



Oregon State University

**Coastal Oregon Marine
Experiment Station**

Strategic Intent

2018

Strategic Intent -- Executive Summary

Since its inception in 1989, the Coastal Oregon Marine Experiment Station (COMES) has been the state's primary research engine supporting wise use and conservation of marine resources with a primary focus on fisheries, aquaculture and seafood. Consistent with the College of Agriculture's mission, COMES works to solve complex problems of productivity, profitability, environmental quality, and human health, and to prepare the next generation of scientists, managers, and leaders in marine resource fields. We strive to be entrepreneurial and innovative, and to work collaboratively with our stakeholders and partners including the fishing and seafood industries, coastal communities, and state and federal agencies. COMES takes pride in responding to the needs of Oregon coastal communities and seafood industries. We embrace diverse relationships and openness to new ideas, and we strive to maintain a strong reputation as a source of reliable and objective research-based information. COMES covers a wide geographic area, with locations in Newport (Hatfield Marine Science Center), Astoria (Astoria Seafood Laboratory which manages the Seafood Research and Education Center campus), and the Corvallis campus. Our faculty in Newport and Corvallis conduct a broad range of applied marine research in aquaculture, ecology, oceanography, genetics, population dynamics, policy/management, marine mammals, economics, and marketing, while our Astoria faculty focus on seafood utilization, nutrition, and health.

Our updated Strategic Intent builds on the diverse skills and ingenuity of our faculty. It recognizes the range of challenges and opportunities faced by our industries and communities. Seafood is critical in meeting the food supply needs of a global population expected to reach 9 billion people by 2050. This creates opportunities for coastal industries but also requires support from funders and partners to build critical research programs. Nationally, the U.S. has an annual seafood trade deficit greater than \$14 billion, but over the last four decades the level of per capita seafood consumption has remained basically unchanged. Oregon and the Northwest region have well managed and sustainable seafood industries and resources, but face unique challenges including changes in ocean conditions and related climate change, a large biomass of underutilized groundfish, historically low populations and harvests of coho and chinook salmon, and an underdeveloped aquaculture sector. The major challenges for faculty are increasingly tight federal, state, and university budgets. However, the newly formed OSU Marine Studies Initiative (MSI) provides opportunities to expand COMES' transdisciplinary teaching and research programs with colleagues at the HMSC, Astoria, and Corvallis campuses.

The Strategic Intent focuses on five areas: 1) Coastal Economies and Ecosystems, 2) Innovations in Seafood Science and Technology, 3) Advancing Marine Genomics, 4) Increasing Collaboration and Partnerships, and 5) Increasing and Diversifying COMES Resources. Twenty-three "required actions" were developed to address the five strategic areas. These actions include:

- Continue to focus on investments in the core areas of fisheries, aquaculture, and seafood, while expanding interdisciplinary programs to better serve coastal economies and maintain valuable ecosystem services.
- Co-sponsor research forums on new approaches for conducting interdisciplinary and transdisciplinary marine research.
- Develop new approaches to maximize collaboration and partnerships with the West Coast seafood industry, federal and state agencies, research organizations, and seafood consumers.
- Provide leadership with the Marine Studies Initiative (MSI), co-support faculty where appropriate, and develop formal partnerships between MSI and the Astoria campus.
- Co-lead efforts to create and implement an MSI "Food from the Sea" collaborative Seafood Center to drive research and education in seafood systems and innovation.

Introduction and Background

In 1987 members of Oregon's fishing and seafood industry met with administrators from Oregon State University to discuss development of an interdisciplinary organization that could help address long term problems and challenges facing Oregon's coastal communities and fishing, seafood, and aquaculture industries. Out of those discussions came the establishment in 1989 of the Coastal Oregon Marine Experiment Station (COMES)—a marine counterpart to Oregon's inland Agricultural Branch Experiment Stations. Its primary mission has remained constant from its inception – to conduct applied research on coastal and marine issues beneficial to the citizens of Oregon, the Nation, and the World. Under the leadership of Lavern Weber and Captain R. Barry Fisher, the Station began with five faculty and a handful of graduate students. By 2018, the Station had grown to include 13 faculty, a nine member Advisory Board, and 70 staff, research associates, and graduate students located at the Hatfield Marine Science Center (HMSC) in Newport, the Seafood Research and Education Center (SREC, home of the OSU Seafood Laboratory) in Astoria, and the main campus in Corvallis. COMES is now the largest interdisciplinary applied marine research organization in Oregon and one of the largest University-based marine resource and seafood research organizations on the West Coast and in the United States.

