

# The Fundamentals of a Sea Grant Extension Program

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**Fundamentals of a Sea Grant Extension Program** has been a collaborative effort with an editorial board consisting of Sea Grant extension program leaders Dale R. Baker, New York Sea Grant; Jim Murray, National Sea Grant Office; Bruce Wilkins, Leader Emeritus, Cornell University; Mike Spranger, Florida Sea Grant (formerly Washington Sea Grant); Judy Lemus, University of Southern California Sea Grant; as well as Barbara Branca, Communicator of New York Sea Grant who served as the book's developmental editor. Other contributing writers include: Robert H. Bacon, South Carolina Sea Grant; Mike Liffman, Louisiana Sea Grant; Brian K. Miller, Illinois-Indiana Sea Grant; Judy Pederson, MIT Sea Grant; Bruce DeYoung, Oregon Sea Grant; and Marion Clarke, Leader Emeritus, Florida Sea Grant. The editorial team wishes to recognize all the Sea Grant outreach professionals that have come before and will come after.

## *Foreword*



The genius of the land-grant system has been the effective transfer of science-based information from universities to user constituencies through an extension service. When Athelstan Spilhaus first proposed the Sea Grant concept almost four decades ago, he was emphatic in acknowledging the close relationship of his new idea to the land-grant paradigm.

From Sea Grant's inception, an extension service has been an integral part of the program's infrastructure. Today, over 300 staff members throughout coastal America continue that tradition of strong commitment to information transfer, service to users, and focus on outcomes that has allowed Sea Grant Extension to make such strong contributions to the public interest over the years. It is this integration of knowledge creation and knowledge transfer through outreach that

sets Sea Grant apart from other Federal ocean or coastal programs and makes it so effective.

Looking to the future, the projected pace and magnitude of population growth and economic development in the nation's coastal regions are well documented. Associated with that growth is a host of environmental and economic issues, many of them new to Sea Grant, that will occupy this country's social and political agenda well into the next century. Addressing these complex issues will create an unprecedented demand for knowledge and understanding of physical, ecological, and social systems. The ability to get science-based information synthesized and promulgated to users will be at a premium. The number and diversity of constituencies and opportunities that Sea Grant is asked to respond to is likewise growing exponentially. With the advent of ecosystem and integrated approaches to natural resource management, solutions to problems will be increasingly distributed both regionally and locally while requiring resolution to complex multiple-use conflicts. That future portends exciting and unprecedented opportunities for Sea Grant Extension.

We are entering a century of new challenges, needs, and technologies with more at stake in a shorter period of time for every coastal community than ever before. This book's purpose is to introduce you to and help you with making a difference in this emerging new world of Sea Grant Extension.

***Ronald C. Baird, Director, National Sea Grant College Program***  
**Silver Spring, Maryland**  
**August 2000**

## *Preface*

For over a quarter of a century, a group of the Sea Grant Extension (SGE) program staff and their host institutions have committed themselves to providing information about coastal ecosystems and about the people and businesses influenced by marine and Great Lakes waterways to individuals who then apply that knowledge, often new to them, in extension activities. These SGE educators, typically university staff, have exciting, interesting positions that, while difficult at times, are usually very stimulating!

I am proud and pleased to say a few words as preface to this book, having helped produce related publications in the 1970s along with SGE pioneers Bill Wick and Dan Panshin. It is heartening that so many others who share a related philosophy have taken the time to develop this description of elements critically important in conducting SGE work in a wide variety of communities.

The tasks and tools of extension educators have been modified and aided by new communications technologies and recent understandings about people. But many truths about people and how to help them learn to apply new knowledge have remained the same over the long term. The satisfaction that comes from helping another, the fun in learning about new approaches, the joy of sharing information that can aid others with a publication—through the web or in person—remain a hallmark of those who enjoy SGE work. Those folks may go by many names, but I still think they are best described as "county agents in hip boots" and many of us have come from that tradition.

We do not hold that all Sea Grant Extension programs in the nation are similar in all regards. We do believe the vast majority of program efforts are based on a concern for the individual and the community and a belief that using research and existing knowledge to advance such work is critically important in our task. I hope this publication can aid a new generation in this important work.

*Bruce T. Wilkins*  
*Cornell University*  
*Ithaca, New York*  
*July 2000*

## Chapter 1

# The Philosophy

## *What do we do?*

Jim Murray and Bruce Wilkins



Welcome to Sea Grant Extension. As you begin sorting out your responsibilities and plan of work as an extension professional, you may be wondering how it all began and the guiding philosophy of university extension.

### A Brief History

The National Sea Grant College Program was born during the 1960s in a national climate of rapid social and technological change, an emerging environmental consciousness and faith in our abilities to harness new wealth from marine and Great Lakes resources. During the sixties, Rachel Carson, in her classic environmental book *Silent Spring*, raised serious national concerns about the ecosystem effects of pesticides. The Cuyahoga River near Cleveland, Ohio, was so polluted that it caught fire and noted reporter Edward R. Murrow produced the revealing television documentary, "Who Killed Lake Erie?" Such events ultimately led to the first "Earth Day" in 1969.

That same year, Neil Armstrong walked on the moon, the culmination of the country's heavy investment in scientific research triggered by the "Space Race" with the Soviet Union. America's farms produced a vast supply of crops needed to feed the world's growing population. The public's trust in science to solve problems was at an all-time high. But compared to space exploration, support for ocean science lagged significantly behind.

That changed at the keynote address of the 1963 meeting of the American Fisheries Society when Althehan Spilhaus, a University of Minnesota professor, first suggested the idea of establishing "Sea Grant colleges" in existing universities that wished to develop oceanic work. He drew parallels with the Land Grant college system, which he claimed was "one of the best investments this nation ever made. The same kind of imagination and foresight should be applied to the exploration of the sea." (*Science*, September 1964).

The Senate and House of Representatives, led by Senator Clayborne Pell of Rhode Island and Congressman Paul Rogers of Florida, passed the National Sea Grant College and Program Act of 1966. The act delegated administrative responsibilities for Sea Grant

colleges to the National Science Foundation (currently under the U.S. Department of Commerce). The National Science Foundation (NSF) had authority to initiate and support education, research, and extension –which at that time was referred to collectively as *marine advisory programs*. The act allowed NSF to exercise its authority by:

"Encouraging and developing programs consisting of instruction, practical demonstrations, publications, and otherwise, by Sea Grant colleges and other suitable institutes, laboratories, and public and private agencies through marine advisory programs with the object of imparting useful information to persons currently employed or interested in the various fields related to the development of marine resources, the scientific community, and the general public."

Today the program, now called the Sea Grant Extension Program (SGEP) consists of roughly 300 people who conduct extension educational programming throughout the coastal and Great Lakes states. -

### **What is Sea Grant Extension?**

Over the years, thousands of extension professionals laid Sea Grant's foundation and contributed to its success. Some have made profound contributions to society or have left Sea Grant to assume political office. Retired Alaska Sea Grant agent Hank Pennington conducted award-winning fishing vessel safety programs that led to saving dozens of fishermen's lives. Former New Jersey Sea Grant coastal law specialist Frank Pallone became a New Jersey Congressman and former Hawaii Sea Grant agent Jeremy Harris became Mayor of Honolulu.

These individual successes were built on relationships-- those with universities, industries, organizations and governments --that took decades to build but could be destroyed rapidly by ignoring fundamental principles. It takes most outside observers, and indeed most new extension staff, a period of exposure before they gain a clear understanding of SGE's philosophy and techniques. Extension education is a discipline (some would even call it a science) that is awarded advanced degrees at some universities, but it is also an art. If you are relatively new to university extension, this guide will provide you with some of the basics so that the tradition of success established by the program's founders can be maintained.

Sea Grant Extension (SGE) programs appear in many forms and shapes. Typically they are university-based educational programs that seek to apply knowledge and understanding gained through research to aid individuals and groups. Programs that extend university knowledge require a dedicated group of individuals whose advanced education, training, and expertise may involve many segments of biology, sociology, economics, public policy, engineering and a host of related fields. A SGE professional is known by many names -- specialist, educator, marine advisor, agent. Each works directly with people in coastal-related communities. Extension professionals are also schooled in approaches that can be used to facilitate information transfer.

Assume that the overall goal of extension education is to effect change by having individuals, groups or institutions use science-based information. Within Sea Grant several mechanisms are available to disseminate science-based information. Collectively, these mechanisms can be referred to as outreach. Outreach can be defined as those activities that extend Sea Grant and other relevant coastal and marine information to people. Note that any activity may be included in this definition. Responding to a web inquiry or a telephone call with information is a legitimate outreach activity. Producing reports of Sea Grant research, teaching educators who will, in turn, teach their students, and demonstrating a new device to commercial fishers to reduce by-catch are all techniques to extend university knowledge.

### **What defines a Sea Grant Extension Professional?**

Within the Sea Grant community are people who have special skills to use different delivery approaches. They may be science writers, graphic artists, audio/video experts or editors found in Sea Grant Communications offices. In some cases, people trained in formal education processes and techniques for K-12 teacher education may be organized as a separate unit.

Extension work might be defined as *designing activities* that effect *behavior change* through constituent-driven *programs* focused on *outcome-based objectives* using a variety of *educational processes* and techniques *over a continuum time*.

The term *designed activities* suggests that the specialists did not "wing it" as they went about their work, but rather approached their positions with some plan in mind. Almost all extension staffs have some type of advisory group to help plan activities and provide overall direction. Obtaining input on the extension staff's plan of work provides a "bottom-up" approach to programming that distinguishes extension education from most other types of public education programs.

*Behavior change* suggests that extension professionals want their audiences or stakeholders -- individuals, groups or institutions-- to do something differently as a result of the information SGE has provided. A good example is for stakeholders to make a more informed decision. The term *program* implies that extension education is more than an isolated event. *Outcome-based objectives* mean that extension staffs have certain measurable outcomes in mind when they decide to conduct a program. *Educational processes* suggest that a variety of techniques may be necessary to achieve the desired outcome. Some examples are one-on-one consulting, workshops, conferences, demonstrations, fact sheets, videos, web pages or radio shows. *Over time* implies that extension work is not a single event, but usually a series of events that may take several years to achieve.



## **An Example: Reducing Finfish By-catch**

In the southeastern shrimp fishery, shrimp trawlers routinely catch between two to four pounds of by-catch typically in the form of juvenile finfish or crabs, for each pound of shrimp caught. Much of the by-catch was discarded as dead, with mortality rates contributing to reduced populations of important commercial and recreational species of fish such as red snapper and weakfish. So great was the problem that fisheries managers at the regional and state levels had to develop some timely solutions.

The university hired an extension specialist with expertise in fisheries science. With an advisory committee of industry and agency leaders, he held meetings to establish that reducing by-catch was an important goal thus gaining “bottom-up” support. The specialist developed a plan of work (designed activities) which included a fifty percent by-catch reduction goal (outcome-based objective) four years from that point (over time). To achieve the objective, shrimp fishermen needed to be convinced that their shrimping practices needed modification (behavior change). Various activities were developed to change their behavior: applied gear development that involved shrimp fishermen and net makers, presentations at commercial fishing meetings and shows, articles in coastal newspapers, fact sheets, booklets, videos and one-on-one training on how to install by-catch reduction gear (a variety of educational processes).

The by-catch issue was at first greeted with suspicion by shrimp fishermen, in part because the issue closely followed the highly controversial requirement for shrimpers to utilize turtle excluder devices. There was a high degree of mistrust between shrimpers and the regulatory agencies that mandated this device. However, the Sea Grant Extension professional had credibility with these issues for at least two very important reasons. First, he had worked locally in the fishing community for a number of years and had achieved a high degree of trust with the industry. The trust garnered from the shrimpers was based on his years of non-advocacy. Second, he worked for a university and not a regulatory agency. Shrimpers recognized that his only goal was to help the industry solve the problem in an unbiased way using science-based information.

## **Summary**

Throughout its rich history, thousands of Sea Grant Extension professionals have conducted hundreds of successful programs that have educated stakeholders and led to significant environmental and economic improvements within coastal and Great Lakes states. In the future, as coastal populations expand and environmental pressures increase, the unique capabilities of the Sea Grant Extension will be needed more than ever.



## Chapter 2

# The Administrative Structure

## *Where do we fit?*

Dale R. Baker



The Sea Grant Extension Program is part of a larger complex of programs both at the state and federal levels. Now that you are a part of SGE, you may need to know just how your program fits into the local, state and federal government.

### **The Federal Level**

The National Sea Grant College Program (NSGCP) is a part of the National Oceanic and Atmospheric Administration (NOAA) which is within the Department of Commerce. Sea Grant has been part of NOAA since the early 1970s. Within NOAA, Sea Grant is part of the Office of Oceanic and Atmospheric Research (OAR) which is one of five line offices. (*Organizational chart illustration, a graphic of agency relationships and NSGO with all the agency acronyms and names spelled out to follow.*)

The (NSGCP), a partnership of the federal government, state government and academia, is administered by the National Sea Grant Office (NSGO) located in Silver Spring, Maryland. The NSGO supports fewer than a dozen professionals--a relatively small staff compared to offices in most federal agencies. Each of these professionals has multiple responsibilities within the National Sea Grant Program such as developing budget initiatives, monitoring individual Sea Grant Programs and communicating Sea Grant activities to other NOAA and federal offices. Each national office professional is responsible for monitoring three or more Sea Grant programs. Each National Office Professional is responsible for monitoring three or more Sea Grant programs. As an Extension professional you would interact with National Sea Grant Office professionals when they perform their duties as Sea Grant program officers.

When fully staffed, three professionals from the NSGCP Outreach Division have administrative and managerial responsibilities for Extension and Communications in addition to their monitoring SGE programs. As an extension professional working on outreach projects, you would likely work with your own program's Communications' staff and sometimes national office professionals who have responsibilities for your program.

