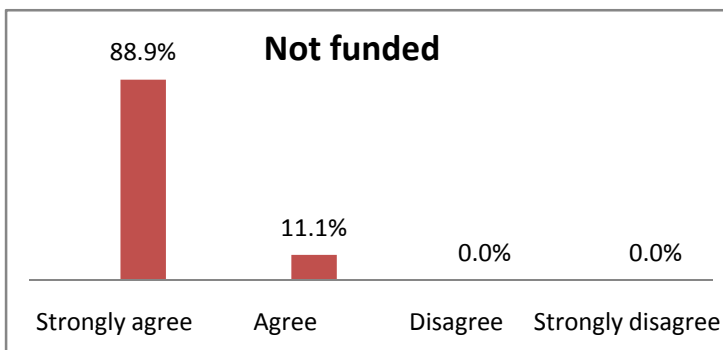
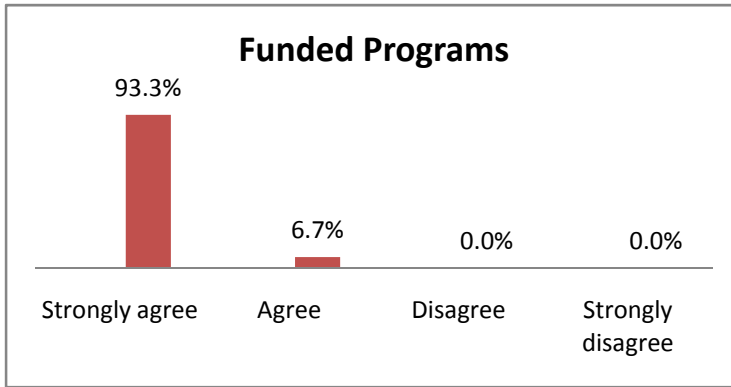


Question: Fisheries extension is an important investment for the National SG Program.



Question: Please comment on your answer.

**Funded Programs:**

We have many supportive partners who rely on Sea Grant to deliver unbiased information with no regulatory oversight.

The Assembly of Sea Grant Extension Program Leaders' 2000 publication, "Regional and National Sea Grant Extension Programming -- Some Issues, Opportunities, and Conceptual Mechanisms for Improving Sea Grant's Capabilities" (<http://seagrants.oregonstate.edu/sgps/onlinepubs/onlinepubs/q00003.pdf>) provided an approach that the FEE program built upon. That is, recognition of the need and value to national investments in capacity building for network programs. The FEE program provided impetus for regional collaboration and collaboration with our federal partners by providing significant and longer-term funding so that programs could invest in faculty members to carry out programming. This is a model that works.

The program is essential to developing and implementing the Sea Grant fisheries research and outreach efforts on a regional basis

Closely connected to a key line office in NOAA.

Fisheries across the US are in transition in a variety of ways - privatization of access, ecosystem based management, establishment of zoning of the ocean, determination of the carbon footprint, and issues of sustainability of the resource and in the marketplace. Sea Grant has a long history and the capacity to

link science, regulation and industry together to ensure that fisheries in the US remain healthy and change with global expectations.

The NSGO and its nationwide extension network are uniquely positioned to play a valuable role in the recovery and continued sustainability of the nation's fisheries. Many fisheries and fishing communities are facing serious challenges as managers seek to define and stabilize sustainable fisheries and fishing communities. At the same time, demand for coastal resources is intense and fisheries are often competing with other powerful interests such as development and increasing demands for marine protected areas. Nonetheless, the commercial and recreational value of fisheries is important and the health benefits of seafood consumption are clearly evident. California, currently imports 80% of the seafood consumed in the state and it is in the state's and nation's interest to increase seafood production through better managed fisheries and aquaculture. The NSGO has a long history of working successfully with commercial, recreational and subsistence fishing communities, and is uniquely qualified to continue this work given the in-house expertise, and especially the ability to capitalize on the increased capacity that has resulted from this FEE Program.

We would not have the solid resources to accomplish all we have done without the extra funding.