The COMES research programs encompass nine primary areas: Aquaculture, Fisheries Ecology, Fisheries Oceanography, Fisheries Genetics, Fisheries Population Dynamics, Marine Resource Management and Policy, Marine Mammals, Marine Economics and Marketing, and Seafood Science. A number of COMES faculty have joint positions within their academic homes and other departments or agencies, including the Department of Fish and Wildlife, Department of Food Science and Technology, Department of Applied Economics, Marine Mammal Institute, and Oregon Department of Fisheries and Wildlife. Most research involves a diverse array of cooperators including other OSU faculty, Oregon Sea Grant, national and international research institutes, industry and seafood commodity commissions, and state and federal government agencies including the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA-NMFS), United States Department of Agriculture Research Service (USDA-ARS), Oregon Department of Fish and Wildlife (ODF&W), and Oregon Department of Agriculture (ODA).

COMES conducts research that addresses all three “distinctive” areas of OSU's strategic plan including 1) *Advancing the Science of Sustainable Earth Ecosystems*, 2) *Improving Human Health and Wellness*, and 3) *Promoting Economic Growth and Social Progress*. COMES research also supports the mission of the College of Agricultural Sciences and the Agricultural Experiment Station *to prepare the next generation of scientists, managers, and leaders in the fields of food, agriculture, natural resources, and life sciences, and to solve complex problems of productivity, profitability, environmental quality, and human health*. COMES conducts research that is interdisciplinary and entrepreneurial. Our strategic approach maximizes the creativity and impacts of our programs by anticipating the future, balancing risks with opportunities, and integrating research, outreach, and teaching responsibilities.



Mission and Goals

The Coastal Oregon Marine Experiment Station conducts research, and supports education and research leadership, to understand, utilize, and sustain marine resources and coastal ecosystems in order to benefit the citizens of Oregon, the Pacific Northwest, the Nation, and the World.

COMES strategic goals include:

1. Increasing economic and social benefits from wise use, management, and sustainability of Oregon's marine and coastal resources and associated ecosystem services.
2. Developing improved techniques for assessing, harvesting, managing, and utilizing marine fishery resources.
3. Developing and improving products and production processes that generate high value, high quality, and health-supporting seafood and seafood byproducts.
4. Developing new or improved aquaculture products, processes, and systems.
5. Improving marketing efficiency and increasing local, domestic, and export markets for Oregon's seafood products.
6. Conducting interdisciplinary research that evaluates physical, physiological, chemical, genomic, and behavioral factors – and their interactions – for utilizing, conserving, and protecting living marine resources.
7. Supporting beneficial economic development of coastal Oregon communities.
8. Communicating knowledge to students, scientists, managers, industry, and the public to support wise utilization and sustainability of marine resources.
9. Teaching, advising, and mentoring undergraduate and graduate students to become future leaders in marine science and resource management.

Vision

COMES is the leading Marine Experiment Station in the Nation and one of the country's recognized leaders in conducting applied, interdisciplinary, and collaborative research in fisheries, aquaculture, seafood, and marine and coastal resources. COMES is known for its unique programs and partnerships, the creativity of its basic and applied science, the quality and leadership of its faculty and students, the integration of teaching, scholarship, and outreach, and the significant value of its economic, social, and environmental impacts for Oregon, the Nation, and the World.