## **National Sea Grant Committee Structure**

The following organizations have had the most impact:

**Sea Grant Association (SGA)** – This major association of Sea Grant programs usually meets twice annually. Most programs support at least one delegate (typically the director) at a cost of several thousand dollars a year. Through its committees and elected officers, the SGA provides leadership and a national direction for the Sea Grant programs. The association employees staff in the nation's capital to ensure effective communication among the federal legislature, the NSGCP and individual Sea Grant programs.

**National Sea Grant Review Panel (NSGRP)** – The NSGRP was created by the same legislation that began the NSGCP. The Secretary of Commerce appoints 15 panel members to a three-year term that can be extended into a second 3-year term. Working closely with the National Sea Grant Program and the SGA, the panel sets overall policy, direction and review of the NSGP. Panelists are paid for their services.

**Assembly of Program Leaders** – One SGE Program Leader represents each Sea Grant College institutional program at a formal assembly. For multi-state Sea Grant programs, one individual from each state is asked to be a member. The Assembly has five elected officers: Assembly Chair, Chair-elect, past-Chair, Secretary-Treasurer, and one At-Large Delegate. The Chair of the Assembly is an *ex officio* member of the SGA. The primary functions of the Assembly of Program Leaders are to:

1. Provide a mechanism for SGE Program Leaders to respond to network issues or needs and provide a forum for sharing related professional knowledge.
2. Foster ongoing communications with SGA, NSGO and other Sea Grant outreach and research components.
3. Develop mechanisms to increase cooperative programming, outreach innovations and talent sharing.
4. Encourage national and regional professional recognition for outstanding performance for appropriate SGE professionals.
5. Foster effective liaisons with various groups interested in collaborating with SGE Program Leaders in concert with the SGA.
6. Support and encourage regional SGE program networks.

Across the Sea Grant programs, professionals with similar jobs have formed their own organizations such as communicators, marine educators, and fiscal officers. These groups usually get together during Sea Grant Week, a biennial meeting of the entire program and

may also hold other formal meetings. In addition, the extension educators within SGE have formed a number of informal program-based networks such as Marina-Net and Haz-Net. (see “Regional and National Networks,” pages 49-53)

## The State Level

There are as many different relationships between Sea Grant Extension Programs and their states and between SGE programs and their Sea Grant Programs as there are programs. One of Sea Grant’s strengths is that it allows and encourages program diversity. In most cases the Sea Grant program is part of one or more university or university systems within its state. Some Sea Grant outreach programs are part of a state agency, while others are members of state and multi-state consortia. There are also a

number of Sea Grant outreach efforts that are solely a part of the state Sea Grant Program without relationships to other programs within the state.

### A Word About Funding

Sea Grant Extension is a matching funds program. Up to two-thirds of the total operating funds for an entire SGE program can come from the national program. The Sea Grant Extension programs receive a portion of those federal dollars, but there is no mandated percentage. Generally Sea Grant Extension program efforts receive from 20 to 40 percent of the federal resources coming to the individual Sea Grant program.

SGE programs traditionally receive financial support from a variety of sources. Most often the state legislature invests resources into a state’s Sea Grant program with a percentage of those dollars going to Extension. Other state and Federal agencies can often be major financial supporters of SGE efforts. States that are part of CES often will use county or parish funding to operate their county offices and pay a portion of a SGE professional’s salary. There are many sources of funds available to operate a SGE effort and programs have become very creative in identifying and utilizing financial resources from grants, contracts, industry, private gifts and endowments.

The relationship between a SGEP to its state may go back to the development of the Sea Grant Program within that state. In a number of coastal states, the Land Grant University initiated or assisted in the development of a Sea Grant Extension outreach efforts because of the similarities between the Sea Grant and Land Grant missions. For those programs, SGEP retains a close relationship and partnership to the state Cooperative Extension Program.

Although a 1999 SGEP management survey highlighted the diversity among all the Sea Grant programs, some general patterns emerged. The majority of programs are administratively linked to the state Cooperative Extension System (CES). This is especially true if the Cooperative Extension program had an interest in natural resources, environmental issues and fisheries outreach when the SGEP was formed and provides matching state and local resources necessary for the development of Sea Grant Extension outreach efforts.

The traditional CES approach employs a network of county-based agents who work closely with subject-area specialists

conducting research at the supporting university. In many CES-affiliated programs, a network of coastal agents is located in area county offices that provide some type of financial support or service. The cooperative extension agents have subject-matter expertise, but are expected to respond to many issues that may surface in their locale. In CES-affiliated systems, the agents may report to two or more different administrators, typically the Sea Grant extension program leader and the CES district director with input from the county extension leader. Specialists often report to academic department chairs with input from the SGE program leader and/or the Sea Grant director.

Each arrangement has advantages and disadvantages. The CES-affiliated Sea Grant programs benefit by being part of a larger organization with its concomitant infrastructure and resources. The non-CES-affiliated programs have the advantage of smallness, independence and an ability to respond quickly to changing issues.

Although each structure has unique attributes, a strong relationship between the extension leader and the Sea Grant director is a key ingredient for a successful program. In many cases, the leader of the SGEP acts as the assistant or associate director of the Sea Grant program and is a key member of the program's management team. Although not always the case, the survey shows that linkage of the SGEP to the management structure of its Sea Grant program is considered a preferable management style.

The 1999 survey also showed that while some Program Leaders report to the Sea Grant director (most often in programs not linked to CES), others do not report to the Sea Grant director at all. Similarly, extension staff may or may not have a reporting relationship to the Program Leader. Extension specialists in university academic departments most likely would likely report to a department chair.

Whatever the genesis of your particular program, the national office does not normally dictate the relationship of an extension program to its Sea Grant program, or to other organizations within the state. That is a "local" decision. Program results and accomplishments are perceived as the ultimate test of an effectively functioning program.

## **Relationship with the University**

Although many models for a SGEP have evolved over the thirty plus years Sea Grant has been around, most Sea Grant programs are a part of a higher education system within their home state. A program may be a member of a single university, a statewide university system, or multiple universities throughout the state. If the Sea Grant program is a member of a multiple university system, there may be formal governing boards, councils, or consortia with direct management authority over the Sea Grant Extension program.

It is not uncommon for the Extension portion of the Sea Grant program to have a different relationship to higher education within the state than the research side of SGE has with the university. The SGEP may have a relationship to one part of an academic

institution while the program director is affiliated with another institution. This is sometimes the case when SGE is part of a state CES. There are also Sea Grant programs that subcontract the extension program to another university or state agency.

Sea Grant Extension personnel have unique employee/employer relationships with their “host institution.” In some cases, SGE personnel are tenured faculty members, especially where SGE is part of Cooperative Extension or in academic departments that are eligible for tenure. In some programs SGE personnel are considered faculty, but not tenured, while in other programs SGE personnel are considered staff. Some SGE staff may have federal appointments that carry federal retirement and health insurance benefits if that policy is in place at the state Cooperative Extension Program. In most other cases, extension professionals receive whatever benefits come from the organization acting as the employer. In no cases does NOAA, or the Department of Commerce, grant federal appointments to Sea Grant Extension personnel.

## **Summary**

There are many different models available to run a successful Sea Grant Extension effort. The model used in a particular program depends on how the Sea Grant Program came about in that state and which institutions had early leadership for the program. It is difficult to say which model is the best. We can only spell out the pros and cons for the different SGE programs that have been created. As in the cases of most programs, much of the success is dependent on how effectively individuals within the program interact and get along with one another. If the communication is poor and relationships are strained between extension and the Sea Grant director’s office, no administrative structure will allow the program to work well.

### Chapter 3

## Planning the Extension Program

*(How do we decide what to do?)*

Brian K. Miller, Bruce T. Wilkins, and Mike Spranger



Planning is a fundamental step in any successful program. We use principles of planning in most things that we do. We plan for our careers, our families and our vacations. Planning is simply identifying what we want to accomplish, then developing a strategy that will allow us to accomplish it. In some cases planning is very detailed and formal; in other cases it is informal, flexible and fluid. Agencies at all levels have embraced planning and it is now an integral part of most organizations.

### Planning Starts at the National Level

NOAA and the National Sea Grant College Program network have a general framework for planning and evaluation of activities. As a Sea Grant extension professional you will find that planning your activities within a general framework will ease your task in preparing proposals and reporting annual activities. Proper planning not only helps us determine what we should do, but also helps us identify what evaluation steps may be needed and when these should be initiated.

Periodically, NOAA develops a strategic plan. This plan identifies the broad goals and objectives NOAA wishes to accomplish. The National Sea Grant Office then develops a strategic plan and implementation plan that identifies which of NOAA's goals and objectives Sea Grant programs will concentrate on nationally. The topics can then become the basis for the priorities identified by each Sea Grant College program and applied to address local and regional issues.

It is important to understand the framework in which the SGE program operates and the importance of our activities to the overall Sea Grant program and to our stakeholders. Regardless of procedural and subtle differences among programs, Sea Grant Extension professionals share these activities:

- We identify four-year goals and objectives that fit our program's strategic plan for the important thematic areas.
- We develop an implementation plan that describes how goals and objectives will be accomplished.
- We focus on having an impact in everything we do.
- We write annual work plans that identify specific activities that help us achieve our goals.

Although the format may vary, each extension professional should address these components to develop programs that are productive, stakeholder-driven and impact-laden. To plan an effective extension program, all staff will benefit by developing goals and objectives and by specifying both the short- and long-term actions that it will take to attain those goals.

## **The Strategic Plan**

The strategic plan is the foundation of a planning process. This plan sets a program's direction, goals and objectives. It should be based on broad input from stakeholders, administrators and staff. A good strategic plan identifies a program's priorities, defines where it will focus staff and financial resources, and should remain dynamic to respond to changing conditions and opportunities.

Such a long-range planning document is an essential, ongoing process helps us to address relevant issues of the future. A good strategic plan anticipates the information, research and technology needs of the local and state stakeholders and is usually built around the priorities and strategic interests of the National Sea Grant College Program, NOAA and other regional and national partners. The plan is tempered by financial constraints and institutional strengths represented by our universities and related institutions.

A Sea Grant Program's strategic plan usually emphasizes four major components:

1. A vision and focus – where the program is headed and why.
2. Some background on issues and mechanisms for establishing priorities for the investment of staff and financial resources.
3. The program's goals and objectives.
4. Impediments -- organizational, resource or procedural--to program growth and performance.

## ***Goals and Objectives***

Goals and objective are the components of the strategic plan that guide extension activities. In some cases, an extension professional will operate under these objectives directly. In other cases, the professional must develop personal objectives that focus on a smaller component of the problems but help the overall Sea Grant program achieve the objectives identified in the strategic plan.

## **Goals**

A goal is a broader and more long-term statement than an objective and objectives are the intermediate steps needed to accomplish any given goal. As you consider the impact your SGE program needs to demonstrate, the purpose of the goal becomes clearer. A goal should be worded so that you and the reader can identify the resulting impact when a goal is ultimately accomplished.



Goals that contain obscure or abstract statements like “increase awareness of,” “enhance an appreciation of,” or “increase quality of” make it difficult to determine what the impact would be if the goal were achieved or if you had any influence on achieving it. The best way to develop a goal or to revise one that is ambiguous may be to first write down the impacts that will result if the goal is achieved. When the resultant impacts are identified, it becomes easier to incorporate indicators of these impacts into a goal statement that tells what will result when your program is successfully completed.

As you begin, write down key components that come to mind. This process can be enriched if you ask coworkers and stakeholders to assist you in compiling this list. The final goal statement can be tested by asking yourself, your group, and other stakeholders outside your working group: “If these impacts were achieved, would they agree that the goal has been met?” If the answer is yes, then your goal statement is complete. If there is disagreement, then further refinement is needed. (Dick and Carey 1996).

## **Objectives**

Generally, objectives are to be accomplished in a shorter term than goals and constitute steps that must be taken in order for a goal to be reached. If you word an objective in a way that expected milestones can be extracted from them, then the objective serves its purpose in identifying what steps must be achieved in reaching the goal.

Objectives that contain self-directed statements like “to help,” “to provide,” “to develop,” “to study,” “to hold” and “to inform” tell us a little about what to do but say nothing about what change will occur or which milestone will be reached if the objective is achieved. At this point you have already identified the impact you want and have developed your goal statement. Now ask, “What must happen if this impact is to be achieved?” “What smaller benchmarks or milestones would signal progress toward reaching this impact?” “In what order should these occur?” As in the goal-setting process, have co-workers and stakeholders assist you in compiling this list.

Objective statements should generally identify 1) the audience, 2) the audience’s change in behavior because of your effort, and 3) some measurable component that indicates the magnitude of change you intend to achieve. Using statements like “anglers” or “coastal residents” define huge audiences. Unless you intend to design actions that will reach all anglers or coastal residents, a refinement of this audience is needed such as “subsistence anglers fishing from shore” or “shore property owners.” It is probably unrealistic for you to expect to influence all subsistence anglers or all shore property owners. The objective statement or the milestone statement needs to further identify the quantity or percentage of this audience that will be influenced. Statements like “60 percent of subsistence anglers will take steps to reduce exposure to contaminants” will further quantify the percentage of people you expect to influence. Also remember that our role is to influence some type of change (e.g. to make something happen, or make the world a better place because of our actions) and not to simply disseminate information or inform people about

issues. Therefore, objectives and the corresponding milestone statements need to be worded to communicate the changes you intend to affect.

The final objective statement can be tested by asking yourself, your group and other stakeholders outside your working group “If these milestones were achieved, would they agree that the objective(s) has been met?” If the answer is yes, then your objective statement is complete. If there is disagreement, further refinement is still needed.

## **Implementation Plan**

The implementation plan is an intermediate step between the strategic plan and the annual work plan.

The strategic plan identifies the general direction a Sea Grant program will take over a four-year period. The implementation plan identifies what expected milestones and impacts will result from an extension program, what resources and approaches are necessary, and what data will be collected to measure progress and success. The work plan lays out specific actions that will be taken over the next year to work toward the identified goals and objectives. In order to develop the work plan, one must think critically about what steps are needed to achieve a desired impact and in what order these steps must be accomplished. The work plan then is ultimately a prioritized list of steps and actions that must take place in order for the desired impacts to be realized.