(From December 2007 Draft National Sea Grant Strategic Plan)

"The U.S. has witnessed the decline of many of its major fisheries at the same time that seafood consumption is on the rise, resulting in a seafood trade deficit of close to \$9 billion a year. Over-fishing, habitat degradation, and increasing competition among coastal users have put the American fishing industry in jeopardy and management strategies have not kept pace. Seafood safety is a growing concern as international trade increases and fish diseases and contamination become bigger problems. Aquaculture is in its infancy in the U.S., amounting to just over \$1 billion of a \$70 billion worldwide industry. Aquaculture opens up important new opportunities to meet growing seafood demand, but a number of questions need to be addressed for its full potential to be realized. Sea Grant has key roles to play in advancing understanding of the nature of these problems and opportunities and in using its research, education and outreach capacities to support the informed public and private decision-making that will lead to a safe and sustainable supply of seafood into the future."

The Assembly of Sea Grant Extension Program Leaders' 2000 publication, "Regional and National Sea Grant Extension Programming -- Some Issues, Opportunities, and Conceptual Mechanisms for Improving Sea Grant's Capabilities" (<http://seagrants.oregonstate.edu/sgpubs/onlinepubs/q00003.pdf>) provided an approach that the FEE program built upon. That is, recognition of the need and value to national investments in capacity building for network programs. The FEE program provided impetus for regional collaboration and collaboration with our federal partners by providing significant and longer-term funding so that programs could invest in faculty members to carry out programming. This is a model that works.

Fisheries extension not only builds economic strength for fishing related industries, but also builds a strong public constituency for Sea Grant that can champion Sea Grant's importance to legislators.

More than ever there is a need for a continued investment in fisheries extension by the National Sea Grant Program. The ever changing and restrictive fisheries regulations have resulted in loss of vessels from most state and regional fleets as well as a loss of income and the ability to land fish for those remaining in the industry. For the industry to survive there needs to be continued fisheries extension infrastructure and a stable support for these specialists. A critical aspect of the National Sea Grant FEE program is the ability to be immediately responsive to emerging fisheries needs.

However, the current method of funding leaves many states and groups of constituents underserved. The current approach and has caused an awkwardness in otherwise functional inter-program relations

and resulted in FE growth in states with lesser FE needs.

-Changes in land-use of coastal waterfront property: working waterfronts and public waterfront access as it pertains to fishing -Increase in recreational fishermen and charter/for-hire sector and resulting increased fishing pressure on marine resources -Economic sustainability of the commercial fishing industry due to market influences: need programming on adapting to these changes -Fisheries Leadership: Commercial fleet is gentrified and industry needs help sustaining young fishermen leadership

### **From Unfunded Programs:**

Fisheries remain an important part of the national economy and the well-being of the nation. Sea Grant has a long history of working with all aspects of fisheries and has developed a unique relationship with fishing communities.

It is one of the basic responsibilities for almost all SG programs

Working with fisheries constituents will always be important for Sea Grant.

Important part of state economy, but many fishers feel they have no political voice

In the Great Lakes region we need to maintain the competitiveness and efficiency of our commercial fisheries and maintain and generate a population of scientifically informed recreational anglers.

Fisheries extension has always been an important component of Sea Grant at both the national and local program levels in dealing with fisheries-related issues and problems throughout the network.

Since we have been called Fish Grant and work with many partners on fish issues it seems that this should be important from a national perspective.

Question: What is changing with your fisheries clientele that future FEE type programming can be uniquely responsive to?

### **Funded Programs:**

Greying of our sportman's organizations which is resulting in a loss of experience in dealing with fish management issues. Need to recruit and educate new leaders.

The velocity of change in managing fisheries that selectively harvest under dynamic spatial management for lowest environmental impacts and highest socio-economic values will continue to increase. At the same time, there are a number of relatively new elements in ocean management that will increasingly be before fisheries and seafood. On the West Coast, and particularly in Oregon, new needs have emerged relative to new ocean uses—spatial uses that have significant implications for fisheries and seafood. These include fixed spatial zoning for wave energy parks and for marine reserves (akin to ocean wilderness areas). Open ocean aquaculture may also be a future issue. However, for wave energy and for marine reserves, where Oregon Sea Grant is already involved, the outreach and community engagement is well beyond the commercial and recreational fishing communities. In many ways, broader community involvement in ocean activities—including harvest—will likely be a major focus of our program.