Core Values

The COMES organization embodies the following values:

- Responds to the needs of Oregon coastal communities, the seafood industry, and disciplinary professions.
- Embraces diverse relationships and openness to new ideas and working styles.
- Commits to fostering undergraduate and graduate student research and education.
- Supports teamwork and coordination among colleagues within COMES, the Hatfield Marine Science Center, the College of Agriculture, the Marine Studies Initiative, and other departments and academic units at OSU.
- Fosters partnerships and cooperation with national and international scientists, members of the fishing and seafood industries, government agencies, and non-governmental organizations.
- Engages in interdisciplinary research in solving complex problems in marine resource science and management.
- Integrates research, education, and outreach responsibilities.
- Maintains the COMES reputation as a source of reliable and objective research-based information.

Our Operating Environment

The Coastal Oregon Marine Experiment Station operates in complex economic, social, and political “macro” and “micro” environments at the international, national, regional, state, University, College, and local levels.

GLOBAL: At the international level, the overriding issue is the importance of seafood in supplying the nutritional and protein needs of a global population that is expected to reach 9 billion people by 2050. This creates major opportunities for research and education in fishery and aquaculture production, processing, policy, management, marketing, and environmental issues. However, expansion of research operations also requires increased support from funders and research partners.

NATIONAL: The U.S. is a global fishery leader in sustainable fishery management, production and trade. However, there are major challenges including a per capita rate of seafood consumption that has not changed substantially in 40 years, and a U.S. seafood trade deficit of more than \$14 billion that is largely driven by imports of aquaculture products including shrimp, tilapia, salmon, and catfish. Although there are opportunities to improve the profitability, value, and safety of U.S. commercial fisheries supplies, production is approaching long term sustainable levels. In response, the U.S. government is directing greater resources to support aquaculture research and production.

A second major national issue is the decrease in budgets for most federal agencies that fund marine science. The decrease in budgets and the intense competition for funds among University, public, and private organizations has decreased the acceptance rate for proposals and increased the workload among scientists to compete for these grants. It has also resulted in decreasing overhead rates as agencies “stretch” grant dollars. The result is decreasing federal monies to help support marine research organizations like COMES.

REGIONAL: The Pacific Northwest, including Alaska, supports the most valuable commercial fisheries in the United States and is home to the U.S.’s largest seafood companies. It is also home to large private shellfish and public/private salmon aquaculture operations. The region strongly supports sustainable fisheries but is significantly concerned about increasing regulatory requirements as well as potential effects of climate change on ocean and coastal environments.

STATE: There is significant support for Oregon’s commercial fisheries and shellfish aquaculture industries. These fisheries are managed by the state (Oregon Department of Fish and Wildlife and the federal government (Pacific Fishery Management Council) and co-led by Oregon’s seafood commodity commissions including the Oregon Salmon Commission, the Oregon Albacore Commission, the Oregon Dungeness Crab Commission, and the Oregon Trawl Commission. Each of these commissions have made major efforts to achieve third party certification as sustainable fisheries. The Oregon fishing and aquaculture industries are innovative and collaborative, and they support marine research and science-based management. Oregon has well managed and sustainable resources and seafood industries but face unique challenges including changes in ocean conditions and related climate change, a large biomass of underutilized groundfish, endangered species listings and historically low populations and harvests of coho and chinook salmon, and an underdeveloped aquaculture sector. These industries also face growing competition for ocean space including space for conservation reserves, energy generation, and marine recreation, which creates challenging political issues as well as research opportunities.

Oregon also faces ongoing budget challenges that impact its financial support for higher education and University research including the Agriculture Experiment Station. In “real” dollars expressed as “continuing service levels”, state budget support continues to decrease over time. This results in loss of base support, fewer new hires in the College of Agriculture, and an increase in competition among College units for “scarce” College resources.

UNIVERSITY AND COLLEGE: Oregon State University is a Land Grant, Sea Grant, Space Grant, and Sun Grant University, as well as the state’s largest research institution. The College of Agriculture is ranked in the top 20 global agriculture/natural research institutions. The University has shown significant growth over the last decade but is experiencing a recent levelling off in on-campus enrollment and revenues. Additionally, there is a new generation of undergraduate and graduate students that have different expectations regarding mentoring and working relationships. While COMES faculty remain dedicated to ensuring that they are effectively training the next generation of leaders in their fields of research, learning management and mentorship strategies that resonate with current students is a new and unanticipated challenge. Finally, costs to support graduate students as graduate research assistants has significantly increased over the last five years.



