

Sample Impacts and Accomplishments

The following are examples of strong, well-written impacts and accomplishments. The intent is not to encourage you to develop impacts or accomplishments that conform to these, but rather, to demonstrate several successful approaches to presenting this information in a clear, cogent, succinct and verifiable manner.

Impacts

Impact statements should effectively describe the significant economic, societal and/or environmental benefits of our research, extension, education and communications work. Below, are several examples of effective impact statements for research and outreach projects.

Sea Grant Helps Build Sustainable Coastal Communities

RELEVANCE: A prospering coastal village for generations, Delcambre, Louisiana's shrimping industry and economy has struggled in recent years. In September 2005, a 10-foot storm surge from Hurricane Rita swept through the community causing damages totaling \$9.9 million.

RESPONSE: With Sea Grant funding, Louisiana State University senior landscape architecture students and University of Louisiana-Lafayette architecture students developed a conceptual redevelopment plan for the waterfront and surrounding area.

RESULTS: The community used the Sea Grant-sponsored plans, and in 2008 obtained \$2.6 million in grants for waterfront redevelopment and rebuilding of Delcambre's fishing fleet. In October 2009, voters approved a property tax that will generate about \$300,000 a year to revitalize the Port of Delcambre. The \$300,000 in annual revenue can be used to borrow as much as \$3 million.

RECAP: Town of Delcambre residents, seeking to revitalize their community, considered Sea Grant-sponsored plans and voted in favor of a personal property tax to support the community's redevelopment efforts.

Sea Grant Helps Shrimp Fishers Launch Successful Direct Seafood Marketing Effort

RELEVANCE: Sea Grant is playing a role in helping southwest Louisiana fishermen rebound after several disastrous years.

RESPONSE: Sea Grant partnered with the Twin Parish Commission and the Port of Delcambre to establish the Delcambre Direct Seafood project with the goal of returning economic prosperity.

RESULT: As a result of Sea Grant efforts, Delcambre Direct, an online seafood market, was launched in 2007 with a dozen shrimp fishers selling their product. In 2010, the fishers earned an additional \$600,000 (combined) as a result of their participation. The crew of the *Brittany G* vessel, alone, reported sales of over 3,000 pounds of shrimp (mostly 16-20 and 21-25 count at \$2.75 per pound) over just one weekend. As of spring 2011, Delcambre Direct has been integrated into the Port of Delcambre website (www.portofdelcambre.com) and has expanded to 23 shrimp, 10 crab, seven fish and four crawfish

fishers, each of whom is profiled online. As a result, consumers now have access to information on packaging, pricing, size of product and where to purchase the catch. Sea Grant extension was approached both by the Louisiana Department of Wildlife and Fisheries and the Gulf States Marine Fisheries Commission about expanding the program coast-wide and potentially Gulf-wide.

RECAP: Development of a custom marketing website puts consumers directly in touch with local producers of wild-caught seafood, bringing fishermen a better price for their catch.

Sea Grant and Partners Introduce Innovative Trawl to Reduce Bycatch and Preserve Haddock Fishery

RELEVANCE: Cod, flounder and haddock are often caught together in commercial fishing trawlers. Cod and flounder are heavily restricted by federal fisheries regulations, and fishermen often have to throw thousands of pounds of fish back into the ocean, while not meeting their quota for haddock.

RESPONSE: By fostering collaboration among commercial fishermen, a commercial net maker, and fisheries researchers, Rhode Island Sea Grant introduced the “Eliminator Trawl” into fisheries management. This trawl net dramatically reduces the bycatch of cod and other fish by exploiting fish behavior: cod tend to swim down when being pursued by a net, while haddock swim upward. The net is designed to allow the cod to escape through the lower portion of the net while the haddock are caught.

RESULTS: The result is an original, practical and cost-effective bycatch tool that benefits both the fishing industry and marine conservation and was approved by NOAA for use in the haddock fishery in 2008. The Eliminator Trawl, which won the 2007 World Wildlife Fund International Smart Gear Award, allows fishermen to once again pursue haddock, which had been closed to fishing due to cod bycatch. For this reason, this innovation is estimated to have a \$30 million impact on the New England economy.

RECAP: Development of the innovative Eliminator Trawl allows haddock fisherman to reduce their cod bycatch, thereby sustaining the haddock fishing business.

Sea Grant Research Results Improve Setback Laws in Two Coastal Counties

RELEVANCE: The County of Kauai, Hawai’i has been engaged in a process to revise its shoreline setback rules in order to mitigate coastal erosion and support sustainable coastal development.

RESPONSE: For the past four years, Sea Grant has provided technical assistance to the Kauai County Council and Planning Department, along with other partners, for revising shoreline setback rules and shoreline land use ordinances.