Regional efforts to enhance shrimp marketing efforts and reduce harvesting costs    The growing difficulty of obtaining access to coastal waters caused by restrictive use of docks and marinas  
Coordinated HACCP training    Assistance with import monitoring

fading away.

Alaska commercial seafood production is vital, healthy and commands top international markets. We see wild catch fisheries carbon footprint analysis and reduction as a very important emerging issue which will require research, outreach and education among the fleets and processors in the very near future. Alaska is on the forefront of global climate change effects which is already being expressed in pronounced increases in water temperatures, northward migrations of fish stocks and decreased ice and accompanying local coastal erosion. Also, our commercial fishermen are aging, and we are aggressively joining established and retiring fishermen in training the next generation of successful fishery leaders in business, safety, marketing and policy. Privatization/access privileges are changing and fishing communities are experimenting with ways to ensure fishing access into the next generations.

Interest in fisheries and broader ocean policy reform within and beyond California has surged in recent years. Within the state, activity to implement the Marine Life Management Act and the Marine Life Protection Act has accelerated, spurred in part by the state's broader ocean policy reform including development of an Ocean Action Plan. This initiative is echoed by the recent West Coast Governor's Agreement on Ocean Health. A recent series of Sea Grant-sponsored regional workshops to identify research and information needs for West Coast ocean management is a further indication of activity in this arena. Having invested considerably to identify regional research priorities and information needs, it seems of paramount importance to maintain the fisheries extension capacity created by the NSGO FEE Initiative. All of this effort, in turn, dovetails with the US and Pew ocean commissions and their respective reports and recommendations.

The proliferation of interest in the diverse values and uses of the oceans notwithstanding, fisheries remain a central focus of ocean management. Altogether, the policy changes above point to critical needs for fishery information – what California calls “essential fishery information” (EFI). That EFI includes not only biophysical information, but also information on the human dimensions of fisheries and fishing communities. Building this human dimensions information requires the development of research and extension capacity. With FEE support, CA Sea Grant is very well positioned to play a leading role in producing objective, scientifically robust EFI, and helping the state to develop capacity for generating and appropriately using social scientific as well as biophysical science data. FEE support is essential for enabling CA SGEP to continue to provide trusted, non-partisan information and outreach to the state's and region's increasingly diverse clientele.

Fisheries ethics and roles and responsibilities. Rights based management.

In recent years, as The Pew Oceans Commission and the U.S. Commission on Ocean Policy findings on the state of the oceans and single-species regulations to prevent overfishing have made headlines, ecosystem-based management has emerged as an alternative strategy to manage our ocean resources. As ecosystem-based management develops, fishermen and coastal communities have a role to play by participating in the research, stewardship activities, and decision-making process. Maine Sea Grant and its partners throughout the national Sea Grant network are already working at the interface between scientists, fishermen, policymakers, and the public and are thus optimally positioned to facilitate this participation, helping to create and ensure the use of the knowledge, tools, and skills needed for ecosystem-based management. Future FEE-type programming can be uniquely responsive to the need for funding this area in Sea Grant Programs all over the country.

The velocity of change in managing fisheries that selectively harvest under dynamic spatial management

for lowest environmental impacts and highest socio-economic values will continue to increase. At the same time, there are a number of relatively new elements in ocean management that will increasingly be before fisheries and seafood. On the West Coast, and particularly in Oregon, new needs have emerged relative to new ocean uses—spatial uses that have significant implications for fisheries and seafood. These include fixed spatial zoning for wave energy parks and for marine reserves (akin to ocean wilderness areas). Open ocean aquaculture may also be a future issue. However, for wave energy and for marine reserves, where Oregon Sea Grant is already involved, the outreach and community engagement is well beyond the commercial and recreational fishing communities. In many ways, broader community involvement in ocean activities—including harvest—will likely be a major focus of our program.

