

IDENTIFYING NEW AND INNOVATIVE PARTNERSHIPS
FOR NORTH CAROLINA SEA GRANT

by

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Executive Summary

The National Sea Grant College program was established in 1966 under the National Oceanic and Atmospheric Administration in order to unite universities with public and private sector partners. The program's goal is to support coastal research intended to yield economic and social benefits. North Carolina Sea Grant (NCSG) was founded in 1970 and designated as the nation's 12th Sea Grant College in 1976. NCSG works to provide unbiased, science-based information to enhance the sustainable use and conservation of ocean and coastal resources to benefit communities, the economy and the environment in North Carolina.

Given its unique position as a producer of objective research and education, NCSG partners with a wide array of different stakeholders in the North Carolina community. In order to expand their current resource base and extend their impact across the state, NCSG seeks new opportunities to engage with external entities with whom they are not already affiliated. The objective of this research is to identify potential industry, non-governmental, academic, and/or state and local program partnerships in which collaboration would be beneficial to furthering NCSG's mission, increasing the impact and efficiency of their work.

The methods of analysis for this project were twofold: (1) to first understand the structure and function of Sea Grant, specifically NCSG and its current partnership framework and (2) to identify and evaluate innovative potential partnerships for the future of NCSG. We performed program evaluation in order to assess NCSG's current operations, impacts, and reporting. In order to map the current landscape of stakeholders and the capacities at which these partnerships operate, we utilized NCSG's website and three sets of documents: The National Sea Grant College Program's list of partners, NCSG's Program Focus Area Reports from 2010-2013, and the mailing list for NCSG's magazine, *Coastwatch*. For details on NCSG's current thought process on partnerships, we reviewed the minutes of the NCSG Board's Partnership Advisory Group. Next, we developed and conducted a survey of the NCSG team to assess their most significant existing partnerships and areas where team members wished to see partnerships formed in the future. Through these results we developed new partnership language to help NCSG categorize the capacities of each of the partnerships they maintain and to provide consistency and clarity when discussing these both internally and externally. Next, we performed a gap analysis to identify areas within NCSG's existing partner network where new, potential partnerships could be formed. By using the new partnership capacity language alongside NCSG's current focus areas, we assessed past and current partners to find any existing gaps.

Through our analysis, several findings were discovered. First, NCSG has engaged with at least 106 unique partners, including both past and present. These existing partners were sorted into partnership category types to provide a more comprehensive understanding of how NCSG's partnership efforts are distributed. Next, as a result of our gap analysis, we were able to identify three unique partnership category types that are lacking in NCSG's current partner framework – community groups, non-governmental organizations, and entities in the private sector. Using our newly created partnership capacity language, we were then able to identify gaps in the depth of NCSG's partnerships. Of these partnership capacity types, NCSG could nurture more financial and outreach partnerships in order to address areas for improvement in their engagement efforts.

Conclusions drawn from the methodology and findings can be used to inform next steps that NCSG can take in its collaborative work with partners. The following are the

recommendations presented to NCSG with a goal to enhance their past, current and future engagement with partners:

1. Incorporate new language to classify and define types of partnership capacities to use during internal and/or external dialogue and reporting in regards to engagement practices.
2. Utilize gap analysis results to identify areas for improvement where new partners should be identified and sought out.
3. Seven new potential partners for future collaboration and their respective identifying information.
4. Principles for effective partnerships that represent best practices that can be used to guide NCSG and their partners as they engage.

In conclusion, this project utilized program evaluation, stakeholder mapping, survey development and administration, and gap analysis to identify areas for improvement for NCSG to gain more depth and breadth in their future partnerships. As an organization that provides unbiased, science-based information, NCSG will continue to have numerous opportunities to create long-lasting, beneficial partnerships that will deepen the impact of their work in North Carolina. We suggest that NCSG utilize our above recommendations in order to move forward in the engagement processes. Once the NCSG team and Advisory Board review the findings in this report, next steps will be to further examine the seven potential partners we recommended. Team members or Advisory Board representatives should initiate contact with these organizations to explore whether opportunities to pursue partnerships exist. The partnership capacity language can be used to aid the Advisory Board in determining these partners and others for future projects and programs. The principles for effective partnerships can guide the initiation stages of any new partnership while also providing a general framework for engagement with these new entities. In addition, the 106 unique partners identified can be used to update NCSG's internal list of partners. NCSG should maintain this list and keep it updated as they move forward, in order to better reflect on past and current work carried out with their respective partners. Altogether, NCSG possesses great potential to further extend their reach and increase their impact across North Carolina, expanding on their already tremendous accomplishments.

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I. Introduction

The National Sea Grant College program was founded in 1966 by an act of Congress entitled the National Sea Grant College Act. It was established as a way to unite universities with public and private sector partners in order to support coastal research intended to yield economic and social benefits. Sea Grant resides in the Office of the Oceanic and Atmospheric Research office within the National Oceanic and Atmospheric Administration (NOAA) and today there are 33 Sea Grant Colleges and universities nationwide.

North Carolina Sea Grant (NCSG) operates as a part of this national network. NCSG is a local entity founded in 1970 that initially began through an institutional planning and project grant. This effort was expanded significantly once the state of North Carolina (NC) established the now 16-campus University of North Carolina (UNC) system. In 1976, NCSG was designated as the nation's 12th Sea Grant College. The NC program identifies as an inter-institutional center under UNC General Administration, with NCSG programmatic authority sanctioned by the UNC System's Office of the Vice President for Research and Graduate Education.

The federally mandated program strives to find science-based solutions for the challenges facing NC's coastal communities and marine resources. It works to fulfill the goals determined by the National Sea Grant College Program while also working to meet the needs of specific NC stakeholders. NCSG's Strategic Plan, updated every three years to include different areas of focus, dictates these national and state-based needs. Their current areas of focus are shown in Figure 1.

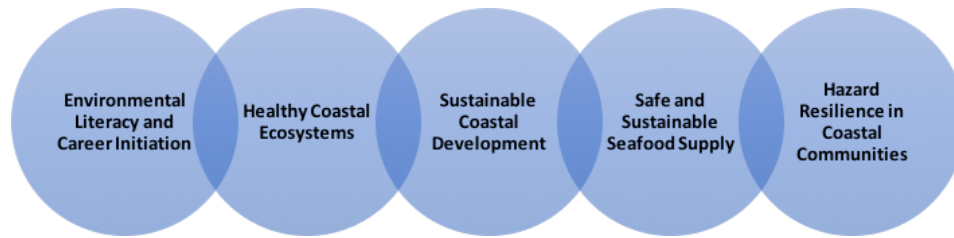


Figure 1. NCSG’s Current Focus Areas

Various NCSG stakeholders include scientists, educators, local officials, interest groups, government agencies, coastal businesses and the general public. In order to carry out their mission, the program provides consistent and unbiased interaction with its stakeholders as well as the general public. NCSG’s own team members and researchers serve as advisors on a wide array of panels, consistently practicing this form of sound, objective science.

NCSG’s mission is as follows:

Through research, outreach and education programs, NCSG provides unbiased, science-based information to enhance the sustainable use and conservation of ocean and coastal resources to benefit communities, the economy and the environment (“Our Vision,” n.d., para. 6).

The program constantly seeks to serve as a leader in addressing North Carolina’s needs in ocean and coastal resource management by providing sound science and educational excellence. The NCSG staff operates as a team, with 23 full time employees working together across the state from their offices in Manteo, Morehead City, Wilmington, and Raleigh. Their organizational structure, shown in Figure 2, allows for an extremely collaborative environment, in which many of their staff work within multiple focus areas and across locations. While the program operates regularly through this team, the NCSG Advisory Board serves to support priority needs through research, outreach, communications, program development, and more.

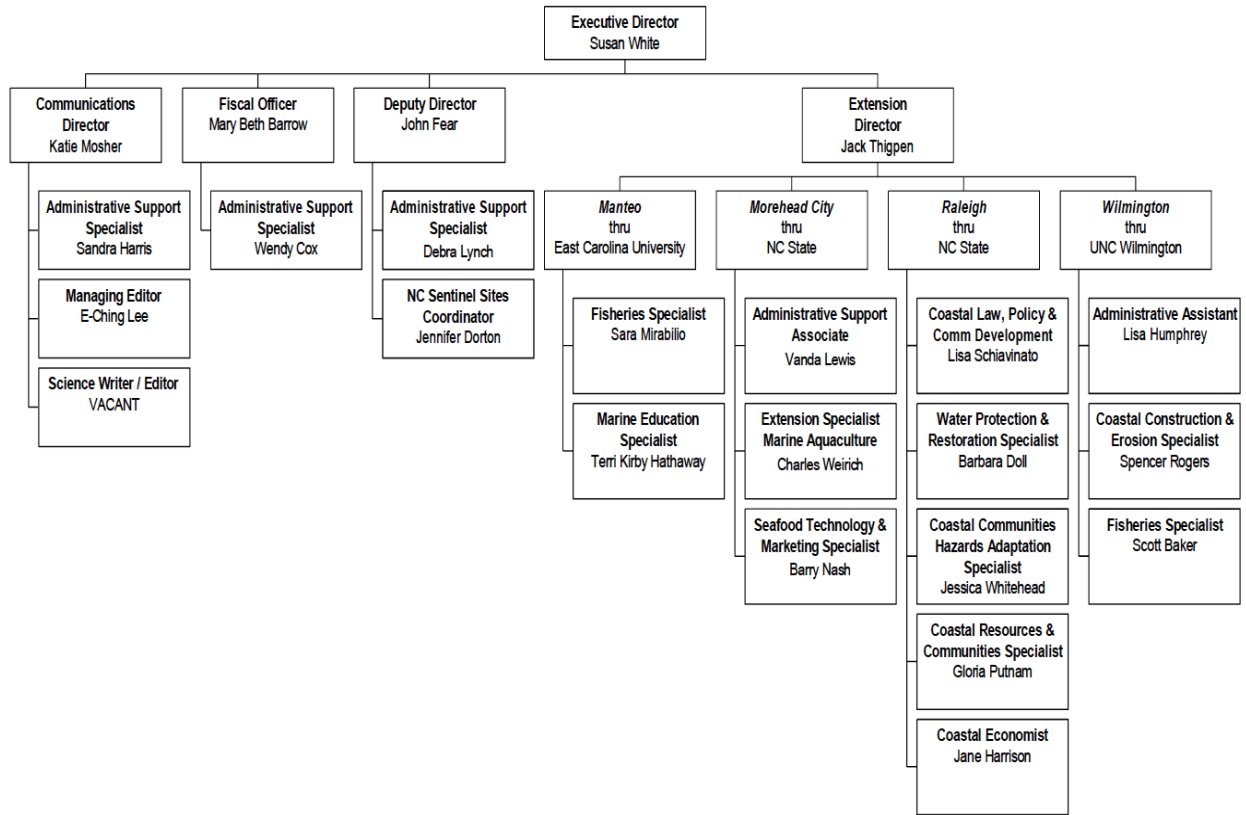


Figure 2. NCSG’s Organizational Structure

The program works to facilitate millions of state and federal dollars to carry out and fund research through the UNC system, outreach, and education programs in order to promote learning, exploration, and awareness across the state and beyond (NCSG, 2013). NOAA federally funds NCSG, while a percentage of these funds are matched by the NC General Assembly. Funds are used to support administration, extension programs and projects, education, communication, program development, and research, as seen in Figure 3. NCSG primarily invests their funds in research, as it made up 48% of their expenditures in Fiscal Year 2015. Second to that is their spending on extension and education at 25%, while administrative and communication also have sizable funds invested in them.

