RELATING TO TRADITIONAL CES PROGRAM AREAS

A REVIEW OF ACCOMPLISHMENTS AND OPPORTUNITIES IN AGRICULTURE

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I welcome the opportunity to participate in this national workshop. From my own experiences we have enjoyed nearly a decade and a half of close working relationships and mutually beneficial program support. Ten years ago this month, I spoke at a Marine Workshop in Biloxi, Mississippi, and the title of the talk was "The Advantages of the Marine Program Within The Land Grant Universities." It appears that while much has transpired the past decade, some basic organizational issues have remained.

In preparation for this workshop, Marion Clarke conducted a survey of states and asked each state to identify agricultural efforts that have been significantly beneficial to Sea Grant Extension efforts. I would like to touch upon the complimentary accomplishments derived from the agricultural program and chat briefly on the opportunities.

1. CONNECTICUT—Norman Bender

Agriculture and Sea Grant agents are cooperating in disseminating research findings regarding potential users of brown seaweeds as mulch.

2. NEW HAMPSHIRE—Peter Horne

Annual "Natural Resources and Planning Lecture Series" jointly sponsored by two counties, and their respective focus on the consideration of natural resources including wetlands—an important part of the coastal marine environment.

3. NORTH CAROLINA—Bill Hoskins

A) Management of agricultural drainage in the estuarine areas:

B) Development of marsh and beach stabilization programs.

4. ALABAMA—Bill Hoskins

A recent publication on "Fish and Shellfish Handbook" was completed including one of the authors from agricultural extension.

5. ILLINOIS—INDIANA—Robert Espeseth

A) Workshops on aquaculture research and legislative strategy.

B) Assistance in drafting legislation for Illinois aquaculture
6. **OREGON—Howard Horton**

Recently conducted joint workshops on farm ponds and aquaculture with the agricultural agents. Worked with agriculture agents in designing programs to reduce river pollution from the residues of dairy farms.

7. **CALIFORNIA—Christopher Dewees**

Development of squid and herring processing methods. Education on water policy issues.

8. **MINNESOTA—Gail McClure**

Coastal erosion coordination: An effort has been made in the three Minnesota coastal counties with agricultural extension and the Sea Grant to assist local officials with coastal erosion problems. Extension and Sea Grant have gotten together all the agencies who have coastal erosion responsibilities with local county government officials. Local officials have made their needs known, and agencies are working together (for the first time) to resolve these needs.

9. **LOUISIANA—Lowell McCormick**

Crawfish farming—An expanding industry in Louisiana: In 1984 about 100,000 acres of managed ponds were devoted to crawfish production. Almost 1,200 individuals were involved, many of whom are small farmers and minorities. A multi-discipline educational program is conducted each year on improved production methods.

10. **VIRGINIA—E.N. Boyd**

A) Programs to market fresh seafood in midwest.

B) Series of training programs for retail food merchants.

C) Applicants of computer technology for the seafood industry.

D) Developed series of educational videotapes with industry and trade organizations.

E) Determined safety of shellfish in southern growing water areas.

11. **RHODE ISLAND—J. Whitney Bancroft**

A) Extensive research completed in developing multiplier effects of the marine industry to Rhode Island.

B) Enzymatic treatment and storage studies demonstrated that shelf life of fresh fish can be extended by 90%.
C) New uses found for seafood processing wastes.

D) Brine shrimp research—Identifying brine shrimp populations of unknown and uncertain origins through a protein "fingerprinting" technique.

E) And several other examples.

12. SOUTH CAROLINA—Paul M. Horton

A) In-service training for coastal counties in agriculture.

B) Tour of crawfish facilities in Louisiana.

C) CES staff assistance with crawfish.

13. FLORIDA—Marion L. Clarke

Satellite freeze forecast systems:

(1) Currently have adapted this technology to give fishermen water temperature data.

(2) Have developed a print mode to give hard copy.

(3) Are working on putting navigational data on the screen and currently working on a low powered off-shore transmission of data to TV sets on boats off the coast of Florida.

(4) Currently have the following products available:

(A) Water temperature data

(B) Weather including marine forecasts

(C) Automated field operation systems radar map for Florida and coastal waters

(D) Our technicians have developed a high resolution product that is currently available.

We are working on using weather facsimile data providing the marine user with data not currently available to the public from any other source. We anticipate that we will be looking to use polar orbiting satellites to get imagery from more localized areas.