There is strong support by OSU for marine research and education. The University has initiated a new program called the Marine Studies Initiative (MSI), with plans for up to a \$200 million ten year investment supporting “transdisciplinary” and experiential research and education that will include 1000 new undergraduates, new buildings (one at HMSC, possibly a second in Corvallis), new dorms near the Newport campus, and up to 50 new faculty hires. MSI is “a once in a generation” opportunity for expanding marine research and education. However, it is in its early stages and given University budgets and other issues, there are major questions about budget support, institutional and governance structure, and academic focus. A key issue is whether MSI will help to build student enrollment and engagement in fisheries, aquaculture, and seafood, which have experienced significant decreases at OSU over the last decade.

LOCAL AND COASTAL: There is strong support for COMES-Newport and COMES-Astoria at local and coastal levels. Both HMSC and the Astoria campus provide excellent facilities and collaborative research opportunities, but the long distances to Corvallis can create challenges in research, education and collaboration with main campus faculty. COMES is recognized and supported by coastal legislators, and the Coastal Caucus plays a major role in support of the College of Agriculture, the Agricultural Experiment Station, and marine research. In Newport, OSU/HMSC and the broader marine research and education community is recognized as a vital cluster to drive economic development. However, except for key political and fishery/aquaculture leaders, COMES is not generally recognized by most coastal residents.

Strengths and Assets

High quality, diverse, and productive faculty and students: Most COMES faculty have national and international reputations and by most measures of productivity (e.g., publications, research grants, economic and conservation impacts, students) rank high within the University and College of Agricultural Sciences. COMES houses a complementary cluster of interdisciplinary programs including ecology (e.g. the *Salmon and Marine Ecology Initiative*), seafood science (e.g., the *Surimi Research and Technology Schools* and *Better Seafood Processing School*), aquaculture (e.g., the *Molluscan Broodstock Program*) genetics (e.g., *Project CROOS*), economics, and fishery analysis and assessment. COMES also supports and advises a diverse group of approximately 40 graduate students at any given time, many of whom become leading scientists and resource managers in the academic, public, and private sectors.

Excellent external relationships with OSU departments and colleges, Oregon Sea Grant, federal and state agencies, and coastal industries and communities: COMES faculty have a reputation for cooperation with external groups and a strong willingness to work with campus organizations and state and regional industries and communities. They actively collaborate with the fishing and seafood industries, Oregon’s Seafood Commodity Commissions, and federal and state fishery agencies.

A strong, diverse, and committed Advisory Board and invested stakeholder groups: The COMES Advisory Board, together with leaders of key stakeholder groups, work strategically and

collaboratively with COMES faculty, staff, and students in developing and achieving the COMES mission and strategic goals.

Hatfield Marine Science Center and the Seafood Research and Education Center: HMSC in Newport and the SREC campus in Astoria both provide state of the art facilities and infrastructure to support marine and seafood research and education. HMSC provides access to the ocean, bays, and estuaries, a state of the art seawater system, and a collaborative environment for joint research with co-located state and federal agencies. The OSU Seafood Laboratory provides modern laboratories, a spacious pilot plant, and co-located marine-related university organizations (e.g., OSU Sea Grant Extension), as well as private and public groups. Both locations include fishing and processing industries which enable strong local partnerships and collaborative research.

Supportive Coastal Communities in Astoria and Newport: The cities of Astoria and Newport and, more broadly, Clatsop and Lincoln Counties, demonstrate consistent and strong support for COMES, and its initiatives and programs.