RESULTS: The Kauai County Council passed the rule amendments for Article 27 Chapter 8 related to shoreline setbacks and coastal protection in January of 2008. These setback rules utilize modern scientific and coastal management principles and science-based standards and practices, and are currently the most progressive shoreline setback rules in the state.

RECAP: Shoreline change data developed from this research project are included in revisions to setback laws in both Maui and Kauai counties.

Sea Grant Helps to Maintain an Economically Viable Commercial Shrimping Industry

RELEVANCE: Since 2001, cheap, imported shrimp products have caused large profit losses to the commercial shrimp industry in South Carolina. As a result, the federal government ruled under the Byrd Amendment that the six foreign countries importing shrimp to the U.S. would have tariffs placed on their products, which would then be returned to the shrimp industry to compensate for financial losses and hardship. This new government program requires fishermen to file extensive financial records and paperwork with which they needed assistance.

RESPONSE: Sea Grant, working with the South Carolina shrimp fishing industry, enabled 125 shrimp fishermen and businesses to receive funding under the Continued Dumping & Subsidy Offset Act (CDSOA) in compensation for foreign producers selling shrimp at artificially low prices in order to capture market share.

RESULTS: Over the last few years, the shrimpers received direct training and filing assistance resulting in the distribution of \$1,000,000 to keep their businesses open, retaining jobs for up to 225 shrimp fishermen and crew, and indirectly supporting the continued operation of nine commercial shrimp docks in coastal communities. Tariffs placed on imported shrimp were returned to the shrimp industry through the CDSOA program.

RECAP: Through the availability of these funds and with the assistance of Sea Grant training, shrimp fishermen, commercial docks and processors in the region were able to retain their fishing operations.

Sea Grant Brings Marinas Up to High Environmental Standards

RELEVANCE: According to the Marine Industries Association of Florida, boating is a \$14.2 billion dollar water-intensive industry that includes marinas, boatyards and boaters. The effects of year-round boating activities contribute to constant and growing pressure on the state's marine ecosystems.

RESPONSE: The Clean Boating Partnership is a collaborative effort with the Florida Department of Environmental Protection, Marine Industries Association of Florida, U.S. Coast Guard and Sea Grant. The goal is to improve the health and cleanliness of waterways through voluntary implementation of environmental best management practices within the state's public and private marinas, boatyards and related facilities. Sea Grant contributions have included writing the curriculum for workshops on clean marinas and clean boatyards, participating in the presentation of these workshops, and chairing committees of the partnership.

RESULTS: Since the program's inception, 267 marinas and boatyards in the state have received clean marina designations. Clean Marinas and Clean Boatyards estimated that in one year, over 600,000 pounds of glass, 1.5 million pounds of paper, 3.7 million pounds of aluminum, 5.6 million gallons of oil, and over 1 million pounds of antifreeze were either recycled or properly handled to keep them from entering Florida waters as a result of the Clean Boating Partnership.

RECAP: Sea Grant and other members of the Clean Boating Partnership have helped improve health and cleanliness of Florida waterways.

Sea Grant Efforts Lead to Improved Water Quality at Gooch's Beach, Kennebunk, Maine

RELEVANCE: Tourism is Maine's largest industry. Beach-related spending by tourists is estimated to be over \$500 million per year, supporting the employment of more than 8,000 people. High bacteria levels impair water quality, threaten public health and lead to advisories/closures of valued beaches. Routine monitoring of Gooch's Beach has resulted in over 40 exceedances of bacteria safety standards since the town joined the Maine Healthy Beaches (MHB) program in 2003.

RESPONSE: Maine Sea Grant coordinates MHB, and the program has supported studies and intensified monitoring to help pinpoint pollution sources and transport pathways affecting beach water quality. MHB and Maine Geological Survey conducted a circulation study of the Kennebunk River, which influences water quality at Gooch's Beach, and examined the relationship between bacteria and other parameters to define the "worst-case scenario" for beach water quality. EPA scientists helped locate pollution sources, and a task force of MHB, Maine Department of Environmental Protection, and municipal staff surveyed 31 priority properties. A 2009 workshop then built local capacity to find, fix and prevent sources of fecal pollution that degrade beach water quality.

RESULTS: MHB data and technical assistance have supported the town's effort to improve the nearby stormwater drainage system, and to increase the number of properties serviced by the municipal sewer system.

RECAP: The actions of Sea Grant and its partners have resulted in measureable improvements in water quality.