SEA GRANT TOLERANT VEGETATION PANEL

A. Assembled panel of industry, agency and extension personnel to assess the state of the industry, capabilities and needs; project future plant material requirement and determine research and extension activities.
B. Developing planting and maintenance guidelines for 19 different species of dune and salt water wetland plants.

C. Updating old listing of supplies of salt tolerant vegetation.

D. Work on publications for select plant materials.

I would like to make some general observations on programs being conducted or evolving in the colleges of agriculture which have far reaching implications for marine extension programs.

I. These efforts are directed at retaining and/or improving water quality. A national extension taskforce is underway in an assessment of program needs in ground water quality. Our own experience in Florida with pesticides (EDB and Time) and nitrates as possible major pollutants is one example. The marine extension program has a strong bond of commonality with a vigorous environmental toxicology program. This is particularly critical as one looks at the estuaries and the saltwater resource and the food chain.

II. Computer software

Each of your State's cooperative Extension services as well as the marine advisory program are developing user-friendly practical software. It's my observation that much of the economic analysis and cash flow information provides a conceptual framework for application in the marine sector. These software programs could be analyzed, amended, and transformed for use in the marine advisory program to a wide series of audiences. Developing high quality user-friendly software is expensive and this presents an excellent opportunity for the marine advisory program to develop products at a fraction of the cost—compared to "going it alone."

III. SATELLITE-FREEZE-FORECASTING-SYSTEM

While this system of satellite imagery, developed by NASA and the Natural Weather Service, was first utilized as a cold detection and freeze forecasting for terrestrial crops, it can provide extensive measurements in the marine environment (water temperatures; cloud cover; movement of storms; etc.). It could become a very potent management tool in the marine advisory program.

IV. SALT TOLERANT PLANT SPECIES

The increased need for developing salt tolerant plants continues due to increased populations locating in the coastal areas. Erosion problems, limited water resources, and saltwater intrusion has accelerated this effort.

V. PUBLIC POLICY EDUCATION PROGRAMS

There are several extension program efforts underway throughout the U.S. addressing various facets of growth management, water management, environmental quality. Many of these programs are educational programs addressed to providing critical information for decision-makers and groups of decision-makers, enabling them to make their own decisions and selecting courses of action.
Once again, I would urge the marine advisory program leaders to remain heavily involved in those program efforts. This would ensure that the marine interests would be well represented—so that the materials developed would be germane and relevant to the marine industry.

There is a long list of complimentaries and an even longer list of mutual program opportunities. Once again, I welcome the opportunity of being with you.
A REVIEW OF ACCOMPLISHMENTS AND OPPORTUNITIES
IN MARINE AND GREAT LAKES EXTENSION PROGRAM
IN HOME ECONOMICS

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I appreciate the invitation to discuss with you some accomplishments, opportunities and ideas concerning joint or cooperative programs between Sea Grant and Home Economics Extension and Research. My perspective will be that of a newcomer to a Sea Grant state, a person with no prior experience in working directly with Sea Grant Programs, although I was acquainted with it in a general way from having served on a number of national committees and task forces with Extension professionals from Sea Grant states.

Since coming up to the University of Florida in March 1984, as Director of Home Economics Programs, a position which includes both serving as Chairperson of a Home Economics Department and serving as State Leader for Home Economics Extension Programs, I have become keenly aware of opportunities for potential cooperation between home economics and marine education programs. Because of the urgency of other tasks such as departmental reorganization and recruiting for faculty vacancies, we have scarcely begun to explore these opportunities but we have a good foundation of mutual respect and positive relationships upon which we can build. One visible evidence of our intentions is the participation in this workshop of one of our departmental faculty members, Ms. Lizette Murphy, Extension Specialist in Consumer Food Marketing. I have asked Ms. Murphy to help develop and maintain a communication link with Sea Grant personnel who share our interests in consumer, family and nutrition issues and programs. As we add new departmental faculty members in human nutrition and applied food science and technology, I expect an increase in our cooperative work in these areas. In the meanwhile I appreciate Lizette's willingness to add this responsibility to an already full Plan of Work.