Where We Are Heading

Focus Area 1: Coastal Economies and Ecology – Utilizing, Managing, and Conserving Fishery, Aquaculture, and Coastal Marine and Estuarine Resources

Today's Situation: COMES faculty are engaged in a wide variety of fishery and aquaculture research projects reflecting the conditions of regional and global markets, resource policy and management, the natural environment, needs of our stakeholders, and faculty expertise. These projects include research in fishery assessment, fishery ecology (including genetics and oceanography), seafood science, marine economics and policy, and marine aquaculture. COMES will continue to conduct research in these core areas while addressing stakeholder needs and opportunities. However, a number of COMES faculty will be retiring within the next five years with no guarantee of replacement.

New Emphasis and Direction: Many complex and large scale marine resource issues require a broader set of interdisciplinary approaches, especially those involving climate change, ecosystem services, policy and management, and coastal economies. For example, there are major concerns about changes in climate and impacts to ocean chemistry, circulation, and ecology. Recent changes in the California Current system include shifts in circulation and upwelling, causing extremes in temperature, hypoxia, and acidity beyond those experienced in previous decades. This has resulted in significant effects on the shellfish industry, and possibly other fisheries, with potentially large scale ecological, social, and policy implications over time.

Required Actions:

- COMES will continue to focus on, and invest in, the core areas of fisheries, aquaculture, and seafood while expanding our research frameworks to more broadly link coastal economies, coastal ecosystems, and ecosystem services.



- COMES will evaluate new initiatives including new faculty hires in consideration of changes in stakeholder needs, global markets, policy and regulatory environments, marine environments, technology, and interdisciplinary/transdisciplinary research opportunities.
- COMES faculty together with other HMSC, MSI, and OSU marine faculty and researchers will co-sponsor research forums on conducting interdisciplinary and transdisciplinary marine research. Forum topics might include organizing and managing large scale transdisciplinary projects, improving working relationships between natural scientists and social scientists, developing required long term data sets, and generating support for long term funding.
- COMES will evaluate whether to develop internal organizations to lead and develop transdisciplinary projects under the theme of “coastal economies” or whether to fold such initiatives into a larger framework including MSI sponsored initiatives.

Focus Area 2: *Innovations in Seafood Science and Technology*

Today’s Situation: Under the leadership of Dr. Christina Dewitt, COMES-Astoria manages the SREC campus, which houses the OSU Seafood Lab and a variety of OSU and non-OSU tenants. The Seafood Lab conducts a wide range of research and applied training in seafood utilization including processing technologies, health and safety, product quality, and value added production. COMES-Astoria is recognized nationally and internationally for its research leadership, creativity, and contributions to seafood science and industry. At present, it is the last major University-based seafood research laboratory on the U.S. West Coast, including Alaska.¹ The recent hire of Dr. Jung Kwon has opened up new research opportunities in nutraceuticals and seafood nutrition and health. The loss of Dr. Su, however, creates a major challenge in addressing seafood safety although Dr. DeWitt has stepped up to support Hazard Analysis Critical Control Point (HACCP) seafood training. In addition, Dr. Jae Park has announced his intention to retire in the next 2-5 years, a potential major loss given the size, scope, and success of his programs. However, Senior Faculty Research Assistant Angela Hunt is leading efforts to run new “schools” focused on processing technologies beyond surimi as well as coordinating consumer education with the Food Innovation Center in Portland.

New Emphasis and Direction: The Seafood Lab will maintain its core strengths in seafood utilization, seafood safety, product quality, and value-added products while developing new programs in seafood health and nutrition. Collaboration with the Food Innovation Center is growing and providing opportunities to integrate product and consumer seafood research and education with product utilization strategies. Significant underutilization of West Coast groundfish resources (e.g., over 100,000 MT of allowable quota presently unharvested) as well as emphasis on reducing discards, bycatch, and waste along the seafood supply chain increase opportunities for full-utilization research. Greater regulation to reduce seafood effluent is creating significant needs to reduce waste streams and improve technologies in Oregon and West Coast seafood plants. While the closure of the University of Alaska, Kodiak Seafood Laboratory creates research opportunities, Washington State University’s plans to expand their seafood program create both competitive challenges and collaborative opportunities. The planning of

¹ However, Washington State University has plans to expand its Everett WA campus to include a new seafood laboratory and is presently sponsoring a number of seafood training programs.