Each action is designed to meet four criteria when possible:

1. A product will result from the activity or action.
2. Efforts to cooperate with appropriate organizations or agencies are made.
3. The action will make major contributions toward achieving an expected milestone or impact can be evaluated.
4. The stated action and evaluation (if needed for this particular action) will be designed so that all resulting milestones or impacts are measurable.

Implementation plans used by most Sea Grant programs should flow from and coincide with the strategic plan and describes how you expect your goals and objectives will be accomplished and measured. The implementation cycle is divided into two biennial intervals that correspond to the program’s omnibus proposal cycle. The omnibus proposal describes in detail the planned research, outreach, and administrative actions planned for a two-year period. This approach to strategic implementation provides an opportunity to re-prioritize objectives and redirect program activities every two years. In addition, program staff should review activities on an annual basis and, with approval from their director or their program leader, re-order outreach activities appropriately in their annual work plans. This provides further opportunities for a mid-course adjustment during a particular implementation interval.

The implementation plan focuses on the stakeholders to be served, the alliances to be formed, and the resources used in order to accomplish the stated goals and objectives. This is where one identifies what will be measured to determine if the goals and

objectives are accomplished. The implementation plan identifies performance targets that provide benchmarks for evaluating program performance.

In developing an implementation plan and the resulting work plan, keep in mind that Sea Grant is a science-based, issue-oriented program. Each implementation plan should be based on a good strategic plan and integrate policy, planning, outreach, research, education and management.

After expected milestones and impacts are identified, the rest of the implementation plan can be finalized. The body of an implementation plan contains strategies, procedures and performance measures for each objective listed in the strategic plan. These do not need to be lengthy statements--one paragraph may do--but they do need to set a clear direction for accomplishing objectives.

### **Annual Work Plans**

Annual work plans are the most detailed step in our planning process. Work plans detail specific actions that will be taken and products that will be produced in working toward an expected milestone or an expected impact. A work plan should provide a mechanism that is flexible enough to allow you to make mid-course corrections because of change or to take advantage of unique opportunities.

A work plan is often more than just a list of proposed actions. It may be helpful for you to list the objective from the strategic plan that is being addressed, the expected milestone or impact that will result from this action or associated group of actions, the action that is proposed and a rationale that explains why this action is needed and why it is the logical next step toward accomplishing the desired impact (or goal). By taking this approach, the work plan makes a specific reference to the portion of the strategic plan being addressed, identifies what part of the implementation plan is being conducted and reaffirms the expected milestones or impacts that are desired.

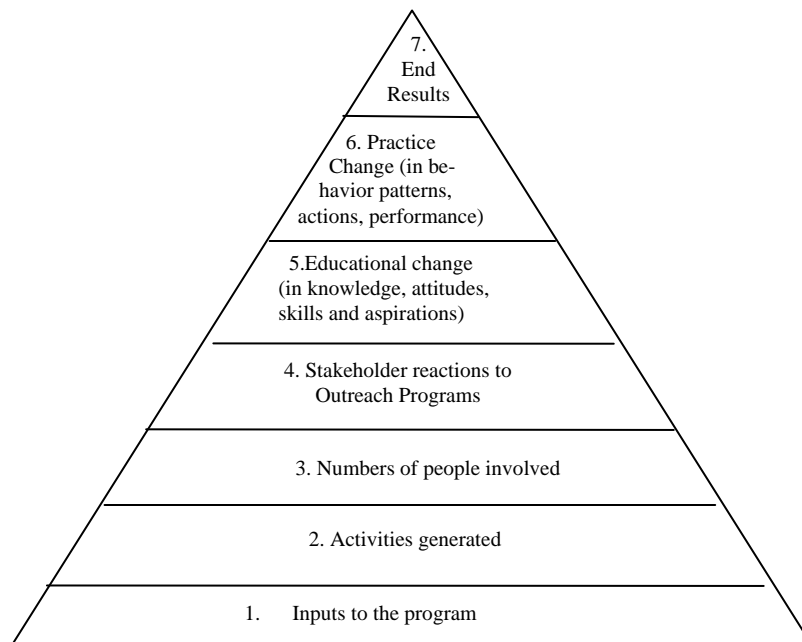
### **Designing a Program That Achieves Impact**

In light of tightening budgets, it is imperative to demonstrate that the impact from a program effort is greater than its cost. It is no longer enough to select only projects we feel comfortable with or have ready capabilities to address. We also need to plan our programs so we can measure and demonstrate the impact we have had. This may be a change from the way some have evaluated your extension program in the past, where proving impact was encouraged but never required. Is your program worth its cost? This is not easy to determine. A program developed with our suggestions can help you and others respond effectively to such questions.

### **Increase Your Program's Level of Effectiveness**

Your extension program can be planned and evaluated to increase its effectiveness. All programs start with staff and financial inputs. As the program matures, the types of results and impacts made are expected to move up a hierarchical pyramid (Bennett 1978).

In the early stages of development, an extension project can measure and report primarily activities conducted, number of people participating, and stakeholder reactions. As the project matures, it is expected that programming will go beyond educational change and will result in practice changes and ultimately permit measuring impacts of your program. Your challenge in planning your extension program is to decide how you can move the effectiveness of your program up this pyramid each year. Strive to reach the highest level possible with all of your planned program areas.



## Assessing and Meeting Needs of Stakeholders

One challenge for all extension professionals is in identifying the stakeholders with whom they will work. The possibilities are endless and you will likely be approached by stakeholders with more ideas and suggestions than you could ever meet. The most important thing to remember when getting input from stakeholders and advisory groups is to distinguish between wants and needs and between perceived and actual solutions that will achieve the desired outcome. The purpose of a needs assessment is to identify the exact nature of an identified problem and to decide how it can best be resolved (Dick and Carey 1996).

### Formal Mechanisms

*Advisory Committees:* Most effective extension programs seek stakeholder input. Each program does this differently, but has some form of user advisory committee and research advisory committee formed at the program level. Some programs use this as their only formal committee mechanism to solicit stakeholder input for all staff. Other programs allow individual extension professionals to form their own advisory committees

composed of key stakeholders. Either can provide an effective mechanism for regularly seeking stakeholder input. One must be careful, however, to remember that these groups are advisory and are not a board of directors.

*Evaluations* of publications, products, and services not only evaluates the quality and effectiveness of the program, but can also be used to assess additional stakeholder needs. We often ask participants to complete evaluation forms. If you are creative, you can use these forms as opportunities to assess stakeholder needs, to gain input in prioritizing issues or actions, or to help select between options you are considering

### **Informal Mechanisms**



Most extension professionals make judicious use of informal methods for assessing stakeholder needs and conduct this analysis on a daily basis. Undoubtedly you have daily contact with user groups, resource users, and scientists in your area of specialty and receive information on problems and needs on a continuous basis. Contacts occur through phone calls from stakeholders; interaction with other government agencies and institutions; interaction with stakeholders at meetings and workshops; interaction with general public at large and one-on-one interaction with stakeholders. These contacts give you a comprehensive understanding of how science is currently being applied by stakeholders in your thematic areas, help you lead efforts to apply existing science and technology to current needs, and develop a clear understanding of stakeholder needs not being addressed by ongoing research and outreach activities. Informal conversations with stakeholders can be used to clarify your understanding of an issue from their perspective and assist you in identifying true causes for problems “or gaps” that you’ve identified in your needs assessments.

*State of science and future trends:* Extension professionals also strive to keep in close contact with researchers in their thematic area, participate in research projects when possible, conduct scholarly work and continue to grow in their disciplines

*Proactive assessment of future needs and trends:* As extension professionals, we are in a unique position not only to understand the current state of the science in our focus area and future research trends, but also to assess how this science is being applied and where stakeholder needs are unmet. Extension personnel can assimilate this information and may anticipate the future needs of our stakeholders. We may identify present and future barriers to achieving expected impacts and milestones and take proactive steps to remove them. Proactive steps may include identifying research needs and participating in developing future research proposals. (See Chapter 6.)

### **Incorporating Stakeholder Needs into Program Plans**

Stakeholder needs that you've identified should be incorporated into the program's strategic plan and corresponding implementation plan, the biennial omnibus proposal, and annual work plans. The objectives developed in the strategic plan articulate the basic direction needed to meet present and future stakeholder needs. We need to anticipate barriers and future needs so research and technology can be developed prior to the stakeholders' needs. The implementation plan identifies milestones that signal progress in accomplishing goals, articulates the impacts program activities are expected to have, and partnerships and mechanisms needed to accomplish program objectives. The two-year omnibus proposal and annual work plans we submit describe actions over the year to address stakeholder needs and achieve expected milestones and expected impacts.

All feedback from users can be incorporated into your extension planning process and can be used to formulate and modify program activities at five points:

- Strategic planning (4 year intervals)
- Implementation planning (2 two-year intervals)
- Omnibus proposals (2 years intervals)
- Work plans (annually)
- Anytime opportunities or problems arise

### **Nine Important Questions**

1. Will your involvement in the activity help achieve an identified/ expected milestone/impact?
2. What is the link between this outreach activity and relevant research?
3. What change in partnerships with government agencies, industry, and private organizations might result in a more efficient accomplishment of objectives? Would greater impacts be achieved as a result of this partnership?
4. Is each project designed for long-term impact and for short-term Sea Grant support?
5. What communication tools (e.g. publication, video, workshop, web site, etc.) will result from this activity?
6. Has your overall program visibility and outreach productivity increased over the previous year? Will this activity contribute to a further increase?
7. Will your proposed work plan result in a higher level of effectiveness and/or a higher level of program users than the previous year?
8. Does your work plan contain projects with regional or national impacts?
9. Has your outreach program grown in size or has the level of outside funding and stakeholder support increased?

### **Design and Marketing of Extension Products**

Any products that you have designed and marketed have no value or impact if they do not get into the hands of stakeholders or if the products are not used by them. Every Sea Grant program has a communications program staffed with professionals trained in developing, designing and marketing products. Your program's communications professionals—writers, editors web designers, and videographers—can be an invaluable resource and the proper time to enlist them is at the product's conception and not after its development. Many universities also have communication departments with staff that can assist with product design, development, marketing and distribution. Incorporating these individuals into your product planning efforts will not only result in better products, but will better target stakeholder needs.

### **Summary**

Planning is one of the foundations upon which Sea Grant Extension programs were built. Planning identifies both short-term and long-term courses of action and identifies milestones that can be used to measure if our activities have met their target. Proper planning and self-evaluation will allow you to reflect regularly on your program and determine if you are doing all you can to have positive impacts for your stakeholders. A great time to do this is when you are developing your annual work plan or preparing for your annual performance evaluation. Asking yourself these “Nine Important Questions” may ensure that you are following sound planning procedures

and conducting an effective extension program designed for impact. If you want to be successful, make planning a key component of your extension activities.



## References

- Bennett, Claude F. 1978. *Analyzing impacts of extension programs*. No. ECS-575, U.S. Department of Agriculture, Extension Service, Washington, DC.
- Dick, Walter and Lou Carey, 1996. *The Systematic Design of Instruction* (4<sup>th</sup> edition). HarperCollins Publishers Inc.
- National Sea Grant College Program. 1995. *Sea Grant's Network Plan 1995-2005*. Washington, DC; NOAA.
- National Sea Grant College Program. 1996. *Implementing the Sea Grant Network Plan 1995-2005*. Washington, DC; NOAA.
- National Sea Grant College Program. 1998. *Policy Document on the Implementation of Program Evaluation Procedures in the National Sea Grant College Program (NSGCP)*. Washington, DC; NOAA.
- National Sea Grant College Program. 1998. *Proposal Guidelines for Sea Grant Extension and Communications Proposals*. Washington, DC; NOAA.

## Chapter 4

# Evaluation

### *Why bother?*

Mike Spranger and Bruce Wilkins

“What have you done for me lately?” This refrain is today’s new tune of Sea Grant stakeholders. Funding agencies are also asking Sea Grant Extension professionals what we are doing with the funds they are providing for our projects. In order to answer these questions, we need to show the impact that our programs and projects are having on the people and resources that we target. This is what evaluation is all about. It is a process that measures whether our program or project accomplished what we hoped for or intended and what, among the things, we did to achieve that goal, worked well or how they could have been done better (Wilkins 1980).

Sea Grant Extension has always been known for its evaluation of programs and projects. We have a strong reputation and history in conducting evaluations that demonstrate how we are “making a difference.” As an action-based arm of a national program, we have numerous examples of success that others value and want to emulate. Each Sea Grant Extension program has examples that show how we aid the lives of individuals, reduce negative environmental impacts, reduce business costs, and increase the sustainability of the marine and aquatic resources. But how do we insure that others get this information. Evaluation is the name of the game!

In the past, evaluation was a “seat of the pants” exercise. Today, Sea Grant Extension professionals have many resources to aid them in the process of evaluation. A growing field of research is now available that wrestles with the topic of extension program evaluation. On every university campus there are individuals well-versed in evaluation theory and methodology that Sea Grant Extension professionals can utilize. We are no longer operating in a vacuum in the planning, delivery and evaluation of our programs.

### **A Case for Evaluation**

In conducting evaluations, we need to define what it is since program evaluation means different things to different people. To some, it means determining if the program’s goals and objectives are achieved. To others, it means judging the overall worth and value of the program. Still others view evaluation as providing information to funding agency staff, elected officials and key stakeholders so they can make important decisions about SGE’s present and future status. Others take a more blasé attitude of evaluation shaped by a belief that “it really does not make any difference” since important program decisions are usually not based on the results of the evaluation, but are based on other considerations such as political expediency.

In some way, all of these responses are correct. Morris and Fitz-Gibbon (1978) define a number of successful stages of formal extension program evaluation. These include 1) needs assessment, 2) program planning, 3) formative evaluation, and 4) summative evaluation. Every SGE program follows these basic stages of evaluation in some form.