Demographic changes are reducing participation in the fishing industries. FEE programming dedicates personnel to reaching and inspiring both nonparticipating youth and adults.

New fishing regulations outlined in Framework 42 to the Fisheries Management Plan has resulted in a loss of income and the ability to land fish for those remaining in the industry. NH fishermen are opting to fish in bad weather in order to maintain an income base while fishing grounds are not under management closure. In addition, vessel owners and captains are dropping health and life insurance policies to save money and fishing alone. For the industry to survive there needs to be a continued cooperative research effort to design innovative fishing gears that provide enhanced selectivity and bycatch reduction. The NH FEE program will be a critical component of maintaining interest in cooperative research and the development and transfer of conservation minded fishing strategies. These strategies may provide opportunities to increase income through special access programs (SAPs) or B-day use in conservation areas.

There also need to be efforts to develop extension programs that increase fishermen efficiency by reducing deck sorting time and/or increasing fuel efficiency. It will also be critical to continue to provide safety training as well as begin to provide alternatives to commercial fishing to those being forced out of the industry. Alternatives, may include marine aquaculture and technical training/certification for new job opportunities.

It is unclear how FEE-type differs from normal FE programming.

Our groundfish fleet is going out of business and leaving the state for Massachusetts ports.

Increasing global competitiveness and the need to establish local markets for seafood will require fishermen to become more capable the delivery of a quality product in local markets. Access to waterfronts is being restricted by coastal growth and development, and the high land costs that come with it. Fishermen and fishery dependent businesses are being priced out of waterfront access. Increasing fuel and other costs are making it difficult for fishermen to remain competitive in the marketplace. More fuel efficient engines vessels, gear, etc. will be needed to bring down the cost of fishing. This is the flip side of the quality/marketing piece that creates good local markets for premium products.

Tribal fishermen in Washington state are more in need than others, as they typically do not have the options of travelling to Alaska and elsewhere to participate in fisheries to supplement local stocks. We have not had the financial resources to turn our attention to the needs of the recreational fisheries either.

### **Unfunded Programs:**

Fishermen are caught between high operational costs and the inability to pass along costs because of low-priced imports. Programs that address reducing the cost of harvesting fish would be helpful and fit well with FEE.

The demise of the Commercial Fisheries in our state and the changing regulations

Losing much of our commercial fisheries, and focus now is on Recreational clientele.

Our fishermen are facing more and stringent regulations that are impacting on their livelihood.

Fisheries clientele continue to become more involved in management decisions and could use more training to better understand ecosystem-based management.

looking to find ways to have stronger voice via associations and foundations assistance to business planning developing flexibility in face of changing regulations

Waterfront development threatens business locations of commercial fisheries operations. Not exactly a change, but potential for divisiveness between anglers and commercial fishermen remains.

Shift to examining how fisheries can be done in a more sustainable manner that minimizes its impact on the environment.

Stream and Lake access issues related to keeping and expanding fishing opportunities. Capitalizing on the added value to tourism and local economies.

Question: In the next 5 years, how could National Sea Grant's investment in fisheries extension have the greatest impact?

**Funded Programs:**

Education and outreach programs which support and enhance the public's knowledge on fishery issues such as, new legislation on invasive species control, fisheries management use of creel limits, size limits and quotas.

By continued investment in programs of the network – either continuing existing programs or re-competing—the NOSG's investment in fisheries extension helps maintain individual program capacity. If this program support is lost, the trend toward reduced capacity of programs in respect to one of the national program's premier program focus—fisheries and seafood—will continue to reduce the effectiveness of Sea Grant within the NOAA community but also, most critically, among communities of place and of interest.

Adding dollars to Sea Grant core programs.

Provide a pathway to a sustainable, economical viable commercial fisheries and opportunities to enhance the enjoyment of the recreational fishing experience.

Continued grass roots investment in agents on the docks responding with relevant solutions to real issues, learning about problems and concerns through long-standing relationship development with their clientele. We suggest that National Sea Grant build on what it has enhanced rather than start over completely. Thus we recommend that funding be continued to programs that have shown success and impacts.