MSI and related interest in developing a new Food from the Sea Center also create major opportunities for COMES-Astoria in transdisciplinary research and education at OSU.

Required Actions

- COMES-Astoria will continue its focus on and investment in its core areas: supporting seafood utilization including health and safety, seafood technology, product quality, and value added products.
- COMES-Astoria will work to replace Dr. Su and Dr. Park in order to maintain core strengths in seafood safety and seafood utilization and technology.
- COMES-Astoria will develop new approaches to maximize linkages and partnerships with the West Coast seafood industry and seafood consumers. This includes the following potential strategies:
 - Establish an Astoria “Research and Training Advisory Group.”
 - Conduct annual Astoria “Field Days.”
 - Conduct workshops with seafood processors from Washington and Oregon.
 - In partnership with the Food Innovation Center, conduct workshops with members of the seafood value chain including retail and restaurant sectors, as well as initiating a “Seafood 101” consumer education program.
- COMES-Astoria will provide leadership with MSI and the Food from the Sea Center, and become a recognized formal MSI partner-campus.
- COMES-Astoria will explore opportunities to engage in greater extension and outreach opportunities with Oregon Sea Grant and OSU-Extension.
- COMES-Astoria, together with other OSU partners, will continue to explore large scale opportunities to advance use and development of the OSU Seafood Laboratory campus including:
 - Partnerships with USDA to create a National Safety Center.
 - National Science Foundation supported Collaborative Research Program Initiative with other partners including the West Coast seafood industry and West Coast universities.

Focus Area 3: *Advancing Marine Genomics*

Today’s Situation: COMES has a strong group of marine geneticists conducting work in fisheries (e.g., salmon, rockfish, Dungeness crab, albacore tuna, oysters) and marine mammals. This group is taking advantage of the rapid growth in genetic technologies to address complex questions to improve understanding, management, and conservation of marine fisheries and marine mammal populations. A relatively new position (Dr. Kathleen O’Malley) is jointly funded by ODF&W and OSU with the formal title of “State Fisheries Geneticist.” She will be coordinating state fisheries genetic research (especially salmon) as well as housing fish genetics databases at HMSC. Dr. Scott Baker, a joint position with the Marine Mammal Institute, also houses a genetic database at HMSC for cetacean species. Dr. O’Malley, Dr. Baker, and Dr. Michael Banks (Director of the Cooperative Institute for Marine Resource Studies and COMES faculty member), will be housed in a new state of the art HMSC Marine Genomics and Conservation Laboratory by 2020. This facility will be part of the new HMSC Research and Education Building. In the past, a fourth COMES “allied” shellfish genetics position has helped



to support the Molluscan Broodstock Program as part of the USDA Agricultural Research Service (ARS), but presently this position remains unfilled.

New Emphasis and Direction: The COMES genomics group is well positioned to conduct broad-based genetics research on fishery management and conservation issues. This includes work in freshwater and marine environments, especially with anadromous species. The group is especially well positioned to employ cutting edge techniques that look more broadly at fish and animal behavior (“behavioral genetics”), as well as the larger marine and freshwater ecosystem including “megafauna genetics,” “eco-genetics,” and “microbial genetics.” This work is also critical in supporting hatchery management and aquaculture programs, including salmonid hatchery research programs and shellfish breeding programs. Genomics work is especially important in developing new organisms that can adapt to changing marine and freshwater conditions and environments.

Required Actions

- COMES will continue its focus on and investment in its genetics programs and support hiring genetic and bioinformatics faculty deemed critical and high priority to the COMES mission.
- COMES will work with HMSC in supporting the new Genomics Laboratory consistent with budget resources.
- COMES will work closely with ODF&W to support the State Fisheries Geneticist position.
- COMES will work with external stakeholders and OSU to replace the vacant ARS shellfish genetics position.

