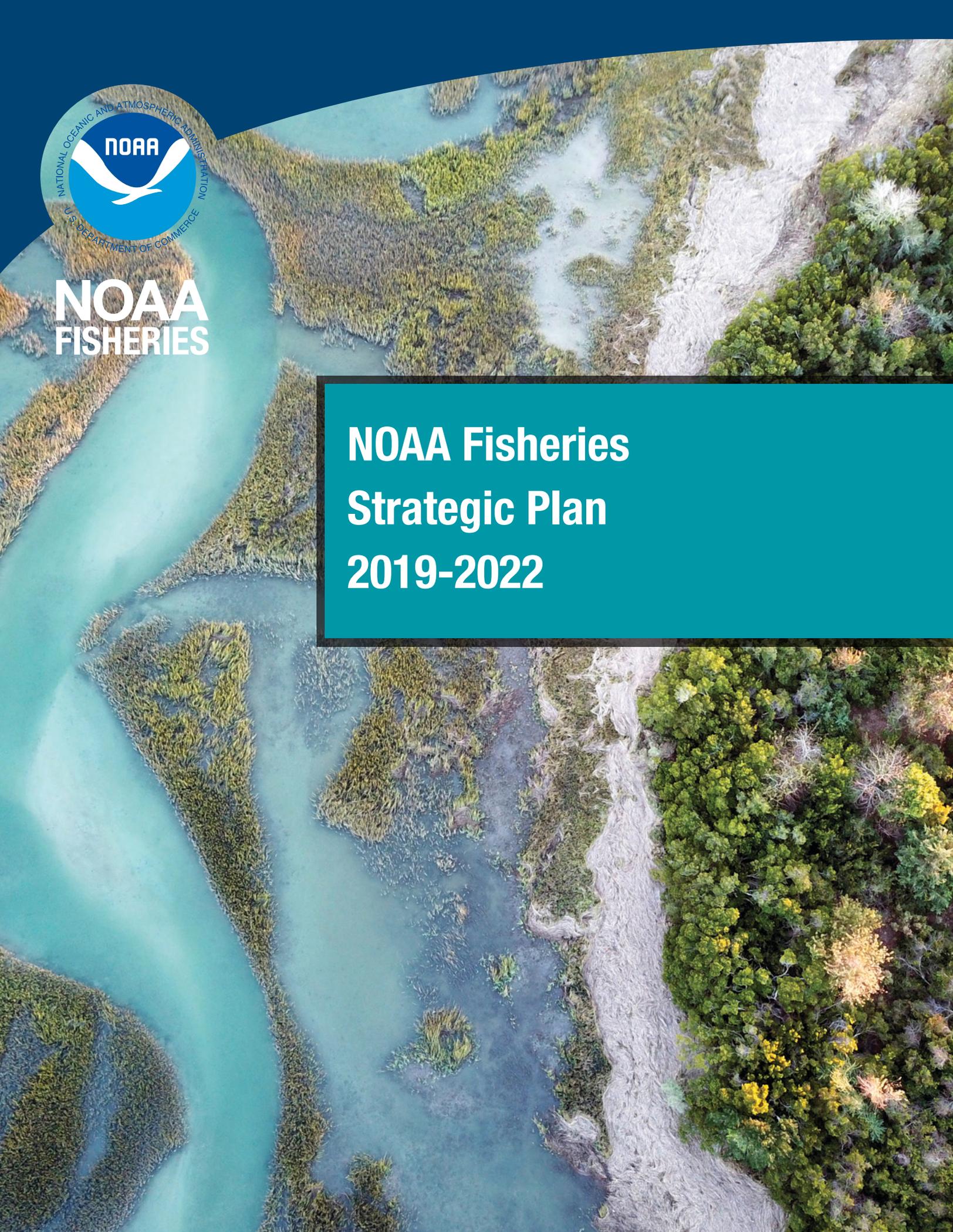




**NOAA
FISHERIES**

NOAA Fisheries Strategic Plan 2019-2022



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A Message from Chris Oliver

Assistant Administrator for NOAA Fisheries



Dear Friends and Colleagues:

I am pleased to introduce our Fisheries Strategic Plan for 2019–2022. This plan reflects a practical approach to managing our fisheries and associated marine resources. I am proud to be part of this Administration, which through a series of Executive Orders and other actions has initiated a comprehensive approach to agency and regulatory reform. We will continue efforts to reduce the regulatory burden on our customers and streamline our regulatory processes to execute our stewardship mission efficiently and support a productive Blue Economy in a business-minded manner. We will focus work to support our nation's economic position by increasing our seafood production and exports, thereby reducing our seafood trade deficit. While we operate under many long-standing statutes and governmental processes, we will proactively seek and take advantage of opportunities to improve our operational excellence. We will continue to address our high-priority activities, while minimizing or eliminating efforts on low-priority activities, to provide the best value to the American public.

Our mission is to amplify the economic value of sustainable fisheries while recovering and conserving protected marine species. We support the long-term sustainability of our fisheries to benefit commercial, recreational, and subsistence fishermen as well as aquaculture producers, the seafood industry, and coastal communities that depend on those fisheries and coastal resources. Our successes at ending overfishing and rebuilding fisheries support a strong U.S. seafood economy. Supplementing U.S. wild-caught fisheries, a healthy marine aquaculture industry has the potential to greatly increase our overall U.S. seafood production. Conserving and recovering federally protected species and their habitats ensure a productive and diverse marine ecosystem.

NOAA Fisheries enjoys a world-class reputation for our robust science and research capabilities. Successful management is dependent on building trust in our science in every region. We will maximize efforts through close cooperation with the U.S. Regional Fishery Management Councils, and other federal agencies, states, tribes, industry, and other partners to ensure shared data availability as we modernize our data information systems, leverage new technology, and strengthen our partnerships that support shared stewardship of the resources.

I believe there is room for flexibility and a greater role for common sense in our approach to fisheries management. Wherever possible, I rely on effective strategies and collaborative opportunities to strengthen the U.S. economic position. I look forward to achieving successes together.

A handwritten signature in black ink that reads "Chris Oliver". The signature is written in a cursive, flowing style.



Mission and Mandates

NOAA Fisheries is responsible for the stewardship of the nation's ocean resources and their habitat. We provide vital services for the nation, which ensure productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems—all backed by sound science and an ecosystem-based approach to management.

U.S. fisheries are among the largest and most sustainable in the world. The U.S. science-based fishery management process, as mandated by the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and other acts, is designed to provide optimum yield while preventing overfishing and taking into account the protection of habitat and marine ecosystems.

We partner to achieve our mission. Our partners include other NOAA line offices, the eight regional fishery management councils, the three interstate marine fisheries commissions, federal agencies, states, tribes, commercial and recreational fishing stakeholders, national and regional aquaculture associations, foundations, non-governmental organizations, and academia.

We work closely with the regional fishery management councils and state partners to develop and implement effective management programs. Working with the councils, NOAA Fisheries has significantly reduced the number of fish stocks subject to overfishing and increased the number of rebuilt stocks through implementation of annual catch limits, stock rebuilding plans, and conservation and restoration of habitat. We also conduct extensive data collection programs in collaboration with states, and provide stock assessments and ecological and socioeconomic information required for the federal management of fisheries and their essential habitats. The NOAA Fisheries Office of Law Enforcement—in partnership with states, territories, and other federal agencies—conducts compliance assistance and enforcement activities to ensure success of our regulatory efforts.

NOAA Fisheries also seeks to grow domestic marine aquaculture production, supplementing U.S. wild-caught fisheries while promoting business and employment opportunities. NOAA Fisheries accomplishes this by working closely with federal and state partners

to develop effective and streamlined aquaculture permitting systems, and by providing science and services to support the expansion and sustainability of U.S. marine aquaculture.

The health of species like marine mammals, sea turtles, coral, and salmon is important for maintaining balanced and thriving ocean ecosystems and supporting a thriving ocean and coastal recreation sector. We work to conserve marine species and their habitats, protect them from detrimental human activities, and monitor activities that might impact them, as mandated by the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA).

NOAA Fisheries promotes international cooperation to ensure sustainability of fisheries and species conservation globally. In partnership with industry and consumer groups, we work to increase consumer confidence in seafood by ensuring safe, wholesome, and properly labeled seafood through inspection, law enforcement, and international cooperation. Our international efforts prevent unfair seafood import practices or seafood labeling fraud from disadvantaging our domestic fisheries.