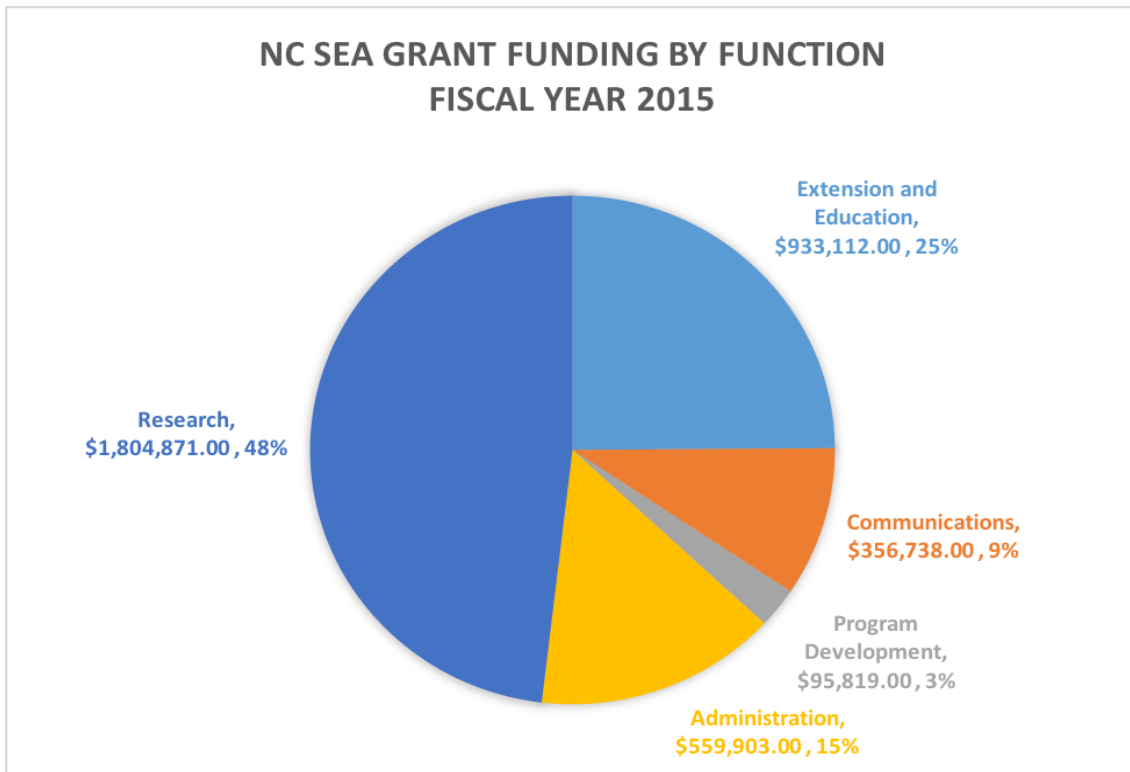


Figure 3. NCSG’s Funding by Function, Fiscal Year 2015

State Sea Grant programs have specific annual performance metrics based on the goals of their Strategic Plans that are subsequently sent to the national office for further reporting. National Sea Grant works to track yearly performance measures and metrics to better understand the impact of their work on a national level. NCSG also works to track their individual impacts and accomplishments by using specific performance measures, setting targets, and reporting subsequent data, as shown in Tables 1 and 2. Table 1 shows targeted performance measures with the reported data for a 4-year period between 2010 and 2013. Table 2 is a current snapshot of the performance measures for the 2014-2017 period with targets. There are no reported data shown as NCSG tracks and collects data at the period’s end.

Table 1. NCSG’s Goals and Performance Measures for 2010-2013. Targets and reported data are present. Each represents only the metrics for this time period, with a baseline of 0 for each measure beginning in 2010.

	North Carolina Sea Grant Goals	Performance Measures (2010-2013)		
Marine and Coastal Literacy	<ul style="list-style-type: none"> An educated workforce that protects, uses and manages coastal resources in ways that optimize social, economic, and environmental benefits for current and future generations. 	(No Performance measures exist for this focus area)		
Healthy Coastal Ecosystems	<ul style="list-style-type: none"> Sound scientific information to support ecosystem-based approaches to managing the coastal environment. Widespread use of ecosystem-based approaches to managing land, water and living resources in coastal areas. Restored function and productivity of degraded ecosystems. 	Number of coastal watershed communities who have mitigated or enhanced degraded tributary or shoreline ecosystems: Target: 10; Reported: 21	Number of degraded acres rehabilitated or enhanced as a result of NCSG activities: Target: 130; Reported: 250	Number of public coastal resource management bodies that utilize ecosystem-based approaches in management of land, water and living resources, based on NCSG activities: Target: 13; Reported 87
Sustainable Coastal Development	<ul style="list-style-type: none"> Healthy coastal economies that include working waterfronts, an abundance of recreation and tourism opportunities, and coastal access for all citizens. Coastal communities that make efficient use of land, energy and water resources and protect the resources needed to sustain coastal ecosystems and quality of life. Coastal citizens, community leaders and industries that recognize the complex interrelationships between social, economic and environmental values in coastal areas and work 	Number of coastal communities that have adopted, adapted, improved or refined sustainable (economic and/or environmental) development practices and policies as a result of NCSG activities: Target: 20; Reported: 54	Number of coastal watershed communities engaged in activities or making informed development decisions that address the sustainability of economic and environmental resources as a result of Sea Grant's capacity building, tools, data, technologies, and/or education of community leaders: Target: 20; Reported: 103	
Safe and Sustainable Seafood Supply	<ul style="list-style-type: none"> A sustainable supply of safe seafood to meet public market and non-market demand. A healthy domestic seafood industry that harvests, produces, processes, and markets seafood responsibly and efficiently. Informed consumers who understand the importance of ecosystem health and sustainable harvesting practices to the future of our domestic fisheries, appreciate the health benefits of seafood consumption and understand how to evaluate the safety of the seafood products they 	Number of fishermen, resource managers and seafood businesses who consider and/or implement responsible harvest or processing techniques and practices: Target: 1,000; Reported: 1,913	Number of producers, distributors and consumers of seafood who reconsider and/or modify their practices/behavior using knowledge gained from NCSG on fishery sustainability, seafood safety and the health benefits of seafood: Target: 2,000; Reported: 2,900	
Hazard Resilience in Coastal Communities	<ul style="list-style-type: none"> Widespread understanding of the risks associated with living, working, and doing business along the nation's coasts. Community capacity to prepare for and respond to hazardous events. Effective response to coastal catastrophes. 	Number of coastal communities provided with information/trained in local hazard resiliency, and hazard mitigation tools, techniques, and best practices: Target: 200; Reported: 223	Number of coastal communities who adopt/implement hazard resiliency practices to prepare for an respond to/minimize coastal hazardous events: Target: 60; Reported: 64	

Table 2. NCSG’s Current Goals and Performance Metrics for 2014-2017. Targets represent only the metrics for this time period, with a baseline of 0 for each measure beginning in 2014. Note that the focus areas appear different in language than those introduced earlier because these are provided by NOAA and the national Sea Grant program. Their tracking and reporting is slightly different than that of NCSG but for consistency, this will be the language used for the focus areas in the remainder of the report.

	North Carolina Sea Grant Goals	Performance Measures (2014-2017)		
Environmental Literacy and Workforce Development	<ul style="list-style-type: none"> An environmentally literate public supported and informed by a continuum of lifelong formal and informal engagement opportunities. A future workforce reflecting the diversity of Sea Grant programs, skilled in science, technology, engineering, mathematics and other disciplines critical to local, regional and national needs. 	Number of Sea Grant products that are used to advance environmental literacy and workforce development: Target: 8	Number of people engaged in Sea Grant supported informal education programs: Target: 20,000	Number of Sea Grant-supported graduates who become employed in a career related to their degree within two years of graduation: Target: 100
Healthy Coastal Ecosystems	<ul style="list-style-type: none"> Ecosystem services are improved by enhanced health, diversity and abundance of fish, wildlife and plants. Ecosystem-based approaches are used to manage land, water and living resources. Ecosystems and their habitats are protected, enhanced or restored. 	Number of resource managers who use ecosystem-based approaches in the management of land, water, and living resources as a result of Sea Grant activities: Target: 35	Number of acres of coastal habitat protected, enhanced or restored as a result of Sea Grant activities: Target: 40	
Resilient Communities and Economies	<ul style="list-style-type: none"> Development of vibrant and resilient coastal economies. Communities use comprehensive planning to make informed strategic decisions. Improvements in coastal water resources to sustain human health and ecosystem services. Resilient coastal communities adapt to the impacts of hazards and climate change. 	Number of communities that implemented sustainable economic and environmental development practices and policies (e.g. land-use planning, working waterfronts, energy efficiency, climate change planning, smart growth measures, green infrastructure) as a result of Sea Grant activities: Target: 30	Number of communities that implemented hazard resiliency practices to prepare for, respond to or minimize coastal hazardous events as a result of Sea Grant activities: Target: 20	
Sustainable Fisheries and Aquaculture	<ul style="list-style-type: none"> A safe, secure and sustainable supply of seafood to meet public demand. Informed consumers who understand the health benefits of seafood consumption and how to evaluate the safety and sustainability of the seafood they buy. 	Number of fishermen, seafood processors and aquaculture industry personnel who modify their practices using knowledge gained in fisheries sustainability and seafood safety as a result of Sea Grant activities:	Number of seafood consumers who modify their purchases using knowledge gained in fisheries sustainability, seafood safety and the health benefits of seafood as a result of Sea Grant activities:	
Cross-Cutting Goals	<ul style="list-style-type: none"> Sound scientific information to advance understanding of the nature and value of our coastal, ocean, and Great Lakes resources; to identify new ways to conserve and use these resources; and to support evaluation of the environmental impacts and socioeconomic trade-offs involved in coastal decision-making. An informed public that understands the value and vulnerability of coastal, ocean, and Great Lakes resources, and demands informed science-based decisions about the conservation, use, and management of these resources, and a well-trained workforce that will make this a reality. Decision-making processes that involve the full-range of coastal interests, that integrate efforts of public and private partners at the federal, regional, state, and local levels, and provide mechanisms for establishing common understandings and generating outcomes that balance multiple interests. 	Number of Sea Grant tools, technologies and information services that are used by our partners/customers to improve ecosystem-based management: Target: 50 Economic (market and non-market) impacts derived from Sea Grant activities: Target: 3,500,000 Number of peer reviewed publications: Target: 80 OPTIONAL: Patents derived from Sea Grant activities: Target: 4	Businesses created as a result of Sea Grant activities: Target: 30 Businesses sustained as a result of Sea Grant activities: Target: 500	Jobs created as a result of Sea Grant activities: Target: 32 Jobs sustained as a result of Sea Grant activities: Target: 160

These performance measures and targets are used to assess the quality of work performed through NCSG. The state program works with national Sea Grant to design their strategic plan that incorporate national goals with state-specific goals. These performance measures help the program to track their progress and understand how well they are meeting their goals. This, in turn, helps to dictate the types of projects to be taken on, based on foreseen impacts and accomplishments. A partnership committee serves on the NCSG Advisory Board in order to help carry out these decisions. The committee regularly meets to discuss proposed projects and activities and makes decisions using guidelines that include how the project relates to NCSG's mission, priority of it, who proposed it and who will implement it, cost, timeline, and possible funding sources or partners.

NCSG is known to have a very robust extension and outreach program that provides assistance for it to remain a leader throughout the entire national Sea Grant network. It receives significant input from its stakeholders to guide the development of research and programming geared towards relevant issues. The program has been praised for its educational outreach capabilities, with the American Association for the Advancement of Science (2013) commenting,

Clear linkages to economic and educational impacts are essential to gain needed support in the business community and of other stakeholders. NCSG is already doing a superb job translating science into economic benefit for the people of North Carolina and could be a significant resource in accomplishing this task (p. 14).