Since I was virtually without prior experience of my own to call upon in preparing for this presentation, it was necessary for me to examine information from other sources. In careful reading of the brochure based on a January 1983 report to the national Council of Sea Grant Directors, I am somewhat surprised to find this statement "...helping to improve the productivity of marine resources and the quality of life for the people who enjoy them, are affected by them, or who depend on them for a living." And on the next page, in a section on Origins, the following "...and to increase to the greatest amount possible the social and economic benefits derived from them."1

Compare these statements, if you will, to this quote from the section in Home Economics/Family Living in Extension of the Eighties: "The Home Economics component

has as its goal the improvement of the quality of life for individuals and families through enhancement of their economics and social well-being.  

It seems to me, then, that we have considerable parallelism between the missions and goals of Extension home economics and those of the Marine Education Program. Is that bad? Of course not. On the contrary the parallelism provides us with a legitimizing basis from which to explore ways to cooperate and form partnerships that will lead to greater achievement of the goals of both program areas.

I am sure that we would find a similar parallelism between home economics research and Sea Grant research programs, although a history of inadequate funding for home economics research has severely restricted efforts in this area.

Another source of information to which I turned for help in preparing for this presentation was the Extension Narrative Accomplishment Reports (NARS) which are submitted annually by all state Cooperative Services and stored in USDA's computer system. When I asked for a retrieval of FY 84 NARS reports on the keywords Sea Grant/Home Economics, can you guess how many I got? Only one. ONE. Yet, when I received the responses to the Marine Extension Programmatic Survey, I found some sort of home economics example in the responses from 22 of the 29 Sea Grant states. Therefore, I must ask an embarrassing question of those of you here representing CES from those 22 states. How come the Sea Grant/Home Economics work going on in your states doesn't show up on your NARS reports? It's a simple matter of concisely reporting your accomplishments and including the right key words. Please consider this in your upcoming reports for FY 85, so those of us who are new to the area and looking for ideas will continue to have examples from other states in addition to the ones provided in your survey responses.

Incidentally, the one NARS example I found dealt with ground water quality and was submitted by a CRD specialist.

A wide variety of examples were cited in the survey responses from states suggesting a challenging array of opportunities that might be explored by those of you interested in expanding Home Economics/Sea Grant cooperation. I attempted to categorize the examples and I would like to spend the next few minutes discussing some of these.

1) In service training and education for home economists.
   - Selection, handling, home storage and preservation, preparation, nutrition, teaching methodology.

2) Developing educational materials and methods
   - Publications, bulletins, including correspondence course materials.
   - Slide-tapes, television, video tapes, radio, learn by-mail, newspaper releases.

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3) Consumer Seafood Educational Programs

- Cooperating with home economists. (Many of our Florida Coastal counties conduct programs in shopping malls, often during Seafood Month in October).

- Florida home economics agents have a seafood handbook for reference in answering consumer inquiries.

- Minnesota's catchy (no pun intended) title for "Fixing Fish" caught my eye when I was reviewing the examples.

- Increasing consumer awareness and acceptance of underutilized species was a focus of consumer-oriented programs in two states, while other emphasized selection and use of lower-cost species. Some programs of this nature were included in Expanded Food and Nutrition Program's (EFNEP) efforts with low income families.

4) Research and Development

- Computer programs for nutritional assessment of seafood recipes.

- Quantity recipes developed and tested for use in restaurants and institutions.

- Microwave recipes developed and tested for consumer use.

- Development of new products such as fish patties.

5) New Hampshire: an example of a clear, concise, specific state report, submitted by Peter J. Horne: "A program was cooperatively planned by staff of the Cooperative Extension Service and the Sea Grant/Marine Advisory Program at the University of New Hampshire. The program was designed so that participants would become familiar with at least six species of New England fin fish, their nutritional value and method of preparation. Objectives included increased use of fin fish in family meals. Trained leaders have reached over 1,000 persons in five counties with this information to date. Familiarity with species of fish increased 50% from pretests with 83% of participants planning to use fish more often in a wider variety of ways. This program will be expanded into other counties next year."

Isn't that an elegant report?

In conclusion, I would like to share with you a few ideas for expanding cooperation in areas where such cooperation already exists, plus a couple of additional areas where I found little or no evidence of current work.

1) Seafood economics for consumers: Developing and disseminating current information about comparative portion costs of various forms of the same seafood, prepared-at-home vs. convenience foods, vs. the same seafood purchased ready to eat (i.e., fast food carry-out). (April 26 Kiplinger Washington Letter says franchise fish restaurant sales will rise by 18% this year).
2) Increased research and educational efforts are increasing consumer acceptance and consumption of locally abundant, currently underutilized species (Example: Gulf Coast mullet).