Fisheries Economics of the U.S.

The benefits provided by our oceans promote trade, jobs, and industry growth in commercial and recreational fisheries, aquaculture, tourism, and resource use while supporting various marine species facing extinction. In 2016, commercial and recreational fisheries generated approximately 1.7 million jobs, \$212.2 billion in sales impacts, \$64.2 billion in income impacts, and \$99.5 billion in value-added impacts to the U.S. economy.

U.S. Regional Fishery Management Councils

Prior to 1976, waters beyond 12 nautical miles were international waters and were fished by fleets from other countries. In 1976, the Magnuson-Stevens Act extended U.S. jurisdiction to 200 nautical miles and established **eight U.S. regional fishery management councils** with representation from the coastal states, fishery stakeholders, and NOAA.

The councils' primary responsibility is development of fishery management plans (FMPs), which must comply with a number of conservation and management requirements, including the 10 National Standards—principles that promote sustainable fisheries management.

Under the MSA, most recently reauthorized in 2007, U.S. fisheries management is set up to be a transparent and robust process of science, management, innovation, and collaboration with the fishing industry. Using the best available scientific data, the councils set annual catch limits to prevent overfishing and rebuild overfished stocks.

Strategic Goals

Reflecting the vision of the Department of Commerce and NOAA to help the American economy grow, our three Strategic Goals for 2019–2022 are to:

- Amplify the economic value of commercial and recreational fisheries while ensuring their sustainability.
- Conserve and recover protected species while supporting responsible fishing and resource development.
- Improve organizational excellence and regulatory efficiency.

Organization

Our organization of 2,900 employees is aligned toward the achievement of our three strategic goals. We have:

- Five regional offices focusing on living marine resource management and habitat conservation.
- Six science centers, with more than 20 laboratories around the United States and U.S. territories, providing science-based advice and current stock status information to fishery managers.
- Headquarters, comprised of the following 13 offices, providing nationwide oversight and coordination:
 - Sustainable Fisheries
 - Protected Resources
 - Habitat Conservation
 - Aquaculture
 - Science and Technology
 - Law Enforcement
 - International Affairs and Seafood Inspection
 - Management and Budget
 - Chief Information Officer
 - Policy
 - Communications
 - Equal Employment Opportunity and Diversity
 - Human Capital Management

The Strategic Landscape

It is critical that we are strategic about prioritizing activities to achieve optimal performance. We must be prepared to take advantage of new technologies, seize opportunities to modernize our infrastructure, increase efficiencies, and streamline business processes. We must be strategic with a willingness to move in new directions, while choosing what must be phased out. This plan is tightly focused on addressing our highest priorities and is informed by the strategic landscape. Many of these issues, challenges, and risks will be considered in our regional strategic plans and annual priorities.

Some of the *Issues we face*:

- Illegal, unreported, and unregulated (IUU) fishing effects on the management of transboundary and highly migratory stocks, and its effects on U.S. fisheries and food security.
- Changing oceanic and coastal conditions affecting distribution, productivity, and sustainability of fish and other marine species.
- Loss of sea ice effects on protected resources, marine ecosystems, and Arctic communities
- Marine and estuarine habitat loss
- Increasing demands (e.g., agriculture, hydropower, municipal needs) on available freshwater supplies impacting anadromous species
- Ocean acidification as a growing concern affecting fisheries, aquaculture, and marine ecosystem (e.g., oyster spat and larval crab survival, fish sensory abilities, shallow and deep-sea coral reef survival)
- The effect of marine toxins (e.g., endocrine disruptors, growth inhibitors, and carcinogens) on marine species
- The effect of non-point source nutrient loading in contributing to seasonal hypoxia and harmful algal bloom events.





Some of the *Challenges* we must address:

- Maintaining an adequate level of surveys and population assessments for marine resource management.
- Meeting the increased needs for assessment data and modeling capabilities to support optimal catch levels.
- Reducing regulatory burdens while ensuring sustainable fisheries and protecting marine species.
- Increasing U.S. seafood production and reducing the seafood trade deficit.
- Improving stability and opportunity in U.S. recreational fisheries.
- Reducing bycatch of non-target species while supporting commercial and recreational fisheries.