As stated in Chapter 3, planning and evaluation go hand-in-hand. Planning not only determines what we should be doing, but also helps in identifying what evaluation steps are needed and when to apply them. Evaluation in a good SGE program takes place throughout all planned activities. In fact needs assessment (or pre-activity evaluation) takes place long before the program begins. It also is one of the primary techniques used to determine our program efforts. After stakeholder or resource needs are determined, the SGE activity is planned, organized and delivered to the respective stakeholder group. “Formative evaluation” takes place during the activity and measures immediate impact. “Summative evaluation” takes place after the program is finished and measures the total impact and overall value of the extension education program. The main question in the summative evaluation is what logic and facts were utilized to determine if, and to what extent, there is a connection between the educational program and action taken by the recipient of that program. For example, were there economic changes, increases in knowledge, or changes in personal or organizational practices?

What is important is that SGE professionals should consider evaluation a continuous process of inquiry. It is a process of constantly asking questions about what they are doing, what impacts and benefits are occurring, and what are the social, economic and environmental conditions and circumstances within which the SGE program is being developed. With these questions in mind, SGE professionals can better assess the needs, goals and objectives that they are attempting to achieve. SGE staff can also ask questions about whether or not the program is reaching the intended stakeholder groups. Finally, SGE professionals can also ask questions about whether or not the program is producing desired results (Douglah 1998).

### **Demonstrating Impact**

Because of the Government Performance and Results Act (GPRA) and other accountability initiatives, federal and state agencies are increasingly being asked to quantify the results of their efforts with economic impacts. Decision-makers are increasingly evaluating programs by linking future budget allocations to program accomplishments and a return on the public investment (Boyle 1997).

The dilemma in SGE program evaluation is that this emphasis on return on public investment may not fully show the impact of our programs. There are also non-economic benefits that SGE programs deliver. SGE programs may change peoples’ lives, their attitude or behavior. SGE programs may also benefit society in other ways, such as reducing pollution, creating better community leaders or developing more sustainable coastal communities (Diem 1997). Thus, increases in knowledge, along with changes in personal and organizational behavior may or may not have an economic impact; they are also difficult to quantify.

Additionally, decisions made by SGE stakeholders not to do something that may have large economic consequences are often not factored into determinations of “success.” For example, saving marine businesses dollars because a poor investment was NOT made based on information gained at a SGE meeting is hard to quantify. Similarly, the saving

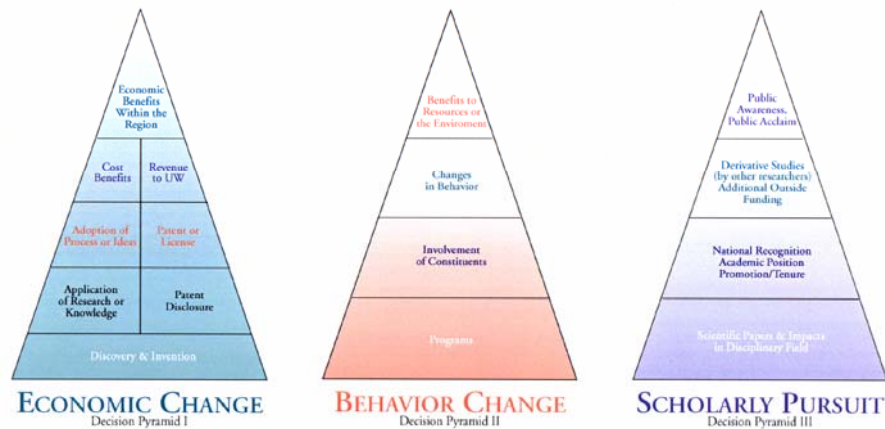
of a life or vessel because a boater knew what to do in a hazardous situation as a result of information gained at a SGE fishing vessel safety program is hard to quantify in economic terms. Likewise, providing training to coastal planners on alternatives in coastal shoreline mitigation that they incorporate into local planning ordinances that preserve and enhance shorelines, and at the same time, decrease erosion and reduce other coastal hazards, is difficult to quantify in economic terms. Each SGE program leader can provide examples of successful programs where impacts may be difficult to measure in economic terms, but are extremely important to their program, as well as to their stakeholders.

Similarly, we should not be hung up on the initial number of stakeholders that we serve. The adage of quality over quantity is applicable here. Sea Grant Extension professionals often use the adoption-diffusion model in their work. In this model, we work with key leaders and innovators who are respected by their peers. By having these individuals learn and adopt new skills and knowledge and then apply them in their home and workplace, the new skills and knowledge are gradually diffused throughout the stakeholder groups that we have targeted (Rogers 1983).

In addition to impacts of economic change or behavior change, SGE programs or activities may have scholarly impacts and benefits. Increasingly, SGE staff conduct applied field projects that may contribute to the research literature. SGE staff, as members of universities, have the opportunity to present papers at professional meetings, as well as publish results of their research and extension activities in peer-reviewed journals. Although not a major thrust of SGE staff activities, scholarly pursuit is another “indicator of success” that is often overlooked in the evaluation of SGE program activities.

In 1999, the Washington Sea Grant Program developed a conceptual “Decision Pyramids” model to monitor impacts in the three areas of Economic Change, Behavior Change and

## WASHINGTON SEA GRANT PROGRAM DECISION PYRAMIDS



Scholarly Pursuit. Similar to the Bennett Hierarchy of Effectiveness that is explained in Chapter 3, activities should show progress over time toward higher levels of impact on at least one of these pyramids. Progress by Sea Grant professionals in more than one pyramid are preferred (Washington Sea Grant Program 1999).

## **Evaluation That Serves Many Masters**

In addition to the emphasis on economic indicators in evaluating SGE programs, there is increased emphasis being placed on SGE programs to be evaluated against national objectives. In 1998, the National Sea Grant Office (NSGO) instituted a quadrennial assessment of the 29 programs, the Program Assessment Team (PAT) process. The purpose of the PAT is to evaluate success, in order to make merit-based allocations to the core program. In other words, SGE programs that rate more highly are most likely to get the best budget increases in years when NSGO has available funds. In the PAT, an additional criterion of meeting national goals as well as a “return on the public investment” has been added that are also tied to SGE funding.

Although a majority of SGE funds do come from NOAA, increasingly SGE programs are augmenting their budgets from other federal, regional, state and local sources. As a result, our programs may also reflect regional, state and local needs that may or may not be in national strategic plans. Hence, we may have another dilemma of not only having to show how we meet national goals, but also how we are meeting the expressed needs of the stakeholders that we serve as well as those that are providing us funds!

What is important is that SGE programs should all have strategic plans that reflect the needs of the people and resources with which they work. SGE programs and activities should then be measured and evaluated against what has been proposed in the strategic plans to determine impacts, benefits, and successes.

## **Evaluation Mechanics**

Although there are many questions about the mechanics of program evaluation, the process can be condensed into six basic questions:

**WHO** should evaluate the program? Anyone who wants to know the strengths, weaknesses, successes and failures of the program may be involved in evaluation.

**WHAT** is program evaluation? Evaluation is a planned process that determines whether or not a program or activity has accomplished what had been hoped for or intended. It also reviews what things were done to achieve the goals and objectives. It also looks at what did not work, or what could be improved for future programs and activities.

**WHEN** should you conduct a program evaluation? Program evaluations should be a natural part of doing business in SGE activities. Informally, Sea Grant Extension professionals are continuously making gut-level decisions about the value of their program activities. These decisions are likely the outcome of informal evaluations through personal observation and communications with their stakeholders. However, administrators and funders generally expect more formal program evaluations because they are generally assumed to be more accurate and objective. They rely on standards, goals and objectives, data collection and analysis in order to determine the value of the SGE program effort. This follows the standard planning process outlined in Chapter 3.

There are some caveats in conducting formal evaluations. For example, it may not be appropriate to expend time and energy in evaluations if no one is going to use the information to improve or make decisions about the program. Secondly, if the program is a “one-shot activity” you do not have to worry about collecting information about changing the program. Thirdly, if you have limited time, money or resources to conduct the evaluation, make sure you choose tools and techniques that fit your resources. Lastly, if there are no clear goals and objectives for the program, it is hard to measure the “effectiveness” of a program if you can not agree on what effectiveness means. Clear goals and objectives of a program become the criteria on which success is determined.

WHERE should you evaluate a program? This does not refer to location, but where in the program’s life should you evaluate? Program evaluation should take place during all phases of the program.

WHY evaluate a program? The bottom line of evaluation is to show that you are “making a difference” in your program or activity that provides a positive impact or benefit to your stakeholders.

HOW do you evaluate a program? There are many methods and techniques available to evaluate SGE programs. They may involve social science research methodologies (surveys, case studies). Others may focus on collecting quantitative (numeric) data; others may focus on collecting qualitative (narrative) data. Additionally, the process may be a very formal, statistically-oriented process, or an informal anecdotal process. There is no one approach or technique in SGE program evaluation. It depends on the audience, program being conducted, as well as the resources that are available to conduct the evaluation.

### **Approaches to Evaluation**

Program evaluation is both an art and a science. It involves taking evaluation theory and methodology and applying it to real-world, real-time situations. There is no single method, approach or evaluative instrument that can be taken off the shelf and utilized to measure SGE programs. It can be as simple or as complicated as you like. Likewise, it can be used for multiple purposes. It can provide information to design, implement, and improve a program. It can provide information that can increase funding, or determine that a program needs to be terminated. Evaluation can be used for accountability purposes – to justify the existence of a program. It can also be used to improve a program. Strengths can be emphasized, and weaknesses can be identified and improved.

Both economic and non-economic indicators should be used to determine if the program has met stakeholders needs. The effectiveness can be quantifiable measurements as well as qualitative measurements taken by unobtrusive methods.

SGE performance also needs to be based on both short-term and long-term benefits and impacts. A SGE program may not show results for several years. Research shows that it takes time for new information to be diffused throughout a resource user group. This

needs to be acknowledged in any evaluative process. Thus, short-term and long-term evaluation tools may be utilized.

SGE Program Leaders need to put more emphasis, thinking and funds for evaluation into SGE programs. We should also begin thinking about evaluation in the needs assessment and planning phases of our programs and not wait until after the program is finished. Evaluation is an activity that should be conducted throughout a project. SGE programs should also have clear ideas about what is to be accomplished in our programs, and what measuring indicators will be used to determine if we are successful.

## **Summary**

Evaluation of programs should be seen as an opportunity, not as a threat to SGE staff. Documenting the impact and benefits of SGE programs not only shows program success, but also individual success. Documentation of successful programs increases SGE staff feelings of accomplishment. Evaluation also provides information that can lead to greater professional competency by learning what worked and what did not work. In the end, both SGE programs and individuals benefit by the evaluation process.

## **References**

- Boyle, P. (1997). "What's the Impact?" *Epsilon Sigma Phi Newsletter*. No. 68:1-4. May/June, 1997.
- Diem, K. (1997). "Measuring the Impact of Educational Programs." Fact Sheet FS869. Rutgers University Extension, New Brunswick, NJ.
- Douglah, M. (1998) "Developing a Concept of Extension Program Evaluation." In *Evaluating Collaboratives: Reaching the Potential*. Taylor-Powell, Ellen; Rossing, Boyd, and Geran, Jean. (eds.). G3658-7. Madison, WI: University of Wisconsin-Extension.
- Morris, L. L., and Fitz-Gibbon, C.T. (1978). "Evaluators' Handbook." Sage Press, Beverly Hills, CA.
- Rogers, Everett M. (1983). "Diffusion of Innovations." Free Press, New York, NY.
- Washington Sea Grant Program (1999). "Strategic Plan, 1999-2006." Washington Sea Grant Program, Seattle, WA.
- Wilkins, Bruce T. (1980) "Views on Sea Grant Advisory Service Work." New York Sea Grant Extension Program, Ithaca, NY.





## Chapter 5

# Outreach Collaborations and Partnerships

*Who do we work with?*

**Robert H. Bacon**

It is difficult to imagine a successful Sea Grant Extension (SGE) professional who does not develop and conduct collaborative

programs with partners inside and outside the Sea Grant network. Collaborations with other Sea Grant professionals, particularly those involving Communications and Education, are a given in any well-integrated Sea Grant program. You will establish your own internal collaborations and they will not be dealt with here. External collaborations, those with outside partners, are especially beneficial when a problem is too large, complex or diverse to be addressed by SGE alone. Collaborators may also provide additional expertise to address problems as well as access to additional sources of funding.

## External Collaborations

SGE professionals, to one degree or another, have always collaborated with agencies and organizations outside the Sea Grant network. Today however, the need to collaborate in program development and delivery is becoming even more critical. The rapid growth of coastal populations has greatly expanded the potential audience for SGE outreach messages. As the audience expands, the ability to reach it with limited staff and financial resources diminishes. Effective collaborations, by capitalizing on the different strengths of the partners, create the opportunity to reach a wider audience, more credibly and with greater efficiency than do programs developed and conducted by any of the partners acting alone.

However, there are several issues that you will need to address in order to build successful program partnerships. The greatest of these involve the compatibility of goals, program coordination, taking or sharing credit, and, for SGE in particular, advocacy. When developing a collaborative project, early planning and organization will help you to overcome many potential obstacles.

## Selecting a Partner

SGE professionals can identify potential program collaborators in several ways, including via the SG strategic planning process, local SGE advisory committees, interagency meetings, conferences, and one-on-one interaction with citizens. Of course, potential collaborators may also approach SGE professionals. Almost any agency or organization may be a potential SGE collaborator, including other NOAA units, other Federal

agencies, agencies of local and state government, businesses and business organizations, private, non-profit organizations, and citizen groups.

SGE professionals who work with state and federal legislators form a special kind of collaboration. A program should have a plan and a process being mindful of rules and policies of the supporting university(ies) and/or the SG director. Following the appropriate process, being a team player and working with your director, contact with the legislature can be a powerful mechanism for affecting coastal decision through improved information. Legislative collaborations can present opportunities – particularly in a non-advocacy role.

### **Compatibility of Goals**

One mission of Sea Grant Extension is to further the wise use and conservation of coastal natural resources in ways that benefit current and future users of those resources. Almost any agency or organization can be an appropriate SGE program partner if there is sufficient compatibility among the missions and goals of the partners as they relate to the specific collaboration. For example, SGE program goals in water quality are highly compatible with those of most state’s environmental regulatory agency. There are many examples of SGE agents collaborating with state environmental agencies on non-point source water pollution educational and outreach programs.