Focus Area 4: *Increasing Partnerships and Collaborative Opportunities*

Today's Situation: COMES is known for its collaborations with fishing industries, seafood communities, management agencies, and other research organizations. A number of COMES faculty are jointly supported and supervised by partnering organizations. Many COMES projects directly involve industry and stakeholders in project design, implementation, and analysis. Today, marine resource agencies including NOAA-NMFS and ODF&W encourage collaborative projects and many research grants not only support collaboration but require it. HMSC as a campus was founded on encouraging OSU collaboration with co-located federal and state agencies and scientists. The newly formed MSI has collaboration and partnerships as a core foundational principle.

New Emphasis and Direction: Although COMES does a good job in partnering and collaborating on a project by project basis, there are potential areas for improvement, especially with long term formal programs and partnerships with “sister” organizations including Sea Grant, ODF&W, ODA, Oregon Seafood Commodity Commissions, and various non-governmental organizations. MSI in particular provides major opportunities for cooperating on OSU marine research, education, and curriculum development. In fact, COMES is well positioned to provide leadership within MSI in developing collaborative programs and brokering partnership opportunities.

Required Actions:

- COMES will continue to support and work closely with core stakeholders on collaborative research and education projects.
- COMES will meet with all four of Oregon's Seafood Commodity Commissions to formally discuss research needs and help to develop collaborative projects where relevant and appropriate.
- COMES will invite Sea Grant, ODF&W, and other key organizations to our Board meetings to discuss opportunities for improving partnerships and collaborative research, education, and outreach programs and projects.
- COMES will provide leadership to MSI in research, education, and outreach and look to formally create partner programs and faculty positions where appropriate.
- COMES will help lead efforts to create and implement an MSI Food from the Sea collaborative Seafood Center to drive research and education in seafood systems and innovation.

Focus Area 5: *Increasing and Diversifying COMES Resources*

Today's Situation: COMES, like many of the Agricultural Branch Experiment Stations and departments in the College of Agriculture, faces significant budget challenges. Although COMES faculty are very productive in obtaining extramural grants to support research projects, COMES base budgets in Newport and Astoria are inadequate to support base services including operations, infrastructure, and start-ups. In addition, the College of Agriculture faces its own central budget issues, and inadequate levels of returned overhead as well as limits on allowable charges to grants compound the problem. COMES has explored ideas to broaden resources

including: 1) creating or expanding revenue from county “service” districts; 2) obtaining base support from Commodity Commissions); 3) generating support from seafood industries and organizations; and, 4) developing endowed positions. Although conversations continue, for a variety of reasons only smaller and more targeted efforts have had success. On the extramural grant side, federal research budgets are generally decreasing while the competition is growing, requiring faculty to work harder to fund research programs. COMES in particular confronts a unique problem, highlighted by a federal-funding conundrum with respect to which agency should fund science-based seafood research. Today, research for seafood utilization is no longer a major focus of NOAA-NMFS or NOAA Sea Grant; but because USDA considers fisheries primarily a NOAA responsibility, seafood utilization (with the exception of aquaculture) is also not directly supported by USDA.

New Emphasis and Direction: The budget situation requires COMES to continue to explore new options and develop funding ideas. The need for research services by government and the private sector provides one avenue for helping to support base costs. The development of MSI and a Food from the Sea Center creates opportunities for leveraging support for faculty positions, generating base support from industry and foundations, and supporting larger grant initiatives. In coordination with CAS, OSU, and stakeholder groups, COMES will continue to work closely with state and federal legislators to demonstrate research impacts and address community needs.

Required Actions:

- COMES will continue to explore ideas for new funding opportunities including endowments, foundations, and base industry support.
- COMES will provide leadership and work closely with MSI to develop joint support for faculty and research, and education programs.
- COMES will incentivize faculty to pursue larger grants that generate higher overhead to address base costs.
- COMES will continue to develop and support research services that will help defray infrastructure, laboratory and research program costs, where appropriate.
- COMES will work with OSU and our federal partners to address the seafood utilization grant “conundrum” among federal agencies.
- COMES will update its communication and public relations plan (including the website) to better support fundraising programs, as well as to generate broader interest and support from industry and community stakeholders, agencies, and students.