Sea Grant Helps Boost Shrimp Industry Profitability with Fuel-Saving Shrimp Trawler Technology

RELEVANCE: Individual gulf shrimp trawlers consume between 50,000-80,000 gallons of diesel per year. Reducing operating expenses through reductions in fuel consumption will improve vessel profitability, thus buoying an industry that is struggling to compete with imports and high fuel prices.

RESPONSE: Since 2008, Texas Sea Grant specialists have been working with elite shrimp fishermen in the Gulf to evaluate new, fuel-conserving vessel-based technology for use by the shrimp fleet. Simultaneously, Texas Sea Grant is working with other Sea Grant programs to transfer these new technologies to shrimp fishermen in the Gulf of Mexico and South Atlantic regions.

RESULTS: Reported fuel savings range from 20 to 39 percent. For the median trawler, expected annual fuel savings amount to roughly 19,000 gallons per season. Introduction of the new trawl gear to the Texas fleet has allowed fishermen to save approximately 2.4 million gallons of fuel valued at \$5.7 million in 2010 alone. Since 2008, the Texas shrimp fleet's fuel savings were estimated to be 7.3 million gallons or \$17.7 million. An estimated 200 jobs were saved each year, since without these major fuels savings many of the boats would have remained idle.

RECAP: Texas Sea Grant-sponsored experimental trawl gear resulted in 20-39 percent fuel savings for Texas shrimp fishermen.

Accomplishments

Accomplishment statements effectively describe the key actions, activities or products resulting from Sea Grant research, extension, education and communications work. These are distinct from impact statements in that they reflect ongoing activities or key results that may not yet have had a significant economic, societal and/or environmental benefit but lay the foundation for such a benefit.

Accomplishments may evolve into impacts in the future.

Sea Grant Scientist Awarded Patent on Groundbreaking Spawning Method

A senior Sea Grant-funded scientist has developed a method for yellow perch to spawn year round. This work creates the potential for greater availability of this popular and delicious fish, and enables the year-round production of perch fingerlings. This is a significant benefit for the urban aquaculture industry. The United States Patent Office, through the University of Wisconsin-Milwaukee Research Foundation, has awarded the researcher a patent on the process of out-of-cycle spawning for yellow perch. By manipulating water temperature and photoperiod in fish tanks, the researcher was able to trick the yellow perch, which normally only spawn in April and May in Wisconsin, to spawn year round. Breeding the fish in captivity also carries the benefit of dramatically increasing survival.

Sea Grant Research Sustains Florida Clam Aquaculture Industry

The Florida hard clam industry support 560 jobs, \$1.3 million in business taxes, and \$25 million in income annually. Currently, the industry is built upon a single species and is susceptible to environmental factors and fluctuating prices. Sea Grant has funded research and outreach to enhance the production and profitability of this industry by developing methods for growing a native clam, the sunray venus clam (*Macrocallista nimbosa*). This research has generated land-based culture methods via stocking density and commercial nursery growout trials. Initial market analysis indicated a positive demand for the clam. Diversifying the shellfish culture industry by developing farming technology and markets for other bivalve species will increase economic stability and growth of the industry.

SeaPerch Institute Enters Second Year and Reaches Over 425 Teachers

In 2009, Massachusetts Institute of Technology (MIT) Sea Grant piloted the SeaPerch Institute (SPI). SeaPerch is an innovative underwater robotics program that trains teachers to teach their students how to build an underwater Remotely Operated Vehicle (ROV). The Institute allows Sea Grant educators and engineers to work more closely with selected schools and thoroughly embed Sea Perch into a school's curriculum. The SPI is leveraging the success of the Sea Perch Program which started in 2003 as an innovative way to ignite children's enthusiasm for science, technology and engineering. Sea Grant educators have run over 24 two-day "train the trainer" workshops across the country and internationally, educating over 425 teachers. These teachers then return to their schools to teach their students to build an ROV.

Sea Grant Trains Next Generation of Fishermen

Each year, Sea Grant sponsors the Alaska Young Fishermen's Summit to assist emerging commercial fishermen. The two-day summit brings young fishermen together with leading experts in business management and finance, marketing and fisheries management. The 2009 summit, scheduled for December, will be the third in the series and is targeted for those just getting started in commercial fishing who would like to assume leadership roles in the industry. The summit is designed to help fishermen improve their business management and marketing skills and decision-making; understand the global seafood marketplace; broaden their understanding of marine and fisheries sciences; and, become effective participants in state and federal fisheries management processes. Small group sessions are designed to directly link attendees with industry experts in policy, science, marketing and business. More than 150 fishermen have participated in the summits to date. Past summit attendees have adopted new quality and handling procedures aboard their vessels as a result of the training they received. Others were elected to boards of fishermen's associations and have testified before the North Pacific Fishery Management Council and the Alaska Board of Fisheries.