In a time of rising costs and declining revenues, research support facilities and equipment are becoming more expensive to operate and maintain. Therefore, the program strongly desires to find new and innovative ways to continue its impactful work in NC.

This can be done in a series of steps. The first of which is to identify existing or entirely new methods of engagement in the form of partnership models. Next, to further broaden their reach, NCSG can also explore pursuing collaborative partnerships with new entities through these newly identified models. This paper seeks to identify what these new partnership models are and to explore how they can be employed in order to engage potential partners for NCSG to further their extension and outreach efforts. It is through these strategies that NCSG can continue to expand and deepen their impact within the NC community.

II. Methodology

The methods of analysis for this project were twofold: (1) to first understand the structure and function of Sea Grant, specifically NCSG and where their current partnerships stand and (2) to identify and evaluate innovative potential partnerships for the future of NCSG. The project began with a literature review of both internal and external Sea Grant background materials. This included a review of both the National Sea Grant and NCSG websites, the 2014 Federal Site Review of NCSG, and NCSG Program Focus Area Reports from 2010-2013. We also sat in on NCSG focus groups with stakeholders in Raleigh and Morehead City during in December of 2015.

Once we established a framework for the operations of NCSG, we explored the available literature to reach a baseline of NCSG's existing partnerships in various capacities. For details on

NCSG's current thought process on partnerships, we reviewed the minutes of the NCSG Board's Partnership Advisory Group. In terms of specific partners, we perused NCSG's website and three sets of documents: The National Sea Grant College Program's list of partners, NCSG's Program Focus Area Reports, and the mailing list for NCSG's magazine, *Coastwatch*. From the National Sea Grant list of partners from across the country, we identified the organizations located in NC. However, this list did not expand on the context of such partnerships, and may not be up to date. From the NCSG's Program Focus Area Reports, we organized the connections NCSG made through initiatives such as funding external research, facilitating workshops, and supporting educational programs. These reports are compiled through the Planning, Implementation, and Evaluation Resources (PIER) program. According to the National Sea Grant College Program:

PIER is designed to facilitate communication between NOAA and the partner Sea Grant Programs. Through the system, programs integrate strategic plans, projects and funding, and project results. It is a resource for sharing Planning, Implementation, and Evaluation (PIE) information on a program scale and can be rolled up to tell a national story ("Program Partners," n.d.).

The extensive (approximately 1,200 subscribers) *Coastwatch* list, while it does not directly reflect partnerships NCSG has made in the past, provided a snapshot of the types of organizations that are currently interested in following NCSG's research and outreach.

To build on our findings in the literature, we then conducted a survey of the employees of NCSG. After obtaining IRB certification from Duke's Office of Research Support, we designed a survey in Qualtrics that collected demographic information about employees' roles at NCSG and their thoughts on partnership priorities, both current and future (Appendix 1). Two sets of

survey questions were of significant importance to this project. One set dealt with NCSG members' views on existing partnerships while the other elicited views on potential partnerships to explore. In the first set, respondents were asked to list up to three entities currently in partnership with NC Sea Grant that they believed to be—in order—of high priority to their work currently or in the recent past (henceforth known as *priority partnerships*). In the second set, respondents were asked to repeat this process but were instead told to list up to three entities NOT currently in partnership with NCSG that they would consider to be top potential partnerships to help further their work within the next 1-5 years (henceforth known as *potential partnerships*).

Survey responses for each set of questions were sorted for inclusion in a comprehensive gap analysis. Prior to sorting, we developed a list of ten exclusive partnership category types to be used for both existing priority and potential partnership responses based on sector, shown in Table 3. Category types were kept broad and descriptive to accommodate the wide variety of partnerships and keep total number of categories low. For both existing and potential partnership responses, placement in a category was determined by the primary mission of the partner entity and a “closest fit” test.

Table 3. Examples of the ten partnership category types used to sort both existing priority and potential partnerships

Partnerships Category Type	Examples
Academia	Public and private universities, community colleges, research institutions
State Government	North Carolina state agencies, executive offices, legislative bodies, or courts
Federal Government	Federal agencies, executive offices, legislative bodies, courts or publicly-sponsored/funded organizations
Fishing Industry	Commercial/recreational fishing associations, vessel captains, fishing cooperatives
Towns/Municipalities/Counties	Local and city governments, city councils, selectmen, town/city offices
Community Groups	Community activists, homeowners associations, event organizations
Non-governmental Organizations (NGOs)	Advocacy groups, non-profits, or volunteer organizations at state or federal level
Private Sector	Any for-profit business that is not a commercial or recreational fishery
Education	Primary and secondary education, educational camps, after-school outreach programs
Media	Newsprint, magazines, radio, television, blogs, online news

Survey responses were also sorted into partnership capacity types: financial, knowledge sharing, outreach, research, and resource sharing. These five capacity types used in the sorting were developed as part of our recommendations for new language NCSG can incorporate when detailing its engagement with partners and can be viewed in Figure 13. More information can be found in Section IV-A. For both existing and potential partnership responses, placement in a

capacity type was determined primarily by NCSG's type of engagement with the partner *as detailed by the survey respondent*. A closest fit test was not used to sort partnership capacities. Instead, a single partner listing could be sorted into more than one partnership capacity if the survey response expressed so.

This background research enabled us to build a stakeholder map of the various sectors represented by NCSG's current relationships with outside organizations. While it was difficult to identify who NCSG officially regards as a partners, as that language has been flexible in the past, by compiling a knowledge of the wide variety of individuals, organizations, businesses, government agencies, and schools that are associated with NCSG in some capacity, we discovered where they currently have strong ties and lend their support, and areas they can improve upon. This knowledge of the operational structure of NCSG, its program focus areas, and the preferences of its employees prepared us for the second half of our analysis, identifying and evaluating innovative potential partnerships for the future of NCSG.

We decided to approach this next step with a gap analysis to evaluate where NCSG can focus their future partnership efforts. We chose to use the partners identified by the PIER documents and the survey results because of the contextual information associated with them. To perform the gap analysis, we designed a matrix that included focus areas on one axis and partnership types on the other. Using the background information we collected on the partnerships, we then sorted each partner into its most relevant combination of focus area and partnership type. Partners were then color coded on the prevalence of that sector in the overall scheme of NCSG's partnerships: green for common partnerships, yellow for less common partnerships, and red for uncommon partnerships. This resulted in two matrices: one of the PIER

identified partners using the 2010-2013 focus areas, and one of the survey identified partners using the 2014-2017 (current) focus areas.

With our knowledge of the wide scope of NCSG's current partnership and the specific gaps present, we identified several focus areas and partnership type combinations that we believe NCSG should look into for future partnerships and suggest seven specific partners associated with those gaps. These proposed partners are accompanied by a brief description of the organization and recommendations on how to approach the partnership in an effective manner.

III. Results

A. Survey Responses

Of the survey invitations sent to all 23 NCSG staff, 21 surveys were completed and returned for a response rate of 91.3%. The work and expertise of the respondents spanned all major NCSG focus areas, with at least one respondent identifying their work as aligning closely to the realm of either coastal hazards, healthy coastal watersheds, fisheries & aquaculture, sustainable communities, or education & training.

In all, 50 entities were listed as existing partners currently of high priority to NCSG's mission and respondents' work. The entity's partnership capacity and a description of the engagement between NCSG and the entity accompanied each listing. When sorted into partnership categories, the existing priority partnership exhibited the following spread (Table 4).

Table 4. Tally of existing priority partnerships listed by NCSG staff sorted into partnership category type.

Partnership Category	Number of partners
Academia	15
State Government	10
Fishing Industry	4
Federal Government	4
Towns/Municipalities/Counties	4
Community Groups	4
Non-governmental Organizations (NGOs)	4
Private Sector	2
Education	2
Media	1

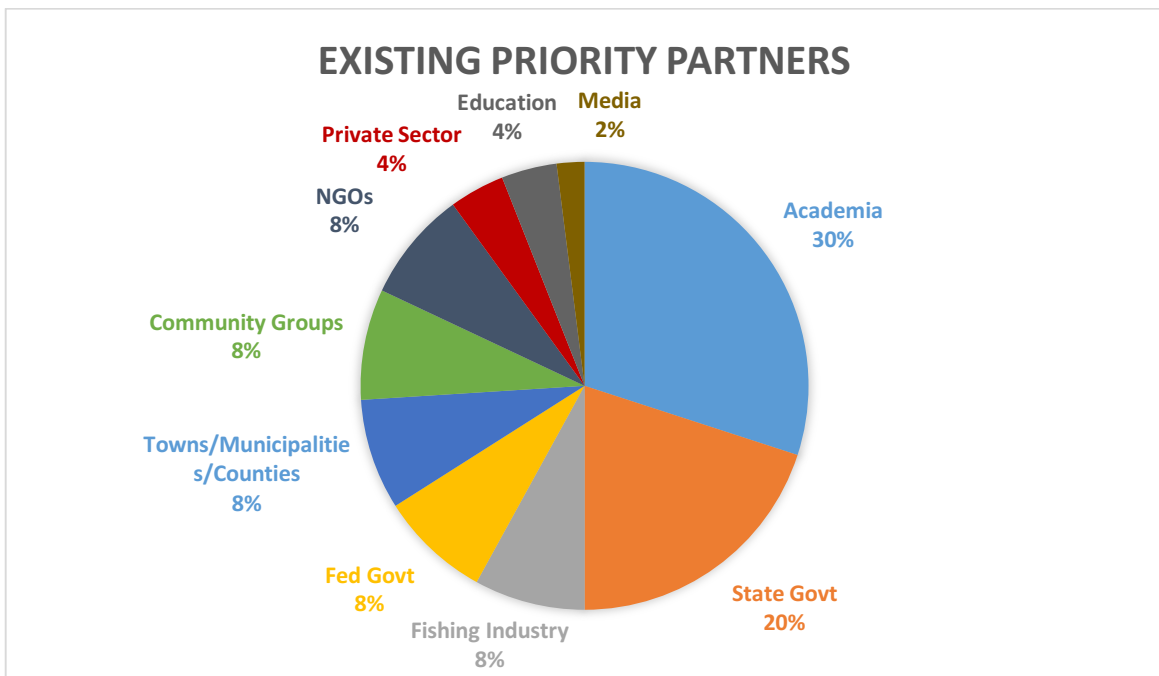


Figure 4. Graphical representation of partnerships sorted into category types as percentages of total existing priority partnerships listed by NCSG staff

About half of NCSG’s existing priority partners hail from academia or the NC state government (Figure 4). Amongst the remaining 50% of existing priority partners, 40% are evenly split between partners in the federal government, towns/municipalities, the fishing industry, community groups, and NGOs. The private sector, education, and media partners constitute the remaining 10% of existing priority partners. Partnership capacities for existing priority partnerships were heavily skewed (Figure 5). About half of the priority partnerships came with capacity types described as resource sharing (25 partners). Another 20 partners had capacities described as knowledge sharing. 11 partners were described as having a financial capacity, nine were outreach, and four were research-based. Eight partners had an unspecified partnership capacity or did not fit within any of the five capacity types provided.