### **The Product and the Process**

There are several roles SGE professionals can play both in solo outreach projects and in collaboration with others. These can be divided roughly into two categories “product” and “process” roles. The most common “product” roles are neutral information provider and direct technical assistance provider. The “process” roles of facilitator, information broker, convenor or catalyst are a little less straightforward. All outreach projects relate to creating opportunities for things to happen. SGE professionals often have a perspective that is broader than that of others with more highly focused goals, allowing extension staff to make connections between parties who may not be taking full advantage of the potential for mutually beneficial collaboration.

#### **Non-point Source Pollution Issues Surface at Sea Grant**

NEMO (Non-point Education for Municipal Officials) is an educational, nonregulatory project of the University of Connecticut’s Cooperative Extension and Connecticut Sea Grant programs. NEMO uses information and technology to educate local decision makers about the connection between land use and water quality. Funded by the USCDA/Water Quality Initiative and other federal and state agencies, the success of NEMO is exemplified by the emulation of the program in 30 states across the country, including many Sea Grant Extension programs. The result is a national NEMO network that promotes the NEMO educational model of partnership among water quality experts, agencies and local officials.

One such example is the important role South Carolina SGE played in the creation of the “South Carolina Hazard Mitigation Roundtable.” While S.C. Sea Grant and other agencies in the state had long been working to mitigate the impacts of flooding and other natural hazards that are typical along the southeast coast, there was little direct interaction among the various groups.

At a 1995 South Atlantic and Gulf Coast Coastal Hazard Mitigation Workshop, co-sponsored by NOAA and the Federal Emergency Management Agency (FEMA), representatives from SGE, the state’s coastal zone management agency; the state’s National Flood Insurance Program and the state’s emergency preparedness agency, began discussing ways to better share information and perhaps collaborate on programs. The SGE representative, having experience with another informal, statewide community development group, suggested creating a similar group for natural hazards to share program information and create collaborations.

The South Carolina Hazard Mitigation Roundtable began meeting every other month at rotating locations around the state. Participation was open to all interested parties and grew to include representatives from the state department of insurance, town managers, planners, property insurers, building and zoning officials, emergency managers and local floodplain managers. In 1996, the SC Association for Hazard Mitigation was formed as a product of the roundtable and in 1997 the association became the state’s chapter of the Association of State Flood Plain Managers. In the years since, the roundtable has continued to meet under the auspices of the Association and annual conferences have been held to educate the association’s members.

As was the case in the creation of the roundtable, there is always plenty of “credit” to share among all collaborators for successful programs. While getting the job done is the main goal, sharing program credit is important to document program success. However, focussing only on “getting credit” in collaborative program efforts can create a parochialism that works against accomplishment. It is important to remember that in a collaborative program that produces good outcomes there are always plenty of kudos to go around for all the collaborators. A program is strengthened when it can demonstrate that many have recognized a need for it, shared in its objectives and contributed to its successes.

### **Neutral Brokers of Information**

Maybe the trickiest and potentially most dangerous pitfall of outside collaboration in SGE outreach programs is that of advocacy. The SGE ideal of being a neutral source of science-based information is very difficult to achieve in actual practice. Working in close connection with a client group can easily lead to identification with that group’s point of view. It is a problem that has and always will exist in SGE.

Every SGE agent, specialist and leader has personal views about the issues we deal with in our jobs. It goes without saying that we should all strive to set these aside in the

conduct of our programs. SGE also has a bias, or institutional agenda. But as neutral providers of science-based information to decision-makers, we do not suggest what those decisions should be. We help them understand their choices and the implications of those choices. We do not take positions on issues of public debate. It is important for our collaborators to know this. It is equally important for us to be aware of their points of view agendas.

Arguably, the most important asset of SGE is its credibility as an objective source of scientific information. As Bruce Wilkins pointed out in his, *Views on Sea Grant Advisory Service Work* (1980), “[SGE] workers are frequently tempted to take on the role of advocate. Urging people to take a particular action or adopt a particular idea, although alluring, should generally be avoided in [SGE] work.”

There are at least four reasons why advocacy can be so seductive.

1. The advocate gains support. Taking a position naturally wins favor among those who agree with the position.
2. Advocacy is easy to do. Taking a position doesn't require all of the facts or even a full understanding of the situation.
3. Advocates may be seen to be more helpful. Answering the “should we?” question, helps the questioner carry the burden of the decision.
4. More can be achieved in a shorter time. Advocating a single solution rather than fully examining the advantages and disadvantages of several alternatives makes it possible to move toward a solution more quickly.

Although advocacy can be seductive, there are many reasons why SGE professionals avoid it at all costs.

1. Advocacy of one position alienates those on the other side(s). That in itself may not be bad (after all they may be wrong!), but we may lose our credibility with those clients who in good faith come to a different decision. There are few absolutes in much of science and none in matters of public policy.
2. We – SGE – don't know the proper decision. The improbability of knowing with certainty the value of change to any individual or group means that we can seldom say what decision is best for someone else.
3. Research is not needed for advocacy. This is of course the flip side of advocacy is easy to do. Exhortation, misinterpretation and misrepresentation are all techniques frequently used in strong advocacy situations. Indeed, science-based information can often be an impediment to an emotional advocates role.
4. We lose objectivity. Rejecting research findings that conflict with a given position, and even distorting research to generate desired results, have historically been problematic for groups or individuals who are advocates.
5. We are blamed for failure. If an idea that we advocate is adopted and fails, we receive, and deserve, the blame for its failure.

Effective SGE professionals avoid that trap of advocacy by striving to provide the best information available while recognizing that the decision is one the persons who will benefit, or lose, must make.

### **What Can Happen**

The following real example illustrates problems that can arise when SGE professionals assume a role of advocacy, or in this case are perceived as advocates. In the late 1970s, a new Sea Grant extension program was established in an East Coast state. The program had recently employed a fisheries extension agent and SGE program leader, who had begun discussions about educational programming with leaders of a commercial fishing association. Only about one week into the job, the association president requested that Sea Grant help with a meeting they were planning to discuss the future of fisheries management in the state. Wanting the Association's support, the agent quickly agreed to assist with the meeting, be listed as a co-sponsor, place posters about the meeting at fish houses around the state and offered the local county extension office as the location for the meeting. The meeting was subsequently held and more than 100 fishermen and the television media attended. As it turned out, the fishermen used the meeting to berate the state fisheries management agency and a new fisheries management structure that had been developed by the state over several years. The press was very detrimental to the state and by the next morning the Governor's office and state fisheries director were angrily calling the Sea Grant office. Some years later, the SGEP leader found out that there was a meeting in the Governor's office that very day to discuss what the state could do to eliminate the SGEP. What went wrong?

With almost all public issues there are different perspectives from a variety of constituents. In this case, the fishermen's association had legitimate concerns about the impending legislation and their concerns deserved a public forum. However, Sea Grant made several major mistakes. The most important was the meeting was not balanced among differing points of view. The state fisheries agency (and other fisheries groups that supported the legislation) should have had equal time on the program to express their views. By listing Sea Grant as a co-sponsor on the meeting flyer, it was perceived that Sea Grant (and the university) tacitly endorsed the association's opinion. In addition, as a meeting co-sponsor, it was Sea Grant's responsibility to make sure that the planning for the meeting was properly balanced. The bottom line was that Sea Grant did receive kudos from the association, but it quickly made enemies from the other parties who also had legitimate opinions on the issue.

As in the example above, extension professionals can find themselves in a conflict, or wishing they could help ameliorate its effects. Conflict resolution skills may prove valuable for program leadership in these instances and effective training in technique may be an aid to addressing the needs of stakeholders.

## Cooperative Extension

As mentioned in Chapter 2, Sea Grant is based-on the Land Grant model of the Cooperative Extension System (CES). Approximately two-thirds of SGE programs are formally affiliated with the Cooperative Extension programs in their state. Whether your program has this formal affiliation or not, it makes a lot of sense for SGE professionals to collaborate with Cooperative Extension.

That collaboration can take many forms, including:

- In-service training on coastal water quality, aquaculture, etc.
- Information packets in CES county files, e.g. zebra mussel information and identification folder
- Joint water quality programs that serve communities on both marine and freshwater issues

## Other Examples of SGE Collaborations

### Aquaculture Permitting

An SGE aquaculture specialist, working closely with her state's environmental regulatory agency and the aquaculture industry, played a leading role in the development of a regulation which created a general National Pollution Discharge Elimination System (NPDES) aquaculture permit in the state. Creating a permit specific to aquaculture discharges streamlined the permit application process and reduced permitting costs dramatically. The effect of the regulation was to create a more favorable climate for aquaculture as well as help protect the health of the state's natural resources. Under the streamlined system, the permit cost was substantially reduced from almost \$2,000 per discharge to just \$300.

### African-American Heritage Map / Guide

A SGE coastal recreation and tourism specialist was advised by a representative of the state's Heritage Corridor program in the coastal region that the state's African-American Heritage Council (AAHC) was seeking collaborators in a project to develop and publish an African-American Heritage Guide for several coastal counties. Its purpose was to help residents of the state and tourists learn more about the area's African-American heritage and to promote community economic development in rural areas and small communities through tourism. The idea for the project had been around for some time, but it was the collaboration that finally got the project off the ground.

With each partner making significant contributions, SGE collaborated with the AAHC and the Heritage Corridor to produce and distribute the map/guide. The AAHC representative worked with people from the communities to identify points of interest and businesses to include in the guide, wrote descriptions of them, while representatives of

the Heritage Corridor project and SGE edited them. The team recruited a history professor from the state's predominately black African-American Land Grant institution to help verify the facts in the guide. The SGE specialist applied for development funds from his Sea Grant program for the design and printing of the map/guide. The Heritage Corridor project representative took the lead in distributing over 40,000 of the guides to the state's welcome centers along the interstate highways, local chambers of commerce, county parks and local businesses. Each of the collaborators was credited with printed logos on the guide.

Publication of the guide received attention on several local television broadcasts in the region. Two of the state's major newspapers ran articles on the map/guide. One of them editorialized about the need being filled by the guide to educate citizens about this often overlooked aspect of the state's history. Similar map/guides were soon developed for other regions within the state's heritage corridor.

### **Marine Ecological Reserve Working Group**

One of the issues facing the National Marine Sanctuary Program as a whole and more specifically the Channel Islands National Marine Sanctuary Program (CINMSP) is the realization that the level of sanctuary restrictions may not be appropriate for the Sanctuary's goal of resource sustainability. Currently, the CINMS imposes no fishing restrictions on either recreational or commercial fishermen. Recent allegations of fisheries declines have prompted a review of the status of the resources, as well as consideration of fishing restrictions through the use of marine reserves (no-take areas) in conjunction with the California Department of Fish and Game. A California Sea Grant marine advisor serves on the CNIMSP "Marine Ecological Reserve Working Group," made up of commercial and recreational fishermen, kelp harvesters, tourist industry representatives, fishery managers and non-government agency representatives to provide research-based information that addresses reserve design criteria and the status of existing Channel Islands reserves and their levels of restriction. In addition, to facilitate communication and decrease the chance of duplication or contradiction in efforts among interested parties working statewide, the advisor initiated an e-mail listserv known as the California Marine Protected Area Network (CMPAN) as a forum for discussions about reserves.

### **Summary**

Collaboration has always been an integral part of any successful SGE program. As coastal populations have increased, so has the number of agencies that deal with coastal issues, making effective collaboration even more critical. There are obstacles to effective collaboration that must be overcome in order to build successful program partnerships, the greatest being the compatibility of goals, program coordination, credit sharing and advocacy. When effective, the benefits of collaboration greatly outweigh the inconveniences or extra effort that might be required at the outset. There are numerous opportunities for collaboration with a wide variety of organizations or agencies, and SGE professionals can participate in both product- and process-driven roles.



## Chapter 6

# Sea Grant Extension and Research

## *Where do we get our information?*

Judy Lemus and Judy Pederson



Sea Grant Extension program professionals interpret scientific knowledge for policy-makers, managers, the media and the public. Within this role, it becomes our responsibility to distinguish scientific and technical facts from interpretations of a biased constituency. In this day of instant media accessibility it is important to review the types of data available and the reliability of the information being conveyed.

### **Sources of Information**

Scientists refer to “primary sources” as papers published in peer-reviewed journals. These papers are considered to be good quality scientific data as two or more peers have reviewed each paper. Reviewers comment on the sampling design used, the quality of the data, the validity of the analyses, and the interpretation of the data by the researchers. Often scientists are asked to conduct additional experiments, add controls or recalculate the data before papers are published. Although not perfect-- and there may still be some uncertainty with scientific information--this process is thorough and is accepted practice for assuming the data are of high quality.

Other sources of original data that you may come upon are reports from government, consulting companies or other agencies that are often referred to as “gray literature.” These studies may be based on specific questions, although many states, agencies, and organizations publish monitoring reports. These reports may be peer-reviewed, but because the source is a government or private/public agency, there is concern that politics or internal agendas could influence the scientific conclusions. Also, government reports are often written about controversial topics that can cloud the perception of credibility for many of us. However, even though the issue may be controversial, the data may very well be good and useful as most government scientists are well trained and produce quality research.



How do you distinguish the quality of the gray literature report? In general, federal government research laboratories produce peer-reviewed reports that are reliable and that follow good scientific protocols. At the state level, these gray literature reports are less reliable and thus, each Sea Grant Extension professional should determine the extent to which data are collected by qualified scientists and technicians and reports are reviewed by outside reviewers. The reliability of reports from consulting companies also varies widely. By discussing the information with the primary author and asking questions about how data were collected, who reviewed the information and whether the report was “sanitized” by higher level administrators or the project proponent, you may gain information regarding the quality of the information. Proceedings from conferences are often not peer-reviewed and therefore, are less reliable than published papers.