The greatest impact would be to continue the existing FEE program given the investment to date, and

the fact that after five years these extension advisors have laid the groundwork and established the trust and partnerships necessary to achieve ADDITIONAL significant impacts.

Regional, national and international focus; fishermen training; collaborative research and management.

- Increase and sustain the funding for this initiative.
- Double efforts at the National Sea Grant Office to capture the impact of this investment and convince NOAA Fisheries to provide matching funds for the NSGCP FEE investment.

By continued investment in programs of the network – either continuing existing programs or re-competing—the NOSG's investment in fisheries extension helps maintain individual program capacity. If this program support is lost, the trend toward reduced capacity of programs in respect to one of the national program's premier program focus—fisheries and seafood—will continue to reduce the effectiveness of Sea Grant within the NOAA community but also, most critically, among communities of place and of interest.

The greatest impacts will be economic, from greater revenues stemming from increased participation, new businesses and streamlined operating methods in the industries.

The National Sea Grant program should continue to support the current FEE specialists. The process of building trust within the commercial fishing industry as well as planning and constructing extension programs takes time. Many programs are just beginning to impact their constituents by year four or five of the program. With that said, this FEE evaluation report should be used to identify gaps in the national fisheries enhancement approach. Response to these gaps may include an additional competitive program to further enhance the fisheries extension infrastructure. The FEE program should not eliminate funding of current specialists and essentially “start over” with an entirely new competitive program.

By providing funding to programs with the greatest needs and constituent base.

Be targeted at state managed fisheries

-Need more fisheries-oriented economists, business specialists and sociologists, to address global competitiveness, business management, marketing and seafood quality issues. -A better coordinated and supported regional fishery extension network.

Here in Washington state, it would be in tribal fisheries and in recreational/tourism aspects of fisheries.

### **Non-funded Programs**

Extension led research on practical solutions to reducing costs and follow-up extension programs that provide training in running the most cost efficient operations.

To carefully examine the future of commercial and recreational fisheries within the state and assist the fishery in moving towards the direction it is heading. I also feel that aquaculture needs to be built into this entire evaluation.

More agents/specialists on the docks listening to the concerns and issues of the various client groups.

Educate the fishermen on changes in fisheries management and requirements and work with them on alternative and supplemental livelihoods. Need also to figure out how to protect the infrastructure to keep it from disappearing due to gentrification.

Providing easy access to real-time information on weather, wave height, surface and subsurface temps, currents, turbidity, algal blooms, water levels, etc. Will save time and fuel.

Make sure that new knowledge and products are made readily available to each state so as not have to reinvent wheel for each state ensure that funds are available so that each state can provide viable fisheries extension

Assist in development/improvement of more efficient or effective capture techniques and technology to adapt to climate and ecosystem changes. Work to improve fish population assessment techniques and accuracy.

Continue to provide resources that build human capacity to address fisheries-related issues and problems.

Investing in youth education on fishery issues, involvement in fishing, lake ecology, invasive species impacts. Educate the future leaders in fish related organizations. We have a greying (aging) leadership.

Question: In the future, FEE program funds should be:

**From Funded Programs:**

Answer Options	First choice	Second choice	Third choice	Fourth choice	Fifth choice	Rating Average
Continue to support ongoing FEE programs.	8	3	3	0	1	1.866667
Be re-competed throughout the entire Sea Grant network.	4	8	3	0	0	1.933333
Be divided equally among all Sea Grant programs.	3	2	7	2	0	2.571429
End. Funds should be absorbed by NSGO to use elsewhere.	0	0	1	7	3	4.181818

**From Non-Funded Programs**

Answer Options	First choice	Second choice	Third choice	Fourth choice	Fifth choice	Rating Average
Continue to support ongoing FEE programs.	1	1	4	3	0	3
Be re-competed throughout the entire Sea Grant network.	5	4	0	0	0	1.444444
Be divided equally among all Sea Grant programs.	3	3	3	0	0	2
End. Funds should be absorbed by NSGO to use elsewhere.	0	0	0	3	6	4.666667