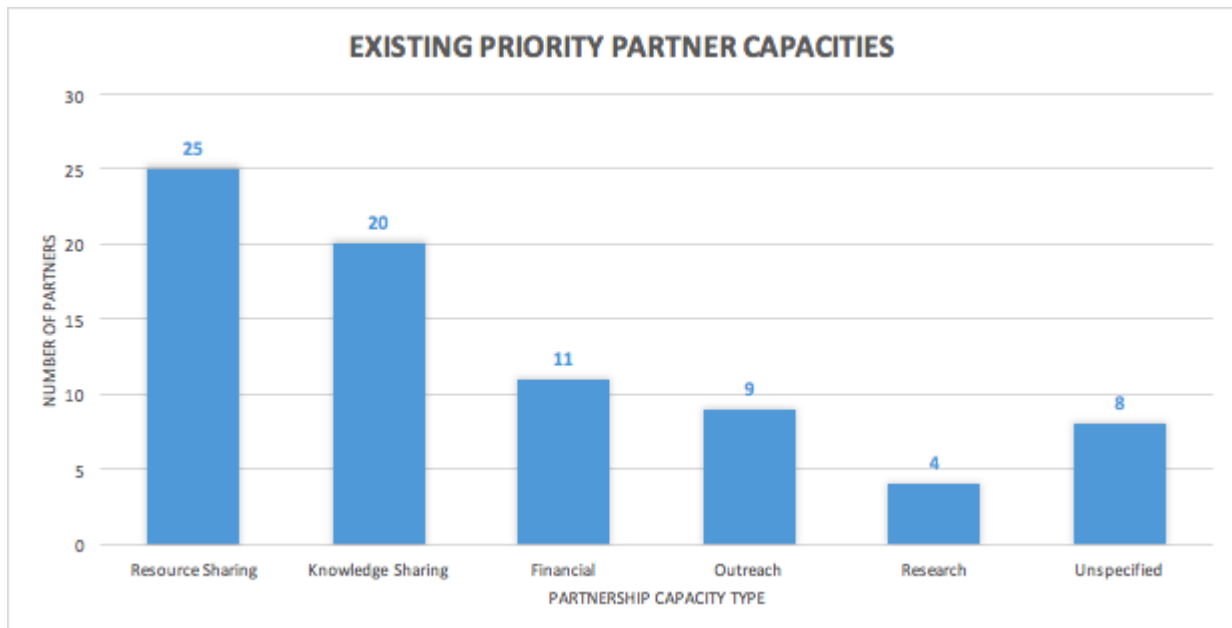


Figure 5. Existing priority partnerships sorted by partnership capacities. Each column represents the number of partnerships that were described as having the listed capacity type. Some partnerships were described as having more than one capacity type and were therefore counted for each capacity type described.

In all, 41 entities were listed as potential partners that could help further NCSG’s mission and respondents’ work. The entity’s partnership capacity and a description of the engagement between NCSG and the entity accompanied each listing. When sorted into partnership categories, the potential partnerships exhibited the following spread, shown in Table 5.

Table 5. Tally of potential partnerships listed by NCSG staff sorted into partnership category type.

Partnership Category	Number of partners
Academia	11
State Government	6
Fishing Industry	2
Federal Government	6
Towns/Municipalities	0
Community Groups	6
Non-governmental Organizations (NGOs)	4
Private Sector	5
Education	0
Media	1

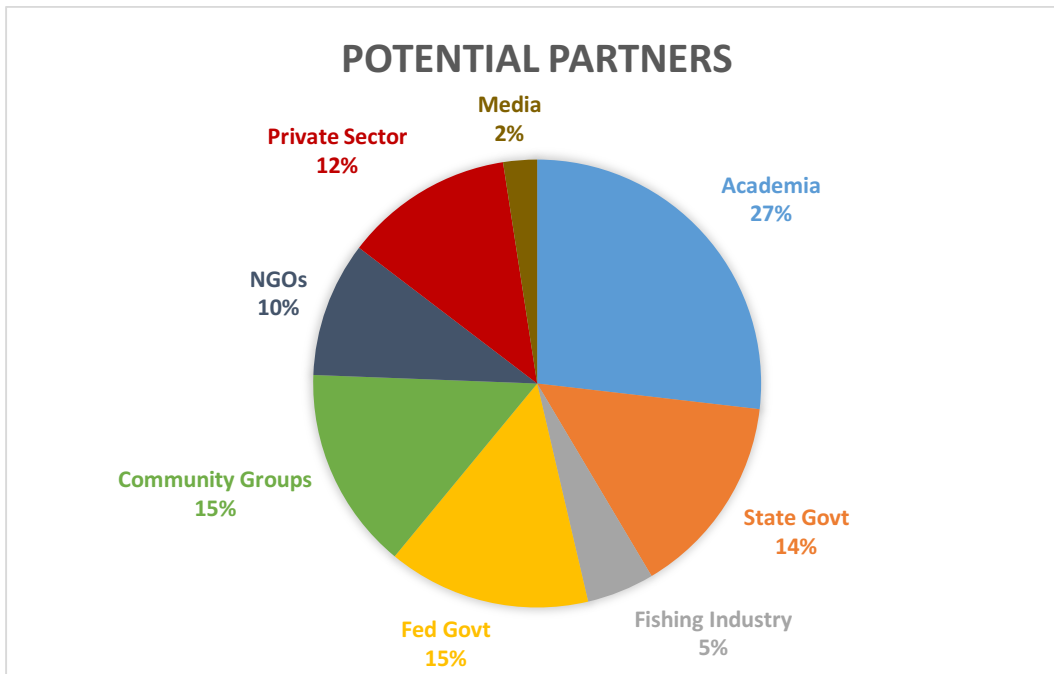


Figure 6. Graphical representation of partnerships sorted into category types as percentages of total potential partnerships listed by NCSG staff

The potential partner category with the highest tally was academia, with 27% of the potential partners listed being affiliated with a college or university in North Carolina, shown in Figure 6. The second place tally was a three-way tie between the federal government, community groups, and state government; each of the three categories made up 15% of the total potential partnership tally, containing six listed partnerships each. NGOs and private sector partnerships made up slightly smaller totals, while the fishing industry and media categories formed the smallest percentages. Partnership capacities for potential partnerships are shown below in Figure 7. 18 of the potential partnerships came with capacity types described as resource sharing. Another 16 partners had capacities described as knowledge sharing. 15 partners were described as having a financial capacity, 11 were outreach, and two were research-based. 10 partners had an unspecified partnership capacity or did not fit within any of the five capacity types provided.

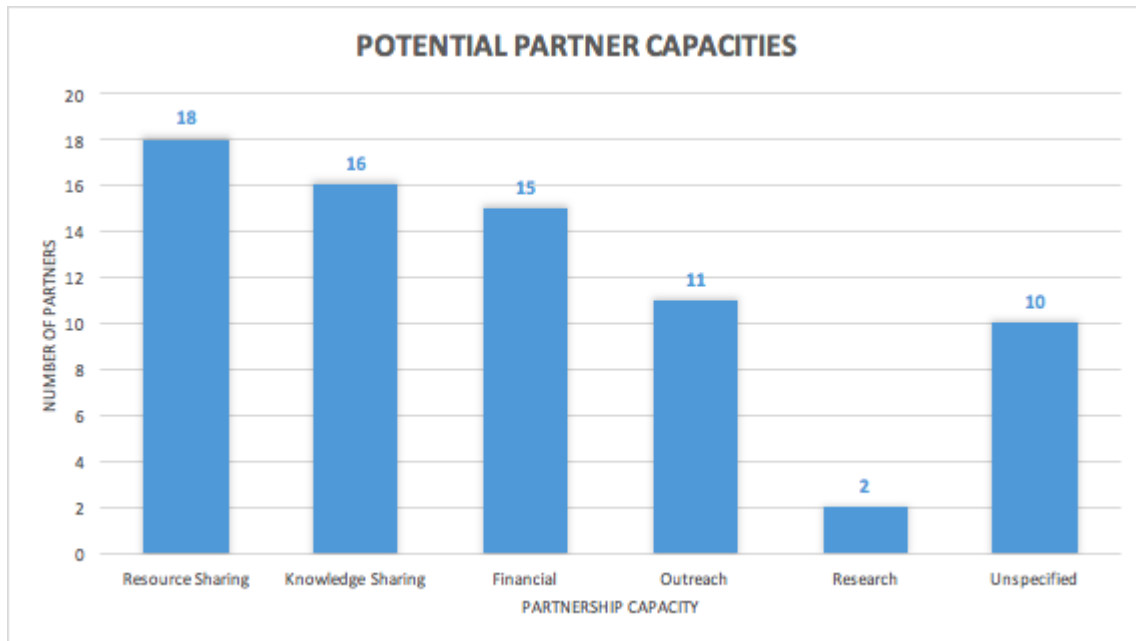


Figure 7. Potential partnerships sorted by partnership capacities. Each column represents the number of partnerships that were described as having the listed capacity type. Some partnerships were described as having more than one capacity type and were therefore counted for each capacity type described.

B. Gap Analysis Matrix

Responses to the survey provided by NCSG staff gave us a laundry list of potential partners that, according to those inside Sea Grant, would help further NCSG’s mission and expand the work already being done. The next step in the process was to determine which of the potential partners should be pursued first. In other words, how could we narrow down a list of over forty partners to include only the three to five new partners we originally planned to recommend? To achieve this, we constructed a matrix comparing partnership capacity and partnership category with NCSG focus areas (Table 6). The vertical axis of the matrix consists of the five focus areas listed in NCSG’s 2014-2017 strategic plan. Opposite the focus areas, along the horizontal axis, are the five partnerships capacities used in the sorting process. The 41 potential partnerships listed in the survey were placed in the matrix spaces. The placement along

the vertical axis was determined based upon which focus area the potential partner would benefit the most based upon the potential partner's description provided in the survey response.

Placement along the horizontal axis was determined based upon which partnership capacity most appropriately reflected the partner's potential engagement with NCSG. As before, potential partners could fit multiple criteria and therefore some of the potential partners provided in the survey appear in multiple matrix spaces.

Once potential partners were assigned spaces in the matrix, they were then assigned a partnership category level. Three category levels were constructed based upon the difference in survey responses between existing priority partnership categories and potential partnership categories. In keeping with the overall mission of this project, we are most concerned with providing NCSG new and *innovative* partners that could expand their partnership model and extend NCSG's reach throughout the state. Therefore, the partnerships that were of most importance to us among the list were those in categories that had a low tally among the total existing priority partnerships and a higher tally among potential partnerships. In addition, partnerships of importance to us will be from categories that are fairly underrepresented in NCSG's existing partnership list.

The community groups, NGOs, and private sector categories saw the biggest leap in total tally and percentage from existing partnerships to potential partnerships and were underrepresented in both lists. These categories were therefore given the highest category level, denoted by red text. Category types that did not see a major jump in tally and percentage from existing to potential partnerships, but were still underrepresented overall in the total, which included federal government partners, media partners, and fishing industry partners, were given a

moderate category level denoted by yellow text. Academia and state government partners both make up the largest groupings of partnership categories, and therefore were given the lowest category level, denoted by green text.

Amongst the partnership capacities, we were concerned with capacity types that, likewise, saw the biggest increase in total tally from the existing partnership list to the potential partnership list. Financial partners increased from 11 in the existing list to 15 in the potential list and was therefore singled out as a capacity type of importance, denoted by the gray column shading. Outreach partners also saw a jump, from nine in the existing partners list to 11 in the potential partners list. It was therefore also singled out as a capacity type of important. The other three capacity types saw their total tally fall from the existing partners to the potential partners.

Potential partners that should be pursued further are those of the highest category level the lie within one of the two capacity types of importance (financial or outreach). These partners will help NCSG be expanding their reach into partnership types currently underrepresented in the existing partner network. By choosing partners that fit these criteria *that also* span the five focus areas, these partners will additionally be helping NCSG meet its 2014-2017 objective goals. The following potential partners listed in the survey responses meet this comprehensive criteria:

- Mountains-to-Sea Trail
- Environmental Defense Fund
- Coastal and Estuarine Research Federation (CERF)
- National Marine Manufacturers Association
- Blue Cross and Blue Shield of North Carolina Foundation
- African-American heritage groups & historically black colleges and universities (HBCUs)
- Latino/Hispanic communities
- Harris Teeter, Whole Foods, or other grocery stores
- Homeowner associations
- Seafood companies

Table 6. Potential partner gap analysis matrix.