Some of the *Risks* we foresee:

- NOAA's aging infrastructure and availability/dependability of vessels for data collection is affecting safety, efficiency, and productivity.
- A greater workload than the available resources can address requires a priority-based approach (i.e., some work will not be addressed).

Meeting the Challenges

To address the identified challenges, we must invest in the people, programs, and technology platforms that most advance our highest priorities. This requires that we strategically sunset low-priority activities, products, or services. Among our high-priority areas of focus highlighted in this plan are to:

Maximize the economic yield of U.S. fisheries, enhancing the value of our fisheries to local fishing communities and the U.S. economy.

Reduce bycatch and entanglement through new gear technologies that enable fishing with minimal impacts on marine mammals, sea turtles, seabirds, and other species of marine wildlife.

Foster U.S. marine aquaculture to increase production of seafood, add American jobs, and reduce the seafood trade deficit (see sidebar and graph).

Focus species recovery on the most at-risk ESA-listed species.

Focus science and improve stock assessments on priority stocks/species without reallocating resources away from successfully managed ones.

Evaluate the levels and frequency of stock assessments to ensure investments are determined by need.

Integrate ecosystem considerations into stock assessments, fishery management, and aquaculture.

Partner with federal and state agencies to address factors and management strategies under other agencies' authorities that are adversely affecting fisheries.

Partner with industry and academia to increase our data collection capacity through use of additional platforms of opportunity.

Leverage emerging technologies, such as aerial-, underwater- and sail-drones, video and advanced sensor technologies, and electronic catch reporting to expand the collection and accessibility of data for improved science, management, and law enforcement.

Engage internationally to level the playing field in seafood trade, combat IUU fishing to ensure sustainable fisheries for stocks that migrate beyond our EEZ, and ensure U.S. fishing access to highly migratory species.

Use non-regulatory tools to protect and restore priority habitats supporting long-term sustainability of our fisheries and protected resources.

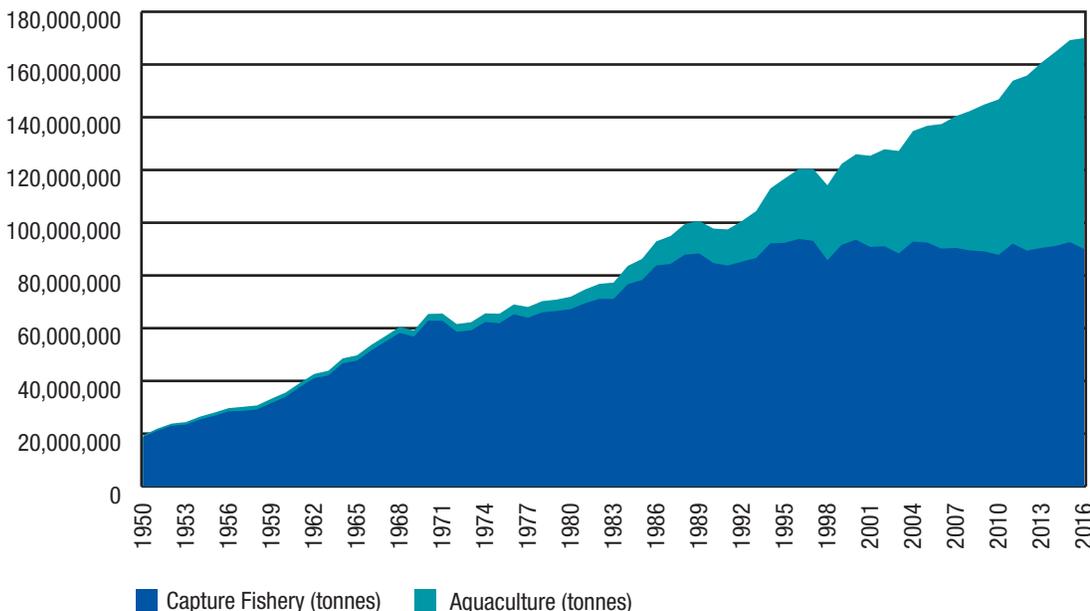
Aquaculture

The fastest growing form of food production in the world

Worldwide, aquaculture is the fastest growing form of food production, at 6 percent per year. With capture fishery production approaching biological limits, major increases in seafood production will come from aquaculture. Aquaculture is well placed to help address the demand for nutrition and food security. Despite possessing the largest Exclusive Economic Zone (EEZ), the United States imports approximately 90 percent of the seafood consumed domestically, by value. A recent study by the Food and Agriculture Organization of the United Nations (FAO) concluded that the United States is the country with the greatest potential for offshore aquaculture when considering environmental and economic factors.