Many states have encouraged citizen monitoring associations to collect water quality and other types of environmental data. Often these reports are published and, with the advent of desktop publishing and computer-generated maps, can have a professional look. While useful long-term records, many scientists question the reliability of these data because volunteer training and oversight of sampling methods are often minimal.

You should interpret these reports cautiously and have them confirmed by other reliable sources. On the other hand, there are exceptions, and citizen monitoring programs that utilize training programs, field supervision and academic laboratories for analyzing nutrients, may obtain quality data.

Secondary sources are those where original data are interpreted by others. Again, the range of acceptability and reliability is broad. Reviews written by scientists are usually peer-reviewed before publication. Newspaper articles vary – with a rule of thumb being that more careful writers are found in newspapers with greater circulation than others. These writers often attend the annual science writers conference and will present differing points of views on the issue. Scientific articles, such as those published by Audubon, Sierra Club, World Wildlife Foundation, World Watch Institute and others, often reflect the bias of the organization. Their articles should be read with the potential bias of the publisher in mind and not treated as primary sources of information.

What about the Internet as a source of information? More and more, scientists, the public and students are using the Internet to obtain information about fisheries, marine bioinvasions, biotechnology, pollution, eutrophication, toxic effects, endocrine disrupters, and so on. Unfortunately, there is very little oversight on what is on the Internet. We can't be sure what is fact and what is fiction. We can access an individual's home page, government reports, peer-reviewed journal articles, newspaper articles and press releases from everyone that informs us on virtually (no pun intended) every topic conceivable. The same standards that we apply to other forms of information apply here as well. If the work is peer reviewed, if good scientific practices are followed, then we have more confidence in the report and conclusions than if we have little insight into where the information originated.

Another challenging area is the information that stakeholders or others outside academic science have on topics of interest to Sea Grant constituents. Much of the information that has practical value to our stakeholders may not come from academic research, but rather may include anecdotal evidence, life experiences and practical knowledge. Sometimes information from different sources, including academic research, may not be in agreement with each other. Your aim should be to provide the *best* information from all sources.

## Evaluating the Information

We believe that Sea Grant Programs should seek to be neutral brokers in providing scientific and technical information. As such, we as Sea Grant professionals need to maintain a high standard in delivering information to our constituents. Most of us write articles for the lay public, provide written materials for our newsletters and publications, have a home page and provide information for our respective web sites. We may even be interviewed on the radio or television. How can we be the neutral brokers of information when the sources are so varied in quality?

To help us evaluate reliability, we can ask several questions about the information that we may share with our audiences:

- What is the source of the facts?
- Were scientific methods used to generate the data?
- How reliable are the data?
- Were there adequate controls, numbers of samples, good sampling designs?
- How were conclusions reached?
- Is there a built-in bias in the interpretations?

These questions can apply to articles in the media, scientific journals, progress reports, and gray literature. Our challenge is to accurately report the findings and provide alternative interpretations as appropriate to ensure that all sides are heard. This helps us develop a reputation for being reliable in our reporting.

Here are some red flags that suggest care should be used in reporting results:

### A Lesson in Decision Making

Academic scientists, agency scientists, engineers and decision makers convened at a workshop to discuss the adequacy of the biological testing protocols currently used in managing dredged material disposal in a coastal community. At workshop's end, the participants were asked act like managers and decide about the quality of dredged materials based on actual values from a recent dredging project. After a group discussion, each person was asked to make a decision about the level of sediment contamination – whether it was unsuitable for open ocean disposal or would require special handling and therefore add significantly to the cost. Participants were not given the option of saying more data were needed. Without exception, all academic scientists refused to make a decision. But agency scientists were more likely to evaluate the sediments as “clean” or “dirty” and all managers made a judgement about sediment quality. This scenario could have just as easily taken place in any regulatory board meeting. The lesson: different professionals will have different approaches to data and information.

- NEVER believe statements that are made in absolutes. (Well, almost never believe statements that are made in absolutes.)
- Look for adequate controls and numbers of samples in data.
- Remember the adage “Statistics, statistics, and more darn lies.” Learn how to interpret statistical analyses.
- Relationships between two events do not mean they are cause and effect.

## **Working with Researchers and Sea Grant Scholars**

Working with researchers and scientific scholars is an integral part of Sea Grant extension work. Without research, there is little need for extension. And from a Sea Grant perspective, there is little need for research without extension. Indeed, many extension professionals are researchers themselves. Either way, to be effective, you must be acquainted with current research and research-in-progress to communicate accurate and useful information to a target audience. A familiarity with research also arms you with certain appraisal skills necessary for discriminating between fact and folklore (Dow, 1969).

While reading research articles and reports is necessary and advisable, the best source of information about current research projects, practices and trends is often “straight from the horse’s mouth.” Researchers are motivated to do good science and are therefore generally cooperative about sharing information with those who are interested and will make use of their knowledge and expertise. When you speak one-on-one with a scientist, you gain a better sense of how confident he or she is in the data, how it might best be used by a particular audience, and its historical and scientific context. Often the research that you use for extension information will be a Sea Grant-funded project in which the researchers involved will probably be very approachable and open to discussion. It may even be possible to visit a researcher’s laboratory or field site to learn more about the techniques and protocols they use. Likewise, graduate students, who often perform much (if not all) of the actual research and data collection for a project should not be overlooked as a valuable resource for first-hand information. Graduate student presentations and symposia are excellent forums for keeping abreast of research.

Information that you can use immediately with your target audience is the most satisfying to both you and your audience. This is likely information that has come from research initiated and designed to address a specific practical problem in some arena of the coastal community. Research generated from this sort of directed approach, often called “applied” research, is a vital element because it’s responsive to the local communities’ needs. However, even applied research may not yield immediate results. Likewise, “basic” research can (and does) yield information that is valuable to a particular audience, although perhaps over a more protracted time scale. One dilemma that may arise is the question of “is it done yet?” (Or, “how much is enough?”). As a group, scientists tend to focus on long-term issues and are reluctant to make decisions in the face of uncertainty. In such cases where decisions are required (as often occurs in resource management issues) but data are either incomplete or unresolved, it becomes the task of the SGE

agent, in cooperation with the researcher(s), to determine whether the information carries enough merit for extension or transfer into the community. Maintaining an open line of communication with scientists throughout the research process will help you address this question, should it become an issue.

## **Integration of Extension into Research Proposals**

The mission of Sea Grant is to apply university-based research and technologies to issues relating to the responsible use of marine resources. In this role, extension professionals serve as the messengers. Our job is to make sure that information generated within the research community makes its way into the hands of those who need it. From this perspective then, an ideal research proposal would incorporate a well-defined extension plan. In fact, other granting agencies outside of Sea Grant, at both the local and national levels, have lately begun to recognize the need for consolidated research/outreach proposals.

While this premise sounds fairly simple to apply, it is not always put into practice. Research proposals are reviewed primarily on the quality of their research, and rightly so for the obvious reason that poor research is of little use to anyone. But by the same token, a good research project can only be strengthened by a well-developed outreach plan (Besides, it's our mandate!). As the liaison between research and the community, it falls to extension professionals to foster that alliance. As discussed earlier, a good working knowledge of both research and community needs will go far in this regard. In bringing the needs of the community to scientists, whether through informal communication or an RFP, try to discuss potential outreach activities with prospective researchers as early as possible. Not only do scientists want their research to be "useful," but as recognized experts in their field, they may rightly *expect* to be consulted. It's likely that your interest will be appreciated.

Sea Grant Extension professionals may also be involved in the proposal review process. Specialists and leaders, in particular, are often asked to provide feedback on pre-proposals regarding relevance, appropriateness, and prospects for outreach. This initial screening affords another opportunity to familiarize yourself with upcoming research projects and initiate working relationships with scientists working in areas applicable to your stakeholders.

In many programs, senior level extension professionals may be required (or desire) to develop their own applied research proposals. In this scenario, the extension researcher is closely involved with a particular issue and the research is generally directed toward addressing a specific problem or need within an industry or audience group, affording a high probability of direct benefits to the community. However, the SGE researcher should take care to assess his or her own data and methods as critically and carefully as any other research project. Peer reviews by both researchers and other SGE professionals are advisable for maintaining objectivity and credibility.

## Research-Extension Interactions with State and Other Agencies

Obtaining data from researchers and extending it to a particular audience is only one direction in the exchange that occurs between research and extension. Another is the communication of information from extension staff to researchers regarding problems or issues that have been identified by industry and agencies. A third dimension to this exchange is providing a feedback loop from users back to researchers regarding the efficacy of applied technologies and information, as well as the shortfalls and remaining needs. A complete extension program should take into account the “full circle” of information transfer.

Because each Sea Grant Program is supported, often substantially, by state dollars, this will include information regarding research priorities from resource agencies at the state level. Likewise, part of your responsibility is to help inform state and local resource managers and policy makers of information and technologies that address relevant research needs or information gaps. You may find that your audience is not even aware of a need for this information and so you should be prepared to explain the relevance of the data or technology. This flow of information from Sea Grant to State can then help resource managers make better-informed decisions regarding regional or statewide research agendas, thus completing the cycle of information transfer. It should be noted, however, that advocating the use of certain information in decision-making is very different from advocating a position regarding what action should ultimately be taken.

### Summary

The Sea Grant model is built on the extension of research information and technology to users of the coastal environment. Maintaining a close relationship with research scientists, as well as other expert sources, is paramount to a successful extension program. Extension professionals serve as the information liaisons between researchers and stakeholders, and should foster bi-directional communication with both groups. To maximize the impact of extension programs, actions and products must be based on quality cutting edge science. Stakeholder needs can be incorporated into research by:

- Identifying future relevant research needed and working these needs into the program’s regular RFPs.
- Working with your supervisors and other Sea Grant professionals to develop future research and outreach needs at the national level.
- Working independently and with other researchers to conduct applied research needed by developing proposals together and responding to RFPs.
- Working with appropriate agencies and groups to work toward policy modification.
- Developing tools or products needed by stakeholders to overcome barriers.

### Reference

Dow, Robert L. *The Role of Research in Fisheries Extension*. Atlantic States Marine Fisheries Commission, 28<sup>th</sup> Annual Meeting. New York City, Oct. 27-29, 1969.

## Chapter 7

# Regional and National Networks

### *How do we work together?*

Mike Liffmann

"...(Sea Grant's) marine extension network is an army of colleagues."

- Director William Q. Wick,  
Oregon Sea Grant College  
Program, 1985

Sea Grant Extension consists of diverse and autonomous programs that are committed to inter-institutional cooperation. As we have evolved in an era characterized by fast-paced change and shrinking budgets, we've constantly looked for ways to advance together and share resources as a community or network of Sea Grant extension programs. Although diverse in geography and culture, organization and size, as well as funding and staff capabilities, SGE has been successful, in large part because we've actively practiced a model of collaborative problem solving that features non-stop building of linkages with others and among ourselves. After 30 years of service, we can point to this achievement as one that has given us a great reputation, made us strong, and for which we can be justifiably proud.

### Informal Links and Talent-Sharing



These linkages have given SGE a distinct advantage. We typically rely on informal networking arrangements, where individuals engage in one-on-one information exchanges after having read or heard about a colleague's expertise in a particular subject -or specific topic. Very often, these exchanges have led to expanded talent-sharing arrangements, where

SGE programs call on peers from other states to help address specific problems. Extension professionals have many backgrounds and skills in fields from aquaculture, beaches and biotechnology to weather, wildlife, and zebra mussels. An excellent source for identifying the expertise and resources available within SGE and the rest of the Sea Grant family is the National Sea Grant Media Relations Office's, *Sea Grant Guide to Coastal Science Experts*.

Interstate talent-sharing and other forms of networking have resulted in many benefits to Sea Grant as a whole. Talent sharing is an agreement among Sea Grant individuals to work together on specific projects. In most instances, the Sea Grant programs seek the talent and provide funds needed for an individuals' time and/or travel expenses. In so doing we manage to solve local problems by leveraging talent and resources while at the

same time sustaining working relationships and encouraging additional cooperative efforts with the rest of the Sea Grant family. Talent-sharing helps ensure that individual programs and regions can respond quickly, via networks, with the delivery of cost-effective extension services. Together, we have been able to move ideas into action and sustained collaboration. Networking on a larger scale has also helped connect many of our local stakeholders with those of other states, often blurring state lines and enabling SGE to more effectively address issues of regional and national significance.

There are benefits to the professional who is being shared—he or she gets training, as does the receiving program's professional. It builds cohesion in the programs and allows programs to hire more specialized professionals. However the downside is that if money becomes an issue, the extension professional's services could be the first to go.

There are many examples of talent-sharing arrangements. In the Great Lakes, it is common for one state to call on specialists from another to help organize and conduct educational programs. In the Pacific region, a ports' specialist was a national resource until his retirement in 1999, and as such, was frequently called on by his SGE colleagues to address port issues throughout the nation. Since the early 1990s, a small SGE cadre of coastal tourism and recreation specialists has networked to address topics related to sustainable development and information technology. SGE Great Lakes zebra mussel experts have conducted conferences and workshops for their colleagues and industry leaders in southern, eastern, western and even non Sea Grant Pacific states. Fisheries experts from SGE programs in the Pacific, Atlantic, and Gulf of Mexico regions have conducted research and conferred extensively to develop the necessary knowledge to help revitalize the nation's commercial fisheries. A Connecticut specialist has worked with peers and policy makers nationwide and provided them with information, technology, and techniques to educate municipal managers about how to protect and enhance water quality.

SGE's talent-sharing has not been limited to exchanges within the 30 programs. Over the years, quite a few individuals have taken advantage of opportunities to spend anywhere from six months to two years at the NSGO. The most common arrangement involves an interagency personnel agreement (IPA) between an individual's program and the National Office.

In addition to informal links and talent-sharing arrangements, some SGE programs provide sabbatical leave opportunities. Often titled, "visiting Sea Grant professorships," these arrangements can bring expertise from one region to another for applied projects and extension education of longer duration.