Capacity Type Focus Area	Financial	Knowledge Sharing	Outreach	Research	Resource Sharing
Env. Literacy & Workforce Development	Mountains-to-Sea Trail	National Marine Manufacturers Association	CERF Public Radio Stations		Mountains-to-Sea Trail
Healthy Coastal Ecosystems	Environmental Defense Fund Universities	CERF		State SG offices Universities	CERF
Resilient Communities & Economies	Blue Cross and Blue Shield of North Carolina Foundation US National Weather Service Offices	African-American heritage groups & HBCUs Home Owner Associations	African-American heritage groups & HBCUs Latino/Hispanic communities	NC Dept of Health and Human Services	Latino/Hispanic communities USDA Southeast Regional Climate Hub
Sustainable Fisheries & Aquaculture		Seafood community groups	Seafood companies		
Cross-cutting Goals		Harris Teeter, Whole Foods, or other grocery stores BOEM	American Sportfishing Association NC Legislature		NC Department of Natural and Cultural Resources

C. Document Analysis

The *Coastwatch* subscriber list was made up of mostly news media outlets (24% of total subscribers) and schools (academia and education combined to 29% of the total), from elementary school libraries to university administrative offices (Figure 8). As a reminder, we did not consider the magazine subscribers as official partners of NCSG because of their passive relationship with NCSG, but the list does provide an opportunity to see where NCSG’s research is distributed.

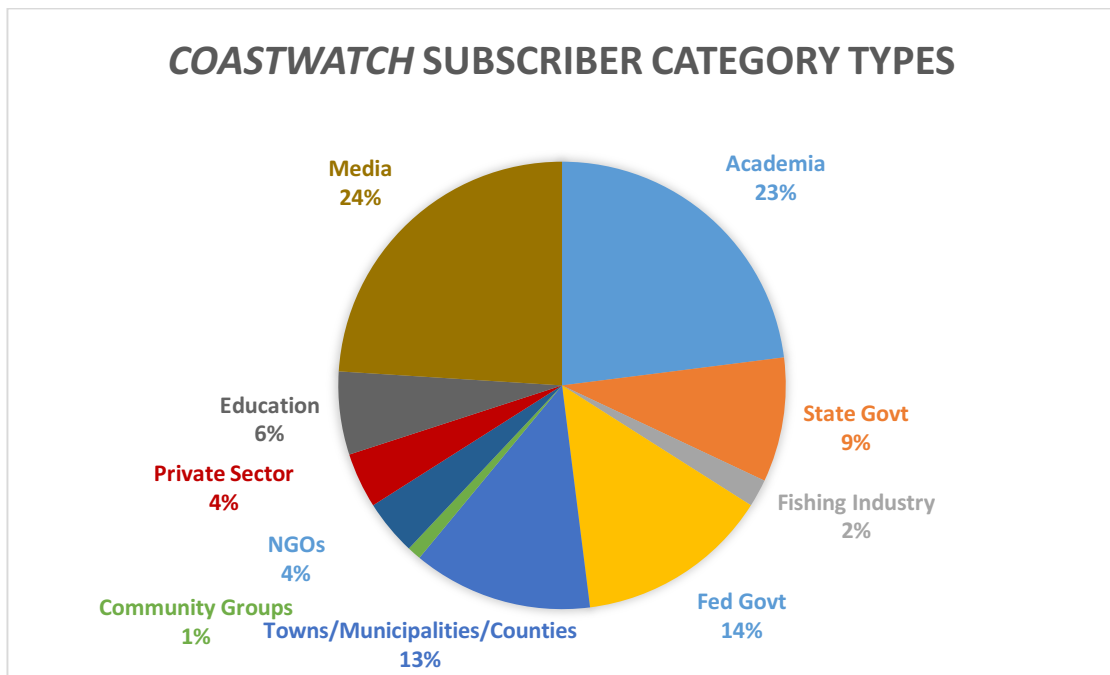


Figure 8. Breakdown of *Coastwatch* subscriber list

The NCSG Program Focus Area Reports, which focused mainly on projects NCSG has supported within its five 2010-2013 focus areas, showed that NCSG tends to fund university and state and federal government research projects, while also providing facilitation and organizational capabilities for non-profit organizations and any events they may host. Academia-related projects made up 34% of the total projects, followed by state and federal government partners at 24% and 13% respectively (Figure 9).

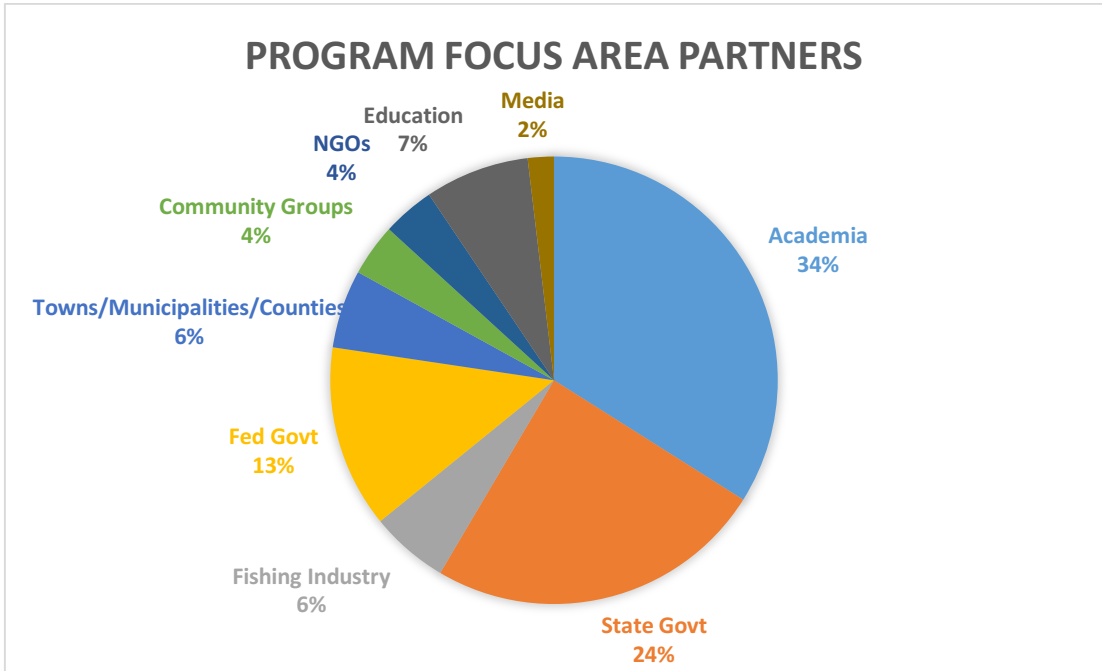


Figure 9. Breakdown of NCSG Program Focus Area Report Partners (2010-2013)

The list of NC-based partners of the National Sea Grant College Program, which may not be up to date and may not reflect partnerships at the state level, were dominated by the fishing industry at almost half, followed by non-governmental organizations at 23% and academia and state government at 14% each (Figure 10).

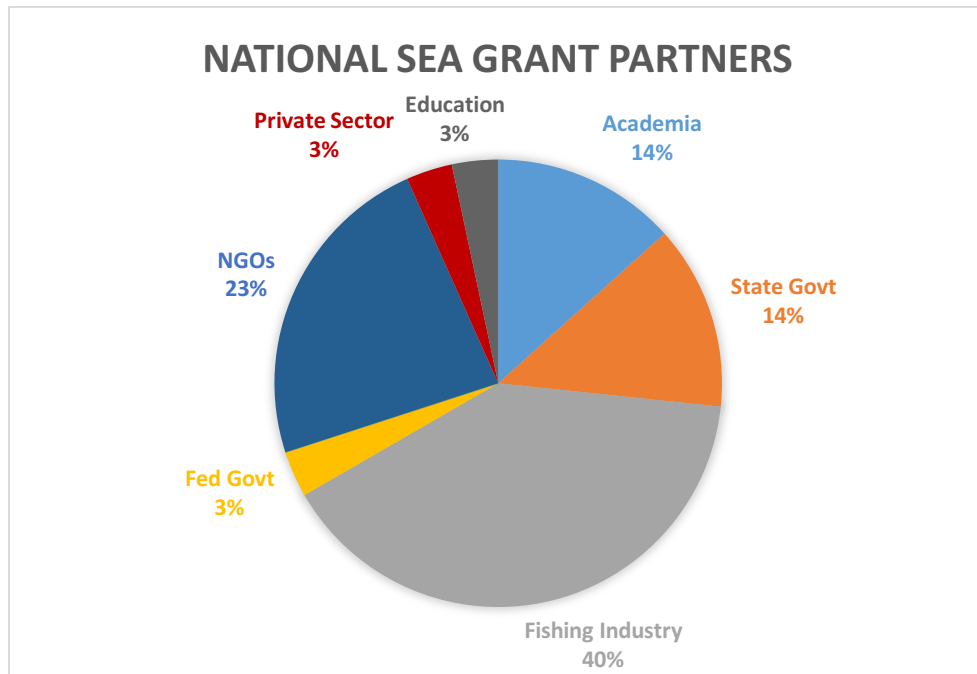


Figure 10. Breakdown of the National Sea Grant College Program NC-based Partners

The partners featured on the website were largely universities, at almost half of the partners listed, and state government agencies, which represented one third of the partners listed on the website, as shown in Figure 11.

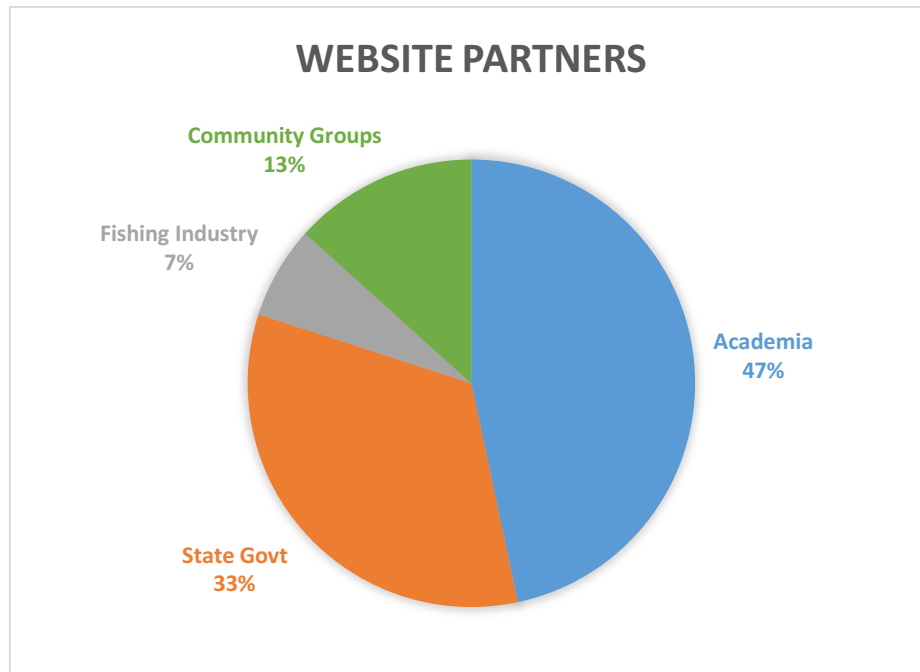


Figure 11. Breakdown of partners listed on NCSG’s website

Based on our findings about the current state of NCSG’s partners, it appears that NCSG has strong relationships with academic and governmental partners, as well as those within the fishing industry and non-governmental organizations. When controlling for overlap across sources, the total number of past and current partners identified from the NCSG Program Focus Area Reports, the National Sea Grant College Program partner list, the NCSG Website, and the survey of NCSG employees is 106 unique partners (Appendix II). Figure 12 shows how NCSG’s existing partners are broken down across the ten partnership categories we identified, with the size of the circle reflecting the number of partners within that sector.