World Capture Fisheries and Aquaculture Production

FAO. 2018. The State of World Fisheries and Aquaculture 2018 - Meeting the sustainable development goals. Rome.



Goal 1

Amplify the economic value of commercial and recreational fisheries while ensuring their sustainability

Key Indicators

- Fish Stock Sustainability Index (FSSI)
- Number of domestic stocks for which annual catch does not exceed the annual catch limit
- Number of adequate assessments for fish stocks
- U.S. commercial and recreational fisheries economic impact trends
- Trend in U.S. marine aquaculture production (percent increase in pounds over previous year)
- Compliance rate of Seafood Import Monitoring Program entries reviewed through audit and inspection

NOAA Fisheries expects to amplify the economic value of U.S. seafood production by optimizing commercial harvest, ensuring recreational opportunities, promoting marine aquaculture, and restoring habitat. Effective science-based management is essential to reaching optimum yield while preventing overfishing. U.S. fisheries are among the largest and most sustainable in the world, yet we maintain a \$14 billion seafood trade deficit. Reducing this deficit requires strong science in fisheries and aquaculture management, close partnership coordination with the regional fishery management councils, interstate marine fisheries commissions, states and tribal co-managers, and local organizations and stakeholders. Realizing the economic value of U.S. fisheries requires international engagement to ensure fair and legal trade practices.

Key Strategies for 2019-2022

1. Manage stocks for Optimum Yield

Rebuild overfished stocks, prevent overfishing, and find ways to increase the use 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.

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.

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.



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.

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.

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.

Goal 2

Conserve and recover protected species while supporting responsible fishing and resource development

Key Indicators

- Number of protected species designated as threatened, endangered, or depleted with stable or increasing population levels
- Number and percentage of recovery actions ongoing or completed
- Percentage of protected species with adequate assessments
- Average number of days to complete consultations, permits, and authorizations

NOAA Fisheries is responsible for recovering threatened or endangered marine species, and conserving and protecting marine mammals. Many of these species are key components of their ecosystems and have particular social and cultural importance. The focus is on recovery while using our understanding of limiting factors and threats to minimize conflict with infrastructure projects or other forms of economic growth. We will continue to improve the timeliness of our regulatory decisions and conservation outcomes when fishing and resource development projects interact with protected resources. Recovery of protected species would relieve restraints on development or other economically important projects.

Key Strategies for 2019-2022

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.

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.

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.

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.

Goal 3

Improve organizational excellence and regulatory efficiency

Key Indicators

- Scores on the Federal Employee Viewpoint Survey Key Indices
- Percentage of agency performance measures met
- Percentage of priority planned accomplishments completed
- Percentage of facility condition assessments completed

To realize the first two strategic goals, NOAA Fisheries must be an effective and efficient organization with the agility to adapt and evolve to meet emerging challenges. Promoting organizational excellence is a continuous process to improve our ability to fulfill our mission, support our people, and support the organization. The key factors that determine organizational excellence include our people, our business and management processes, and our technology and infrastructure. Improving business processes and implementing best practices conducted in a priority-based environment, along with continuous regulatory reform, will ensure our operations best support our customers and partners.

Key Strategies for 2019-2022

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.

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.

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.



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.

5. **Institutionalize the use of innovative technologies**

Support the development, leveraging, and use of powerful technologies (e.g., artificial intelligence and machine learning, AUV/UAS platforms, advanced sensors, molecular genetics, digital platforms, electronic reporting/monitoring, mobile applications, and cloud computing) 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.



U.S. Secretary of Commerce
Wilbur Ross

**Assistant Secretary of Commerce for Environmental
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