## **Formal Networks**

Along with the informal links and talent-sharing arrangements, SGE also has more formal regional and national networks. Our individual programs belong to one of five regional networks: Great Lakes, Northeast, Mid-Atlantic, Southeast, and Pacific. These

independent networks were first designed in the 1970's to respond to issues of regional concern, conduct educational programs, and offer training for SGE personnel. Originally these regions were eligible for regional funding from the NSGO, to develop and carry out regional activities, but this is not the case today.

Currently there is variability in the level of activity within the five Sea Grant regions. Some regions meet approximately every year to 18 months to carry out training for Sea Grant Extension specialists, develop regional plans of work, discuss current regional issues, and plan joint activities. Other regions have minimal formal regional activities and plan and carry out regional activities on an informal basis. Program leaders and specialists attending the network's two-biennial meetings—Sea Grant Week and the Assembly of SGE Program Leaders as described in Chapter 2, also discuss regional topics.

In recent years the NSGO, in recognition of regional programs, has set aside money for regional extension projects. One aspect of these projects is that several include the formulation of a transitional management or exit strategy. It is understood that NSGO funding to support these networks is finite and that shared management, involving government and private sector partners, is a very important element designed to ease the transition once project-funding ceases.

It is critical that the formal networks amass enough resources—human and financial to have an impact on an issue beyond what any informal or regional group could do. The members of national networks share responsibility for the success or failure of the network, and the level of commitment on the part of the member programs is relatively high.

Here are vignettes that describe several networking successes:

### **HACCP Seafood Educational Alliance**

Initiated in 1994 to support a national training and education effort that at first focused on Hazards Analysis Critical Control Points (HACCP), the Seafood HACCP Alliance for Training and Education is a collaborative effort between federal and state regulatory agencies— including the Food and Drug Administration, National Marine Fisheries Service, U.S. Department of Agriculture— as well as the Association of Food and Drug Officials, the Interstate Shellfish Sanitation Program, and two national industry trade associations— the National Fisheries Institute and the National Food Processors Association. The program is funded by the National Sea Grant Program and has also received financial support for the last year from Sea Grant, FDA and the Association of Food and Drug Officials.

Seven programs— Florida, California, Virginia, Oregon, Arkansas, Louisiana and North Carolina— provided the initial leadership for the Alliance, which later expanded to include significant roles for the programs in New York, Maryland, Delaware, Mississippi, and Rhode Island. By February 2000, over 10,000 individuals representing the domestic



seafood processing industry, government regulators, academia, consultants, and seafood exporting countries had completed one of the 403 HACCP training courses conducted in the U.S. and 770 individuals had completed one of the 30 courses conducted in other countries around the world.

Additional Seafood HACCP Alliance projects included developing a Compendium of Fish and Fishery Product Processes, Hazards and Controls. Developing an Encore Training Course and a Sanitation Control Procedures Training Course. Ken Gall is also coordinating a project to convert the first two days of the Alliance training courses to an Internet delivered program with Cornell's Food Industry Management Distance Education Program.

In 1998, HACCP was given the prestigious “National Performance Review Hammer Awards” by Vice-President Gore. The Hammer Award recognizes “partnerships that make a significant contribution in improving the way federal agencies accomplish their responsibilities.” The Seafood HACCP Alliance also received the USDA Secretary's Honor Award in June 1999.

## **MarinaNet**

The National Sea Grant Marina Network (MarinaNet) is another example of SGE's remarkable ability to work in concert to address specific outreach issues. Begun in 1995, MarinaNet expanded what had been an informal network into a formidable national network comprised of academia, the boating-trades industry, and regulatory agencies at state and national levels. For nearly 30 years, Sea Grant researchers and outreach staff had worked virtually one-on-one with marina organizations at the state level. MarinaNet enabled Sea Grant colleagues to jointly work on a number of small projects, all of which led to the formation of a meaningful national network dedicated to sharing information about the sector.

In 1997, MarinaNet designed an exit strategy that involved sharing production and management of three major MarinaNet products: a newsletter, an e-mail discussion group, and a research conference. The Marine Environmental Education Foundation, a national coalition of associations representing the boating trades and the marina industry recently established a MarinaNet Committee to head up these endeavors and continue working with their Sea Grant partners.

## **Sea Grant National Aquatic Species Clearinghouse and Nonindigenous Species Site**

Since August 1990, stakeholders interested in the introduction, spread, impacts, and control of nonindigenous and invasive aquatic nuisance species have relied on Sea Grant's "National Aquatic Nuisance Species Clearinghouse" for timely, reliable scientific information and fast, easy access to published research pertaining to such organisms. The Clearinghouse, located at State University of New York at Brockport, in NY, is home to North America's most extensive technical library of published research, "gray literature," and other relevant documentation pertaining to zebra mussels (*Dreissena* spp.). It is also the leader in information on more than 25 important freshwater and

marine invasive and nuisance species. The Clearinghouse serves as a link between the research community and a wide array of university, government agency, industrial, and special interest stakeholders. It plays a high-profile role as a primary nexus for identifying completed, current, and proposed aquatic nuisance, nonindigenous, and invasive species research activities and for linking researchers with similar interests.

All of the information in the Clearinghouse's 3,500 document library is accessible to any researcher, agency, industry, utility, student, or other individual or group having need of the information via electronic mail, fax, or toll-free telephone, written requests, or visits to the Clearinghouse. The searchable electronic database of its Technical Library Bibliography is available on the Clearinghouse web site receives several hundred "hits" per day, mostly from researchers and government agencies. The Clearinghouse has serviced more than 7,700 information requests from North America and foreign countries and has distributed more than 565,000 publications.

In September 1996, a national Sea Grant Zebra Mussel and Non-Indigenous Species World Wide Web site was opened to make the volume of Sea Grant research and outreach information readily available to industries, governments, and the public. This site was created by a team composed of Sea Grant personnel from four Great Lakes programs (Illinois-Indiana, Wisconsin, Michigan, Minnesota).

This national information source contains a comprehensive collection of research publications and education materials produced by seventeen Sea Grant programs across the country. Two unique features make SGNIS a credible and user-friendly source of information: all site information is peer-reviewed and is fully searchable by user category, product type, keyword, date of publication, title, author and/or organization of the author. This site, giving access to high quality Sea Grant research and outreach products related to nonindigenous species is available to scientists and clients around the world.

This site contains all National Sea Grant research and outreach products on all aquatic nonindigenous species, and in the future, products from other federal agencies and a section for K-12 will be added. Furthermore, the site exemplifies how information will be transferred in the future. Researchers and all end users not only can perform literature searches (such as possible on searchable library databases), but can also download entire documents or products on demand. Use of this information technology has expanded distribution of Sea Grant's products and has reduced printing and distribution costs. Over 1000 files are transferred on a daily basis, and during the month of February 1998 over 30,000 files were transferred to 37 countries. Due to the large amount of international use, a language translator has been added.

## **Summary**

Sea Grant Extension is a university-based network that has been firmly committed to inter-program cooperation since its inception. Our diverse programs are linked in many

ways. Most notably, our professionals have excelled at setting up small, informal networks that involve collaborating with peers from other programs to solve distinct problems. SGE programs are also linked through formal networks designed to address regional and national concerns.

Despite financial woes, SGE has grown and matured. As a national program, it has become a formidable resource to help meet our country's coastal environmental and economic needs. New extension professionals are encouraged to tap into SGE's creative collective experience so that they may continue to carry on the traditions of our meaningful work.

## Chapter 8

# The Impact of Technology on Programming

## *How Do We Stay Connected?*

Bruce DeYoung

The age of the digital economy is dawning and with it new mechanisms for Sea Grant to reach out to its stakeholders. While our work focuses on people, advances in technology make it possible to provide education more quickly and effectively than ever before.

The relationship of technology and university outreach typifies the adage, “the more the world changes, the more it remains the same.” While technology facilitating university outreach has changed over time, its role in outreach program delivery remains the same – vitally important!

Through the years, technology has helped Sea Grant staff stay connected with people and speed the delivery of critical information to them. Sea Grant uses various technologies to achieve educational impacts rather than make a fashion statement. Sea Grant’s outreach enabled by technology is best characterized as knowledge that can be applied, multiplied and trusted by stakeholder groups for its accuracy and timeliness!

### **Continuous Access to Information**

The rate of adoption of digital technology by U.S. citizens is proceeding at a brisk pace. Although, radio existed for 38 years before gaining 50 million users and television took 13 years before reaching that threshold, it took just four years for the Internet to attract 50 million users in the United States.

Internet users now exceed 100 million adults in the United States, about half of the nation's adult population. By the year 2005, this participant level is expected to double. In a recent industry study, two-thirds of youth and adults said that if they were stranded on a deserted island they would prefer Internet access to a television or phone. Also, 63 percent of the youth surveyed indicated they would rather surf the Web than watch television.

The digital technology revolution of the 21<sup>st</sup> century also promises to provide access to goods and services beyond the bounds of time and place. Knowledgeable business observers such as Peter Drucker anticipate that an e-commerce driven marketplace and economy will radically change the mental geography of capitalism. For coastal and marine entrepreneurs, this shift likely means neither their competition nor their markets will be just local.

Interestingly, this wave of change in information delivery technology is concurrent with a significant population influx into our nation’s coastal areas. Over 50 percent of Americans now live on the coast, with this population anticipated to swell to 127 million during the next decade. Powerful new information technologies offer the ability to

effectively reach this large and rapidly growing coastal population and pose interesting challenges for Sea Grant outreach.

### **Outreach Strategies for Digital Technology**

You can keep up with technological changes through in-service training opportunities offered by host universities or from Sea Grant and Cooperative Extension colleagues throughout the country. A source of this information is the peer-reviewed journal for outreach professionals, “The Journal of Extension,” also available online without subscription fee. New ideas on the application of technology in outreach can also be harvested from business, industry and governmental sources. It is important to be a self-activated learner, continually glean insights and educational experiences available from a diversity of organizations.

Beyond learning how to effectively use emerging digital technology in outreach programming, sensitivity is also needed in its judicious use. Many segments of our coastal audience do not yet have continuous Internet access to this new technology. Research indicates that less than 10 percent of coastal enterprises used information technology and e-commerce business methods in 2000. In light of this, use a range of media to ensure nobody is left out of the educational communication loop. Make it easy for the public to access your publications in either hardcopy or online versions. No matter how sophisticated information technology becomes, the personal touch is always appreciated!

It is also helpful to design your digital technology outreach projects to avoid stakeholders from becoming overly dependent upon your assistance. Teach your stakeholders how to use emerging technology effectively. As a related Chinese proverb observes, “Give a person a fish and a single meal is provided. But by teaching others how to fish, a lifetime of meals will result!”

These strategies may help you use digital technology in delivering educational programs and teaching others to use it:

**Technology Demonstrations** - People are sometimes reluctant to adopt a new technology for their own use without first trying it out. To accelerate the adoption of Low Power Radio (LPR) by coastal audiences, several Sea Grant programs are demonstrating this technology in collaboration with various types of organizations and enterprises. By circulating hardware among stakeholder groups at prearranged intervals, the “Johnny Appleseed” strategy for spreading technological innovations can accelerate adoption by public and private groups.

**Stakeholder Evaluation** -- Involve stakeholders in evaluating emerging technology. In New England, coastal LPR who submitted online evaluations to enter a drawing to win a Sea Grant discovery cruise on the Great Bay Estuary. This marketing approach boosted



evaluation participation while highlighting another Sea Grant educational offering.

**Facilitating Collaboration** – Coastal business and community leaders typically struggle alone with thorny problems and promising opportunities. With more stakeholders gaining e-mail capability, it is possible to connect peers through mechanisms

such as listserves and e-mail groups. Most universities or Internet Service Providers (ISPs) have the ability to create virtual communities of subscribers who use a single email address to communicate.

To avoid external "spamming" of such groups with unsolicited e-mail, it is useful for these groups to be "closed" (that is, available for use by subscribers only) to outside participation. While Sea Grant might organize, sponsor and administer an e-mail group, it is important to make clear that participants are able to speak their mind within specific bounds. This can be achieved by programming the host information server to include a brief "tag line" at the bottom of each message indicating: 1) Sea Grant's sponsorship of the e-mail group, 2) the e-mail group's purpose, 3) a disclaimer that opinions expressed through the group are not endorsed by Sea Grant, 4) how to unsubscribe from the e-mail group. By providing user information on the e-mail group, conflicting issues such as business advertising can be nipped in the bud.

**Transportable Libraries** – The rapid evolution of compact disk storage of voice, text, graphic, video and interactive data is opening new horizons for outreach enhanced by this digital technology. As CD-ROM gives way to DVD technology, it will be possible to make available full-length movies along with other information on a single disk. In using this technology as an educational delivery tool it is important to insure the information is equally accessible to Windows and Macintosh computers.

Sea Grant Extension staff use CD-ROM technology in a variety of imaginative ways. The boating safety display game "Dangerous Waters!" is a CD-ROM computer game that puts players at the virtual helm for a series of fast-paced recreational boating simulations presented with colorful video clips, splashy graphics, and amusing sound effects.

Another outreach application of this technology is to share lengthy curriculum materials with teachers interested in marine education. This saves postage costs, reduces storage space requirements and conserves trees through localized printing of just those pages needed. Likewise proceedings of conferences are now being archived on CD-ROM for later printing of desired papers by participants, as needed. Photo libraries are also being archived on CD-ROM disks for later use by Sea Grant staff in newsletters.

This digital technology holds much promise for a wide range of distance education applications by Sea Grant Extension. Soon entire workshops or short courses will be recorded onto a single disk for those not able to participate.

**World Wide Web** – The World Wide Web, with its intuitive point-and-click navigation, its ability to display pictures and sound as well as text, and the relative ease of setting up a Web server, has driven the explosion in public interest and use of the Internet. For instance, computer server statistics indicate that Oregon Sea Grant is receiving an average of 218 information requests a day - better than nine such requests per hour. Although the activity is low by comparison with many popular commercial sites, they assume significance when compared with similar requests received by telephone or mail. Nine such phone calls in a single hour would be considered unusual; 218 letters in a single day asking for Sea Grant publications or program information would be phenomenal.