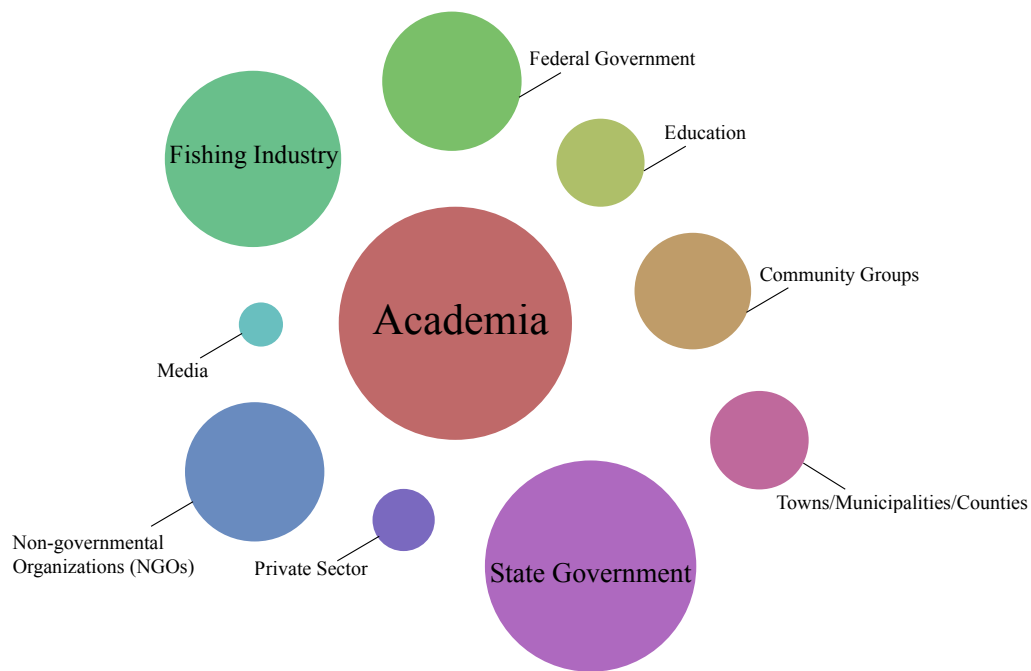


Figure 12. NCSG’s existing partners broken down across the ten partnership categories we identified, with the size of the circle reflecting the number of partners within that sector

IV. Recommendations

Conclusions drawn from the methodology can be used to inform next steps that NCSG can take in its collaborative work with partners. The following will be presented as a series of recommendations that are made to the NCSG team with the goal of enhancing past, current and future engagement with partners. The recommendations include the following:

- A.** Incorporating new language to classify and define types of partnerships as these external entities interact with and benefit NCSG in a variety of ways.

- B.** Recommendations from the gap analysis to identify areas for improvement where new partners should be identified and sought out.
- C.** New potential partners for future collaboration and their respective identifying information.
- D.** Principles for effective partnerships that represent best practices that can be used to guide NCSG and their partners as they engage.

A. Incorporating New Language

NCSG has a rich and extensive history of engaging with partners from all sectors and focus areas, contributing to their overall impacts and accomplishments that become measurable through their performance metrics. While NCSG has clearly established themselves as a strong partner in the North Carolina community with a proven track record of success, there is a lack of consistent language regarding their engagement with partners. Since NCSG engages in a variety of ways, with a variety of partners, at very different scopes, the depth and breadth of their partnerships varies tremendously.

Creating and integrating new partnership engagement language into their work will offer a sense of clarity when deciding which partners to engage with, actionably engaging with individual partners, and when discussing these varying partnerships internally or externally. Given that NCSG has engaged with at least 106 unique partners, understanding the scope and type of each partnership is important in understanding the gaps that can be identified in order to find where NCSG can improve upon partnerships and projects. For example, if NCSG finds itself with several partners in the focus area of Safe and Sustainable Seafood Supply, it may make

sense to classify each of those partnerships to be sure that each of them are providing a unique, significant contribution to the work of NCSG and the external entity.

Figure 13 is a depiction of the language we suggest that NCSG employ in its discussion about past, current and future partners. The partnership capacities are broken up into five main categories: financial, knowledge sharing, outreach, research, and resource sharing. In addition, the financial classification acts as a parent to two subcategories: grant and funding. Grant-type partnerships exemplify NCSG’s role in giving grants to other entities to help in their work. Funding, represents the opposite: other entities providing funding to NCSG to assist in their projects. Outreach also contains two subcategories: extension/education and communications. These simply help to specify the type of outreach that is occurring in the partnership. It is suggested that the NCSG team exercise their best judgment to determine which capacities best represent the respective partnership, understanding that some may represent multiple capacities.

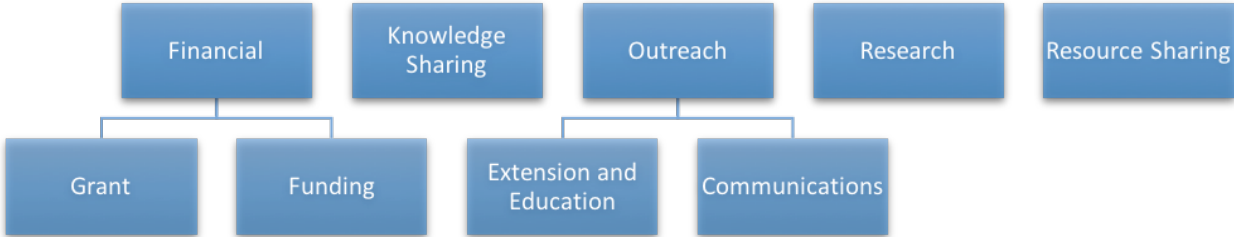


Figure 13. New language to classify partnership types with external entities.

This simple classification system is important in being able to utilize these significant capacity types throughout NCSG’s work. Altogether, these classifications can be incorporated and used in a broad spectrum of ways in which the NCSG team can better inform the partnership dialogue internally and externally, as well as for reporting purposes. These categories can also assist in evaluating past and current partners and where room for improvement may be found in

order for NCSG to broaden the capacity of their work and engage with new or underutilized entities. The gap analysis is one such example of a way to include these new classifications in NCSG's work.

B. Gap Analysis Recommendations

As a result of our gap analysis using existing partners and the potential partners matrix, we were able to identify specific gaps in NCSG's partnership framework to be filled with new and innovative partners. Referring back to our primary project objective, we were tasked with helping NCSG find new partnerships that would help expand the organization's reach and provide new opportunities of engagement. To meet this primary objective, we analyzed NCSG's partnership gaps in two ways. First, we address the desire for NCSG to expand the *breadth* of its partnerships. The breadth of NCSG's partnerships refers to the how many different types of entities are being engaged through collaborative partnerships. Expanding NCSG's breadth of partners means opening the door to new partners from external entities underrepresented in NCSG's existing partner network. Based on our analysis, these entities include:

- The private sector
- Community groups
- Non-governmental organizations (NGOs)

Additionally, we address the desire for NCSG to find new ways of engaging their partners, or in other words, the *depth* of its partnerships. For this analysis, we utilized the new partnership capacity language we developed to describe how NCSG collaborates with its partners. Based on our analysis, the capacity types NCSG could expand upon include:

- Financial assistance (including grants and funding)
- Outreach (including extension, education and communication)

With this knowledge of the existing partner network and its gaps, we can now identify a suite of specific partners for NCSG to pursue as a means of filling these gaps.

C. Potential Partners

The following are partners who were identified through results from the NCSG team survey as well as through research in order to fill the appropriately identified areas for improvement found in gap analysis. Each entity below represents the fulfillment of various gaps that can help NCSG continue to expand upon its partnerships to gain more depth and breadth in their work. The descriptions under each of the respective potential partners below include who the organizations are, their mission and current projects, the collaborative potential for NCSG, and the gaps or areas for improvement that they fill.

Blue Cross Blue Shield of North Carolina Foundation

“Since the Foundation was established in November 2000, they have been focused on one main objective: improving the health and well-being of all North Carolinians. Whether it’s providing fresh fruits and vegetables to neighborhoods and schools or enabling more doctors to practice in rural areas, or assisting everyday citizens in leading their communities to become more physically active or helping children see dentists at an earlier age – they are committed to a healthier North Carolina.” –NCSG survey respondent

The Blue Cross Blue Shield Foundation of North Carolina (BCBSNC) came about from a \$1 million grant to ECU Care to expand health care access to eastern NC's uninsured. In the decade-plus to follow, the separate and independent BCBSNC Foundation has invested more than \$80 million into communities across the state, supporting more than 600 grants and special initiatives and reaching into each of NC's 100 counties. The Foundation focuses primarily on health care and healthy living. As part of their healthy living initiative, BCBSNC is committed to providing access to healthy local foods, especially in NC's most vulnerable communities.

In the past, BCBSNC has partnered with NC Dept. of Agriculture to expand the Farm to Schools program by investing \$1.2 million to fund project infrastructure, marketing initiatives, and educational outreach. A similar partnership with NCSG could benefit local fishermen and sustainable seafood initiatives. BCBSNC offers funding possibilities, which is a partnership capacity in which NCSG is hoping to expand. Funding could help expand programs that will lead to resilient coastal communities and economies, as well as sustainable seafood and aquaculture—both focus areas in NCSG's 2014-2017 strategic plan.

Community Associations Institute, North Carolina Chapter

The Community Associations Institute (CAI) is an international organization that works with housing leaders to provide educational materials and training opportunities for community association volunteers and their business partners. These business partners include management groups, landscaping and construction businesses, and financing and law professionals. The NC chapter, based in Wilmington, is one of the largest of the organization's 60 chapters across the world. CAI-NC members include over 40 community associations that represent 6,000

households. Close to 50 businesses are part of the chapter as well. The chapter has five target regions across the state – the Triangle, Piedmont, Triad, Coastal-Tidewater, and Mountains.

Homeowner associations were mentioned in the survey results as a group the NSCG employees would like to see more partnership with in the future. Instead of targeting a specific community for NCSG to engage with, we chose CAI-NC as a potential partner because the organization provides a central point for NCSG to communicate with and through which to expand their reach to many community organizations and their associated networks. Some previous environmental initiatives carried out by CAI-NC include a disaster preparedness workshop and literature on stormwater best management practices and control of invasive aquatic vegetation.

A partnership with CAI-NC would help NSCG support resilient communities and economies through both knowledge sharing and outreach. The Coastal-Tidewater region was formed recently, in 2012, so NCSG could help CAI-NC develop more coastal-oriented programming. Some options for educating homeowners on coastal resiliency and comprehensive planning could be a feature in CAI-NC's a quarterly magazine, "Serving NC," a presentation at the chapter's annual conference, or hosting a workshop in one of the target regions.

Alternatively, NCSG could partner with specific community associations within the chapter to carry out more localized projects and educational initiatives.

East Coast Greenway Alliance

East Coast Greenway Alliance (ECGA) is a nonprofit organization primarily based out of Durham, NC. Their work is focused around establishing a traffic-free multi-user trail linking

cities along the East Coast, from Maine to Florida. In NC, the main route of the East Coast Greenway runs across the Coastal plain along the Cape Fear River and into the city of Wilmington. In addition to this route, there is an alternate Historic Coastal route that extends from Virginia and runs along the coast into Wilmington. Both of these routes require trail area in order to be officially established.

Currently, the ECGA is collaborating with state agencies and organizations to create the trail, working to improve the on-road route through bike lanes and other infrastructure. Specifically pertaining to the coastal region and the route portions that run through the plains and along the coast, this presents a unique opportunity for NCSG to partner with ECGA. NCSG can use its preexisting relationships with coastal governments, organizations and businesses to help the ECGA to gain support and build their trail system.

A more established trail system would promote sustainable transportation, ecotourism, and increased value of coastal communities. These are just a few of the added benefits to collaborating with ECGA. A partnership between NCSG and ECGA would help work toward multiple goals within NCSG's crosscutting goals and working toward resilient communities and economies. The partnership capacities that ECGA could bring to NCSG would likely include financial and resource sharing.

Environmental Defense Fund

“They could provide funding for efforts to evaluate restoration projects for functional uplift—non-profit environmental group that has taken an interest in the value of ecological restoration” –NCSG survey respondent

Known nationally as a well established and pragmatic environmental advocacy organization, the Environmental Defense Fund (EDF) was ranked first among environmental groups in a 2007 Financial Times global study of 850 business-nonprofit partnerships. The group is known for its work on issues including global warming, ecosystem restoration, oceans, and human health, and advocates using sound science, economics and law to find environmental solutions that work. It is nonpartisan, and its work often advocates market-based solutions to environmental problems.

The organization is headquartered in New York, but has eleven additional satellite offices including the southeast regional office in Raleigh. On EDF's website, the Raleigh office is listed as being home to mostly ecosystems and oceans experts. Some staff members on hand include a Seafood Markets Strategist, a North Carolina Political Affairs Manager, a Chief Ocean Scientist, and a Partnership and Alliances Manager. A partnership with EDF, particularly with its Raleigh office, will help NCSG expand the breadth of their partnerships by exposing Sea Grant to a major national environmental non-governmental organization—a priority partnership category. Such a partnership will also help NCSG expand the depth of their partnerships by opening the door to new funding opportunities and EDF's existing outreach networks.

Harris Teeter

Harris Teeter is a grocery store chain headquartered in Matthews, NC with over 230 stores across seven southeastern states and Washington, D.C. Harris Teeter was originally suggested as a potential partner in the survey of NCSG employees, specifically within the realm of sustainable seafood. After further research, we decided to include them as a potential partner

for NCSG due to their company-wide commitment to sourcing sustainable seafood, their current support of the NC seafood industry, and their potential to expand NC seafood selections within their stores and better inform local consumers with the help of NCSG. According to a report published by the NC Rural Economic Development Center [co-authored by NCSG seafood technology and marketing specialist Barry Nash], NC-based Harris Teeter locations often have a section of their fresh fish selection dedicated to NC seafood, and ads run on Wednesdays that promote NC products. Harris Teeter also mentions NC fishermen on their website in both the “Fishermen’s Market” and “Meet Your Neighbor” sections. A Coastal Review Online article mentions that Harris Teeter executives have met with local fishermen in the past and are continuously considering the logistics of supplying local seafood. However, according to the NC Rural Center report, some Harris Teeter employees are unfamiliar with source of the seafood they are providing and are unable to answer consumer questions.

NCSG currently has strong ties with local catch groups, fish houses, and seafood processing facilities but they do not have as many partnerships or projects dedicated to seafood marketing and sales. NCSG can leverage the existing relationship between local seafood distributors and Harris Teeter and act as a link between the two to strengthen the supply chain of NC seafood and ensure that it stays local. NCSG and Harris Teeter can combine resources, along with catch groups and seafood processing facilities, to establish a centralized distribution center in eastern NC and streamline carrier and refrigeration services between the coast and Harris Teeter grocery stores. In terms of educating consumers, NCSG can work with Harris Teeter on two in-store initiatives: training staff on NC’s seafood supply chain and branding and marketing NC seafood to increase consumer interest. This partnership would address the current focus areas

of sustainable fisheries and aquaculture as well as cross-cutting goals. The partnership capacities this partnership would entail would be knowledge sharing and outreach, and potentially resource sharing depending on the level of NCSG's involvement.

Mountains-to-Sea Trail

“This group has had success in the mountains, but less success in coastal areas in building this trail. Coastal champions are needed to develop coastal trail sections to drive hikers and ecotourism activities to the area. Sea Grant could bring attention to this need and connect coastal champions to the Trail group.” –NCSG survey respondent.

The Mountains-to-Sea Trail itself is a simple footpath stretching almost 1,000 miles across NC from Clingmans Dome in the Great Smoky Mountains to Jockey's Ridge on the Outer Banks. Much of the trail has yet to be completed and it is a work in progress. The management of Mountains-to-Sea Trail represents a creative partnership involving local communities and trail groups, land trusts, federal and state land agencies, private landowners, and the NC Division of Parks and Recreation.

A Master Plan was recently completed by the NC State Parks department in late 2015. The plan seeks to chart a path toward official designation of remaining trail portions by setting priorities for completing trail sub-sections. One planned section of the trail travels from Craven County through a small portion of the Croatan National Forest along the Neusiok Trail through Carteret County to the NCDOT Cedar Island Ferry Terminal. The Master Plan sounds a call for assistance in planning this trail segment. NCSG could help connect community leaders with trail organizers and facilitate the planning process. The new trail could help spur ecotourism in

Carteret County and develop a more environmentally literate workforce among the businesses and communities that would benefit. This example presents the opportunity for NCSG to engage in an outreach and knowledge-sharing based partnership capacity.

North Carolina Agricultural and Technical State University's Cooperative Extension

North Carolina Agricultural and Technical State University (NC A&T) is a historically black research university primarily based in Greensboro, NC. NC A&T is home to part of the NC Cooperative Extension Service that is based at NC State University. Through the Cooperative Extension Service, millions of North Carolinians benefit from centers and programs located in the state's 100 counties and with the Eastern Band of Cherokee Indians. Its programs include 4-H and Youth Development, Agriculture and Natural Resources, Community and Rural Development, and Family and Consumer Sciences. Through these programs, Cooperative Extension is focused on nine major goals; some of which include emergency and disaster preparedness, environmental stewardship and natural resource management, sustainable food systems, and workforce and economic development.

These programs and goals work to better the lives of North Carolinians. Specifically, on the coast, the Cooperative Extension program has worked with a few counties to promote natural resources and ecotourism to contribute to economic growth in rural counties. The program also works with African American communities, educating them about their cultural heritage and assisting them in the preservation and creation of historic sites and recreation centers, respectively.

NCSG's own focus areas similarly reflect the goals of NC A&T's Cooperative Extension program and thus, a partnership with not only Cooperative Extension but a historically black university could present NCSG with an opportunity to positively impact coastal communities in a new way. The partnership capacities that NC A&T's Cooperative Extension could bring to NCSG include primarily outreach and also the potential for knowledge and resource sharing that can contribute to the resilient communities and economies focus area as well as crosscutting goals.

D. Principles for Effective Partnerships

The current and existing partners of NCSG sport a wide variety of focus areas, resource bases, human capital, and communication networks. No two partnerships are exactly alike in terms of what they bring to NCSG and what benefits the partnerships produce for NC. Further, the scopes of NCSG's partnerships vary in form, function, duration, and magnitude. To manage such a diverse array of partners and relationships, NCSG has taken a 'case-by-case' approach in which each partnership is maintained largely independent of other existing partnerships. However, oversight of NCSG's partnerships is carried out in part by the Advisory Board Development Workgroup. The Workgroup is tasked with the following:

- Identify priority Sea Grant activities or projects, including new, current or past development purposes
- Identify community and industry partners and individuals whose interests align with these priorities that can be contacted for requests for support and potential funding
- Prioritize efforts through discussions within the Sea Grant Board and team

- Develop appropriate communication materials to match priorities
- Identify who can contact these partners (including Sea Grant Board members, team members, etc.)

When exploring a new potential partnership opportunity, the Workgroup employs a uniform pre-designed structured process to determine modes of execution to initiate the partnership. A matrix tool has also been developed to help organize the process (Table 7), which follows (taken from the NCSG Advisory Board Development Workgroup Projects and Partnerships Matrix):

1. Sea Grant team members and Board members will be asked to propose projects/activities that aligned the Sea Grant mission and strategic plan but for which there isn't current funding.
2. Sea Grant Advisory Board and team will prioritize these projects/activities for 2015-2016.
3. Sea Grant team will commit to the execution of a project should that funding become available.
4. Sea Grant Board and team will identify potential funding partners/sources.
5. Sea Grant Board and team will develop appropriate communication material (e.g., 1-pager) to highlight priorities.
6. Sea Grant Board and team will approach potential funding sources for support and engagement.
7. SG Board and team will report on development progress, project progress, and opportunities for improvement based on feedback, etc.

<i>Proposed project or activity</i>	<i>How does this project relate to NC Sea Grant's mission? What priority should it be?</i>	<i>Who proposed and who will conduct the project or activity?</i>	<i>How much will it cost? What is the timeline?</i>	<i>Possible funding sources and/or partners</i>
		Proposed by: Project supported by: Who will contact funding sources and partners: Who will develop education installations:	Estimated cost: Timeline:	Partners: Funding source:

Table 7. Template version of the Projects and Partnerships Matrix used by NCSG Advisory Board Development Workgroup

It might be wise for the Workgroup to incorporate additional elements when determining new potential partnership opportunities to certify future project success. Further, while the process for discovering and exploring new partnership opportunities is fairly uniform and consistent, the execution and maintenance of the partnership varies depending on which department or staffer that partnership is tasked to. In order to account with this case-by-case style of partnership management, we've compiled a broad comprehensive list of principles for effective partnerships from relevant literature. The framework for the list we have provided largely comes from a document titled "*Ten Principles for Successful Public/Private Partnerships*" constructed by the Urban Land Institute in Washington D.C. This list provides a fantastic set of guidelines and tips to ensure project success.

Ten Principles for Effective Partnerships

1) Proper Preparation

- Assess your capabilities—What is your institutional capacity to act as a partner? Do you have the capital to invest in the partnership to ensure it's viable?
- Be legislatively prepared—Check on existing rules and regulations to ensure compliance, helps with streamlining
- Manage expectations—Clarify what is to be expected from each partner as well as a schedule of the development strategy

2) Create a Shared Vision

- Involves building consensus among varying interests
- Visualize a cohesive strategy for implementation
- Specify the scale of the partnership/project—ensure it's neither too grand nor too small
- Make sure the vision can sustain the test of time

3) Understand Your Partners and Key Players

- Important beginning component—prospective partners should invest the time and energy to gain an appreciation for their counterparts
- Each partner has a unique set of tools that can be brought to the shared vision
- Leads to future efficiency and a more cooperative productive setting

4) Be Clear on the Risks and Rewards

- Understand and appreciate the nature and scope of each party's potential risks and rewards so that mutual success is achieved.
- A strong partnership has the mutuality of effort and investment required to accomplish an outcome that is unattainable without collaboration
- To deal with conflict and uncertainty, vet your potential partners and make sure they're capable

5) Establish a Clear and Rational Decision-Making Process

- Agreement on process helps ensure the partnership moves forward efficiently
- Create a road map—the timeline helps formalize joint action and commitments
- Define roles and responsibilities—establish “go to” people to handle specific tasks, develop dispute resolution mechanisms
- Create checks and balances—allows for continuous assessment of partnership effectiveness (baby step decision-making)

6) Make Sure All Parties Do Their Homework

- Continue due diligence—important to anticipate change
- Share information
- Adopt scenario planning—understand your partner's limitations and plan ahead

- Creative financial plans—potential for diverse funding capabilities, work together to find new and effective funding mechanisms