Research indicates that some people skim what they find online, others read it from the computer screen and some print it. There are also some outreach stakeholders who indicate doing all three, so online materials need to be visually appealing and user-friendly both online and when printed!

**Distance Education** – Just as information technology and telecommunications are rapidly changing the global economy, so too they are increasing the need for life-long learning. Continuous education is needed by people to stay current – and to advance – in most fields. Information technology is at once the catalyst for great change and the tool by which we can respond to this outreach challenge.

Distance education is one response by university outreach programs to address this need. It is any type of learning situation in which the instructor and student are separated by distance or time. In some cases, distance education offerings yield formal credit but in many outreach applications it conveys knowledge for use in people's lives. For instance, Sea Grant outreach on the West Coast presented a national Web-based conference on harmful algal blooms for educators, media and business communities. Presentation papers were accessed online with interactive discussions taking place thereafter via e-mail.

Web-based meetings are also taking place between Sea Grant staff having similar professional interests and/or responsibilities. Because Web-based meetings can be archived by topic, it is possible for latecomers to find and review specific prior discussion strands. This review capability enables their meeting participation as informed discussants rather than their blindly rehashing topics or issues previously covered.

## Looking Toward the Future

Telecommunication networks in the United States will soon carry more electronic data than voice. With voice communications expected to comprise less than 2 percent of the traffic by 2005, this shift portends a future where telephones run on the Net rather than the Net running on telephone systems!

This shift may significantly reduce long-distance telecommunication costs, thereby encouraging greater use of digital information technology by business and society. Mobile phones, pagers, e-mail, global positioning satellites and other electronic devices yet to be invented will become ever commonplace in our daily lives. As the world becomes more connected than ever before and global marketplaces become the rule, what are the future implications for Sea Grant outreach?

The answer can be found within Sea Grant's core values. Sea Grant outreach was born with a mission of concern and spirit of service. Our delivery of educational programming can fulfill these mandates by using an appropriate blend of personalized communication patterns with emerging information technologies.

## Summary

As a Sea Grant professional you are in the best position to judge the program delivery tools and strategies needed to achieve the desired educational outcome. As part of the outreach process, it is important to not lose sight of stakeholders being individuals. The personal touch fosters people's trust and confidence in using the information being conveyed through various media.

### Sage Advice

The importance of artfully blending technology with the personal touch in Sea Grant outreach is reflected in the sage advice of a veteran Cooperative Extension educator:

"The Extension delivery method is simple - stay close to the people to learn what they need. If you don't know an answer, get it however you can – letter, telephone, library search or research study. Make the answer timely and as understandable as humanly possible. Provide all your information in a form people can use. If the public can't or won't come to receive it - deliver it. Above all, don't be afraid to try new programming methods in order to help people!"

- Trenholm Jordan,  
Cornell University (retired)  
Personal Communication, May  
1976



## Chapter 9

# Maximizing Our Efforts

### *How do we find the time?*

Bruce Wilkins and Marion Clarke



It's useful from time to time to reflect on the many elements of Sea Grant Extension--our philosophy, and our work. Our role is mostly about collaboration and how we link with others. It seemed saying a little more on how one can be most effective in such work might be useful, particularly for those for whom this is a rather new role. So, in this chapter, we try to share some observations and insights from a number of us who have found this work rewarding, though at times, trying. This is in the hope that you can avoid or be better prepared to deal with a variety of pressures most of us feel at some point--pressures having to do with use of time.

A common cry of extension professionals is, "I don't have enough time." In fact, we all have the same amount of time and have enough time to do virtually anything – not everything, but any single thing. So the primary problem is really failure to do the things we later identify as important. Our goal here is to point out some ways you might find that time is lost and to suggest means of recapturing some of that time. You may further benefit by reading and practicing many of the strategies prescribed in the voluminous literature on time management.

### **Time Lost – and Found Again**

#### **Interruptions**

Time management experts note interruptions, such as phone calls and drop-in visitors, comprise major time losses. But it is those very "interruptions" with person-to-person contacts that are essential to the success of your extension program. That doesn't mean that interruptions cannot be reduced, but their demise would signal a weak and ineffective program. How to reduce them? By using other modes of education to solve the more common causes of interruptions.

If numerous inquiries come in on repairing ice-damaged docks, for example, developing a news release or fact sheet on that topic can help reduce the time needed to respond to interruptions. You may want to consider asking your Communications team to help you find or develop the appropriate medium for your message. A fact sheet will permit others, such as an assistant, to handle routine requests, your time being freed for more specialized or detailed questions.

An impressive example of this approach was Rhode Island SGE's solution to the numerous requests received from elementary and high school students seeking information for their papers. "Please send me all the literature on sharks" (or whales or

tuna) typifies such requests. Development of a booklet, "How to Find Marine Information in Public and School Libraries," reduced the time needed to respond and lets virtually anyone in Rhode Island and other states help the student learn how to get such information. It also does a better job of educating students (rather than feeding them facts) than we might do by answering individual requests. Note in this case that the question asked was not answered.

### **Answering All Questions**

Many extension professionals seem to think they are responsible for providing the answer to any question asked of them. Yet it seems clear that we have neither the time nor the expertise to answer all questions. Indeed, we should avoid answering or finding answers to questions not central to our role. "What is the price of hamburger?" is clearly a question to which few Sea Grant extension professionals bring special expertise. Further, the answer is readily available from other sources (on the web, at the supermarket or in newspaper ads). Finally, it is not a coastal problem, and solving coastal problems was the major reason for the establishment of Sea Grant.

Supposing the caller, a commercial fisherman, wishes to know market prices for flounder. For you, an extension professional, a response, not an answer, may still be most appropriate. The question might reflect a problem needing Sea Grant attention, that is, fishermen not knowing how to gain current market prices. One solution would be for you to keep abreast of those prices, but other resources such as the web may also exist to meet this need. Responding with a web site or phone number and how to use it involves us in our educational mode. We help the person learn to solve the problem rather than solving it for him or her. Other approaches to solving the real problem reflected might be envisioned by creative extension staff. (In one case a daily newspaper was stimulated to carry such prices on a regular basis.) Such creativity is impaired if time is taken with providing bits of information, such as what today's price was.

Here's an additional concern. By answering that kind of question, you encourage repeated similar requests. Stakeholders may think, "If you gave me accurate information last time, I'll come back to you." That is one way by which we develop our audience's confidence in us, but we also need to be certain they see us as we wish to be seen, and usually that is as educators, not simply as a source of facts.

Perhaps most insidious is the concern that, in attempting to answer virtually all questions, we become very active and busy, and people are appreciative. But we are reacting, not initiating, and soon we will find no time to adequately plan and carry forth the educational programs we (and our advisory groups) see as important. Busyness is not a sign of effectiveness!

## **Doing It All Ourselves**

It is amazing how often extension staff carry out tasks that others could adequately do. The goal of SGE is to help others grow. Every time we do a task, keeping it to ourselves, we preclude others from growing.

A vivid and useful analogy compares a task or a problem similar to handling monkeys on your back. Skilled professionals ensure that the tasks (or monkeys) on their back are kept to a minimum not by avoiding them (then you're not needed), but by feeding the monkey (accomplishing the task) or giving it to another person competent to resolve the problem. Perhaps you have known two staff persons, each of whom gets the same number of requests, but at some point one has twenty "monkeys" needing feeding while the other has only one or two. The difference often is not the number of monkeys one has received, but the rapid rate at which one of the persons is getting rid of the monkeys. For example, some monkeys can be fed by responding at once to simple inquiries. But some other ways to get monkeys off your back include developing form letters or paragraphs for common inquiries, and checking off items done each day from a check list and reading only the material you need to know.

To continue the analogy, giving the monkey to someone else by sharing or delegating jobs is a skill most effective people have. Extension professionals often assume a task that others can capably perform. Dictate a draft a response, or ask colleagues to help carry out a portion of a task for which they may have special skills, or which requires a skill they may find useful in the future. It often takes effort to envision how a job can be broken into components that can be handled by others. It frequently takes even longer to help the person to do the job well the first time. However, the potential savings on your time over an extended period can be substantial.

## **Larger Tasks**

But what about larger tasks or assignments that we are asked to undertake? Agreement to assume those monkeys should fit within our previously planned priorities. Without clarity in priorities, it is not accurate to say, "I can't." It is important to determine how significant the task is, including its significance to others, such as those with leadership responsibility, before saying no! The task's importance in achieving organizational objectives may not be entirely clear at first and needs to be considered in your decision. By the same token, a leader requesting a staff member to assume a task has the responsibility of clarifying its importance to that person and of reaching a mutual understanding of what other tasks will not be done because of this new assignment.

## **Meetings**

Many identify meetings as a big time waster and they can be, so try to keep planned meetings to a minimum. But good meetings are one of the best ways to achieve certain goals, such as helping you become part of your team, ensuring major concerns are raised and answered at appropriate intervals, and helping clarify that you and your support staff have similar understandings on important points.

As one modest instance, ensure that others know what days or weeks you will be absent from your office. Clarifying schedules has been a common reason for meetings, but posting schedules on the web can speed many such meetings. Regularly scheduled meetings are more critical when staff must spend hours traveling to attend. So a corollary of holding few meetings is to make sure the ones you hold are really necessary and the best way to do a job.

Wisely using conference calls, e-mail, faxes, and web sites can help ensure that less personal time is involved in attending meetings. But meetings are still the best way to guarantee that all personnel receive the same message or gain buy-in to certain changes being considered. Just be sure you always ask yourself "Is there a cheaper, quicker or better way to achieve my goal than another a meeting?"

Often the best meetings result when the potential audience has helped to plan and execute the meeting. Be sure to include also some agenda items suggested by those not directly planning the meeting. Often those people have great ideas. And people knowing that your meetings will follow a planned schedule rather closely, by beginning and ending on time will also help things move along more quickly!

### **Relationships with Stakeholders**

Knowing your clientele means knowing the best way to communicate with them. By collaborating, you may be a catalyst that gets a program started. But once the ball is rolling, you may have to design an exit strategy that helps you to stay connected but not in a leadership role. From New York to Washington there are examples in which extension professionals worked with marine trades association to start a project, then phased out of it, helping to develop leadership among stakeholders.

### **Care and Feeding of Committees**

Most of us work with a number of committees who help us better advance our programs toward desired goals. Or again, as with meetings, committees can be a potential waste of time depending largely on your knack for working effectively with a group. Effectual advisory groups can help you plan programs that will better reach a targeted audience. Those individuals will often remain longer in the community than you do. If so, your work with such groups can help others learn to successfully employ group dynamics, a great benefit to your stakeholders for many years.

We suggest you consider some rotation of the terms of any such committee members and have a clear policy about the roles a committee is being asked to play. For example, are they advisors or decision makers? Stipulating the length of appointment as an advisor can be helpful and may become valuable if a need to shorten the length of an advisor's tenure becomes evident to most.

Choosing members for your committees is a key role in generating an effective one. You want people who will get things done and who are respected in their community. It is OK to ask busy people to serve, but be clear concerning the time commitment you are seeking from them. You may suggest members for the group, but consider having a

program leader or some one higher up name the members. That can give the appointment more prestige and doesn't put you in an awkward position if it is clear the committee would benefit from a more active member.

Keep in mind too the type of busy, effective person that will usually best serve your committee needs and expects to be actively involved in influencing the program. Think of ways they can help plan and implement meetings and use them to introduce guests at appropriate public meetings. You may need to coach some on how to introduce a speaker, but such work can be an important educational role for SGE leadership, and lots of fun as people gain expertise.

## **Plan Ahead**

As most organizations, Sea Grant Extension has deadlines, many of them known well in advance. Most of us prepare proposals with a given deadline or prepare an annual report due sometime after the end of the fiscal or program year. It is likely that you will need to provide information about your activities for these reports or for presentations made during scheduled program assessment and program review times.

Some programs request monthly accomplishment reports that can provide a foundation for the annual report. By keeping these reports up to date and organized in your computer you have the foundation for your annual report and can easily provide information from those on your accomplishments from these monthly reports. Even if your program does not require monthly reports, monthly summaries will be useful to you in compiling your accomplishments and activities for any request for your program activities. And our experience is those at higher echelons will be pleased you can provide that information!

Setting a personal deadline some weeks before the known or probable due date can ease time pressure. You don't need to await someone else's determination of a deadline to begin drafting the document. The draft can be written when most convenient over a several-month period rather than at the last moment. This reduces conflict with other high-priority tasks and, because of the added time available for reflecting and for gaining needed input, can enhance the end product. Having materials requested sent out in a timely fashion can reflect positively on your individual or program performance.

You've read in Chapter 8 Impact of "Technology on Programming" how to use new technologies effectively. But surface mail is still the most appropriate means of communicating event announcements, newsletters and other printed materials. There are also stakeholders who still cannot take advantage of electronic media. Mailing lists should be purged periodically to ensure that the materials sent by surface mail are needed and are proving valuable to the stakeholders receiving them. Work with your Communications staff to find the most efficient way of keeping your stakeholder mailing list an up-to-date database.

## Summary

Enabling others become able to do portions of our work, responding but not answering all questions, not assuming tasks others should do, doing tasks expeditiously, knowing our priorities and anticipating time demands are some of the means SGE extension workers can use to save time. These approaches can help others grow, better enable each of us to get the important work done, and reduce some of the pressures with which we work.

## Conclusion

In these pages we have talked about many tasks you and our co-workers find important, and even some possible ways to save time and effort while accomplishing those. The list may seem long – from a philosophy, to how SGE is structured, to planning, evaluation and how you might better collaborate with others. A link to research, regional networks and use of newer technologies is generally valued and, hopefully, is evident in your program efforts.

Sounds like a lot and it is. But likely you do some of the things we spoke about already and may have some ideas of how to do some even better. We hope so. Our intent in this publication has been to also suggest our work is important, is fun, and constantly involves us in learning and teaching.



As a final point, our work can be exciting, is important by contributing to many others. It also must hold some real pleasure for you and those you think of as family. We hope you are able to join others in our successes, commiserating about those things that don't work as well as we wish, and moving on to further Sea Grant Extension's contributions.