7) Secure Consistent and Coordinated Leadership

- Strong leadership creates positive change
- Leaders should be facilitators, enablers

8) Communicate Early and Often

- Communicate early project objectives to find common ground within the partnership
- External communication—also be communicating with stakeholders, transparent process has potential for more broad support

9) Negotiate a Fair Deal Structure

- Fairness in negotiating a deal structure means that all parties are reasonably satisfied before the partnership moves forward
- Helps build trust early on—mutual trust established over time will go a long way in bridging difficult negotiating issues as they invariably arise
- Important to consider the long term nature of the partnership when determining fairness

10) Build Trust as a Core Value

- Success breeds confidence, and confidence breeds trust
- Trust is reinforced through each partner’s realization of expected responsibilities
- Formal and informal forms of communication between entities create opportunities to build a more open and trusting relationship
 - i. Again, requires transparency!
- By pursuing mutual goals, trust can emerge among partners if the process includes mechanisms to encourage honest communication and dedication to the project

V. Conclusion

Our methodological process utilized program evaluation, stakeholder mapping, survey development and administration, and gap analysis to identify areas for improvement for NCSG to gain more depth and breadth in their future partnerships. As an organization that provides unbiased, science-based information, NCSG will continue to have numerous opportunities to create long-lasting, beneficial partnerships that will deepen the impact of their work in North

Carolina. We suggest that NCSG utilize our above recommendations in order to move forward in the engagement processes. Once the NCSG team and Advisory Board review the findings in this report, next steps will be to further examine the seven potential partners we recommended. Team members or Advisory Board representatives should initiate contact with these organizations to explore whether opportunities to pursue partnerships exist. The partnership capacity language can be used to aid the Advisory Board in determining these partners and others for future projects and programs. The principles for effective partnerships can guide the initiation stages of any new partnership while also providing a general framework for engagement with these new entities. In addition, the 106 unique partners we identified can be used to update NCSG's internal list of partners. NCSG should maintain this list and keep it updated as they move forward, in order to better reflect on past and current work carried out with their respective partners. Altogether, NCSG possesses great potential to further extend their reach and increase their impact across North Carolina, expanding on their already tremendous accomplishments.

VI. References

Our Vision. (n.d.). *North Carolina Sea Grant*. Retrieved September 25, 2015, from

<https://ncseagrants.ncsu.edu/about-us/our-vision/>

American Association for the Advancement of Science (AAAS). (2013). *Independent Review of the University of North Carolina System Marine and Coastal Activities*. Retrieved August

15, 2015, from https://www.northcarolina.edu/sites/default/files/documents/aaas_report_on_unc_coastal_and_marine_2013.pdf

Urban Land Institute. (2005). *Ten Principles for Successful Public/Private Partnerships*.

Washington, D.C. Retrieved from:

http://uli.org/wpcontent/uploads/2005/01/TP_Partnerships.pdf

Program Partners. (n.d.). *National Sea Grant College Program*. Retrieved February 22, 2016,

from:

<https://pier.seagrants.noaa.gov/Login.aspx?ReturnUrl=%2fPrograms%2fProgramPartnersAdd.aspx>

VII. Appendices

Appendix I. NCSG Staff Survey Questions

1. What is your name?
2. What is your professional title within NC Sea Grant?
3. We understand that Sea Grant program areas have a considerable amount of overlap. Please indicate up to three program areas with which your work aligns most closely
 - Coastal Hazards
 - Healthy Coastal Watersheds
 - Fisheries & Aquaculture
 - Sustainable Communities
 - Education & Training
 - Other
4. Please list up to three entities currently in partnership with NC Sea Grant, in order, who you believe are of **HIGH PRIORITY** to your work currently or in the recent past. (Priority #1 being MOST important)
Partnerships are defined as relationships with any outside organization.
Based on your responses, please briefly elaborate on each of these three priority partnerships by explaining:
 - Their value and significance to your work and/or NCSG's overall mission.
 - The depth or type of partnership NCSG maintains with them (e.g. knowledge sharing, project collaboration, funding/grant partnership, etc.).
5. Please list up to three entities NOT currently in partnership with NCSG that you would consider to be top **POTENTIAL** partnerships to help further your work within the next 1-5 years. (Priority #1 being MOST important)
Partnerships are defined as relationships with any outside organization.
Based on your previous response, please elaborate on each of these three **POTENTIAL** priority partnerships by explaining:
 - Their value and significance to furthering your future work (1-5 years) and/or NCSG's overall mission.
 - The depth or type of partnership to be had with the entity (e.g. knowledge sharing, project collaboration, funding/grant partnership, etc.).
6. Do you have any other thoughts or comments regarding either NC Sea Grant's existing or prospective partnerships? Please share below.

Appendix II. Existing Partners of North Carolina Sea Grant

Partner	Category	Source
Albemarle-Pamlico National Estuary Partnership	State Government	Website, Survey
American Meteorological Society Education Section	Non-governmental Organizations (NGOs)	Survey
American Shore and Beach Preservation Association	Non-governmental Organizations (NGOs)	National List
Atlantic Intracoastal Waterway Association	Non-governmental Organizations (NGOs)	National List
Beaufort County Planning Department	Towns/Municipalities/Counties	PIER 2010-2013
Captain Jim's Seafood	Fishing Industry	National List
Carolinas Integrated Sciences and Assessments	Academia	Survey
Carteret Catch	Fishing Industry	National List
Carteret Community College	Academia	National List, Survey
Chowan Edenton Environmental Group	Community Groups	Survey
CI – FLOW	Federal Government	PIER 2010-2013
Coastal Conservation Association of North Carolina	Community Groups	Survey
Core Sound Waterfowl Museum	Non-governmental Organizations (NGOs)	National List
COSEE Southeast	Education	National List, PIER 2010-2013
Crab Processors	Fishing Industry	PIER 2010-2013
Currituck County Commissioners	Towns/Municipalities/Counties	PIER 2010-2013
Day at the Docks	Community Groups	Survey
Duke University	Academia	Website, PIER 2010-2013, Survey
East Carolina University	Academia	Website, PIER 2010-2013, Survey
Elon University	Academia	PIER 2010-2013
Fishtowne Seafood Center	Fishing Industry	National List
Georgia Sea Grant	Federal Government	PIER 2010-2013
Goose Creek State Park	State Government	PIER 2010-2013
Governor's South Atlantic Alliance	State Government	National List
Gulf Coast Marine Life Center	Academia	PIER 2010-2013
Hyde County	Towns/Municipalities/Counties	Survey
Institute for Business and Home Safety	Non-governmental Organizations (NGOs)	Survey

Jarret Bay Oyster Company	Fishing Industry	National List
Kent BioEnergy Corporation	Private Sector	National List
Luther Lewis and Son	Fishing Industry	National List
Mattamuskeet Seafood Company	Fishing Industry	National List
National Marine Fisheries Service	Federal Government	PIER 2010-2013
National Program for Genetic Improvement and Selective Breeding for the Hybrid Striped Bass Industry	Academia	PIER 2010-2013
National Weather Service	Federal Government	National List, PIER 2010-2013
Natural Resources Leadership Institute	Education	PIER 2010-2013
NC and Regional and Fishery Managers	State Government	PIER 2010-2013, Survey
NC Aquarium Society	Non-governmental Organizations (NGOs)	National List
NC Beach, Inlet, and Waterways Association	Non-governmental Organizations (NGOs)	National List
NC Big Sweep	Community Groups	Website
NC Catch	Fishing Industry	Website, PIER 2010-2013
NC Center for the Advancement of Teaching	Education	PIER 2010-2013
NC Central University	Academia	Website
NC Clean Energy Technology Center	Academia	Survey
NC Clean Water Management Trust Fund	State Government	Survey
NC Coastal Federation	Non-governmental Organizations (NGOs)	PIER 2010-2013, National List, Survey
NC Coastal Reserve	State Government	PIER 2010-2013
NC Coastal Resources Commission	State Government	Survey
NC Coastal Resources Law, Planning, and Policy	Academia	PIER 2010-2013
NC Cooperative Extension	Academia	National List, PIER 2010-2013
NC Department of Agriculture	State Government	National List
NC Department of Coastal Resources	State Government	PIER 2010-2013
NC Department of Environmental Quality	State Government	National List, PIER 2010-2013, Website, Survey
NC Department of Public Instruction	State Government	PIER 2010-2013, Survey

NC Division of Emergency Management	State Government	PIER 2010-2013
NC Division of Marine Fisheries	State Government	National List, PIER 2010-2013, Survey
NC Division of Mitigation Service	State Government	Survey
NC Division of Water Resources	State Government	PIER 2010-2013
NC East Alliance	Private Sector	Survey
NC Emergency Management Geospatial and Technology Management	State Government	PIER 2010-2013
NC General Assembly	State Government	Website
NC National Estuarine Research Reserve	State Government	PIER 2010-2013, Survey
NC Office of Environmental Education and Public Affairs	State Government	PIER 2010-2013, Survey
NC Office of the State Controller	State Government	Survey
NC Paddle Trails Association	Non-governmental Organizations (NGOs)	National List
NC Real Estate Commission	State Government	PIER 2010-2013
NC Seafood Festival	Community Groups	Survey
NC Sentinel Site Cooperative	Federal Government	Survey
NC Shellfish Growers Association	Fishing Industry	National List, Survey
NC Shrimpers	Fishing Industry	PIER 2010-2013
NC State University	Academia	Website, PIER 2010-2013, National List, Survey
NC State University Department of Crop Science	Academia	Survey
NC State University Office of Contracts and Grants (also SPARCS)	Academia	Survey
NC Watermen United	Fishing Industry	National List
NOAA National Centers for Coastal Ocean Science (Beaufort Lab)	Federal Government	Survey
NOAA US Lifesaving Association	Federal Government	Survey
North Carolina Fisheries Association	Fishing Industry	Survey
North Carolina Floodplain Mapping Program	State Government	Website
Notre Dame University	Academia	PIER 2010-2013
Pamlico Packing Company	Fishing Industry	National List
Quality Seafood	Fishing Industry	National List
Saltwater Connections	Community Groups	PIER 2010-2013, Website

SciREN	Education	PIER 2010-2013, Survey
Social and Environmental Research Institute	Academia	PIER 2010-2013
South Atlantic Regional Sea Grant Programs	Federal Government	PIER 2010-2013
South Carolina Sea Grant	Federal Government	PIER 2010-2013
Southeast Tidal Creeks Initiative	Non-governmental Organizations (NGOs)	PIER 2010-2013
State of North Carolina	State Government	Website
Stetson University	Academia	PIER 2010-2013
The Albatross Fleet	Fishing Industry	National List
Town of Nag's Head	Towns/Municipalities/Counties	Survey
Town of Plymouth	Towns/Municipalities/Counties	PIER 2010-2013
UNC at Chapel Hill	Academia	Website
UNC at Greensboro	Academia	Website
UNC Chapel Hill	Academia	PIER 2010-2013, Survey
UNC Chapel Hill School of Government	Academia	PIER 2010-2013
UNC Charlotte	Academia	PIER 2010-2013
UNC Coastal Studies Institute	Academia	PIER 2010-2013
UNC School of Law	Academia	Survey
UNC System	Academia	Survey
UNC Wilmington	Academia	PIER 2010-2013, Website, National List, Survey
UNC-TV	Media	PIER 2010-2013, Survey
University of Virginia Carl Vinson Institute of Government	Academia	PIER 2010-2013
US Department of Agriculture	Federal Government	PIER 2010-2013
Wanchese Fish Company	Fishing Industry	National List
Water Resources Research Institute (of the UNC System)	Academia	Survey
Watershed Education for Communities and Officials	Community Groups	PIER 2010-2013