3. Consumer-directed educational programs on safe handling of seafoods from market to home to table.

4) Consideration of the families of people employed in the fishing industry as a specific audience for home economics programs on such topics as budgeting, money management, family stress management, and human relationships. This idea was suggested to me by one of our Florida marine agents, who pointed out the stress on such families resulting from uncertain income, frequent and extended separation of fishermen from their families, fears about safety in bad weather, and the like.

I have never heard of a home economics program in any state with these families as a specific target audience, but I suggest it for your consideration and possible discussion with the home economics state leader in your state.

In conclusion, I would like to quote from Partners and Parallels, TF on SG Relationships 1979:

"There is much common ground in the needs, programs and goals of (Sea Grant) and Extension...the overall of both programs, namely to serve the public in the broadest sense, demands a strong common commitment...talent and...resources must be marketed to achieve our common goals..."

"Although perhaps not easy to find, this resource of talent exists and is readily available given firm organizational support and...leadership."

SEA GRANT: 4-H ACCOMPLISHMENTS AND OPPORTUNITIES

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Introduction

1. Over 20 years ago government leaders began to realize that in the race to be first in space our country had badly neglected ocean science.

2. In 1963, an innovative educator presenting the keynote address at the American Fisheries Society's annual meeting asked persuasively, "Why do we not do what wise men did for the better cultivation of the land a century ago? Why not have Sea Grant colleges?"

3. Eleven years later, this same man rescued a first of its kind, but sinking, Florida 4-H marine education proposal that his Sea Grant site visit colleagues felt was inappropriate for the predominately adult education orientation of Sea Grant.

4. Fortunately, Athelstan Spilhaus felt strongly that youth education could fill a critical need in offering future voters learning experiences that provide a needed understanding of the sea and coastal zone. Furthermore, he accurately predicted that 4-H marine educators could advantageously borrow from the proved methods of Extension 4-H agriculture and home economics education.

Florida 4-H/Sea Grant Overview

1. Beginning in 1975, the University's Institute of Food and Agricultural Science's Extension 4-H Department and Sea Grant cooperatively embarked on a voyage that evolved from a demonstrated need for a marine education program for Florida 4-H youth. Also, the 4-H agriculture and home economics projects to include additional relevant subject matter areas. And, marine education was a natural!

2. A "National 4-H Marine Education Survey" was conducted by Florida in 1975 for the Federal Sea Grant Administration to identify some of the haves and needs of states involved in the development of marine educational opportunities for 4-H and other youth. This study provided an extremely useful data base that expedited some highly accurate predictions and decisions essential to the success of the Florida program. Most importantly, the study helped our fledgling 4-H marine program establish a unique and continuing partnership with Sea Grant.

3. Objectives:

Develop a wide range of fascinating educational marine projects and activities designed to enrich the knowledge, skills and values of Florida 4-H youth relative to better utilization and conservation of ocean and coastal resources.
Extend the Florida 4-H Department's capability for effectively serving special interests of other state and federal agencies seeking information and direction regarding the development of 4-H marine education programs and activities.

4. Resources:

The Florida 4-H Department obtained approximately $85,000 from federal and State Sea Grant agencies which was used during 1975-80 to accomplish:

- County and state planning meetings
- County needs assessment surveys
- Consultation contract services
- Development of summer camps and institutes for 4-H youth
- Development of a 4-H marine lending library
- Marine 4-H resource kits for every Florida county
- A slide/cassette marine program overview
- Marine 4-H program interface with other states
- Development of 4-H marine exhibit materials for use at state and national conferences
- Employment of a two-year, 4-H marine education assistant who was utilized to excellent advantage in the further development of literature, teaching aids, financial resources, in-service training and fiscal accountability.

5. Curriculum:

Marine 4-H projects and activities such as underwater photography, coastal management, oceangoing plants, offshore fishing, shell collecting, sharks, intertidal zones, beachcombing, mangrove wetlands, sea safety, net making, snorkeling, aquariums, venomous sea creatures, fish identification, birds of the sea, boating, and seafood nutrition are taken by thousands of youth through school and community 4-H clubs led by Extension supported volunteer 4-H staff.

6. Publications:

Florida 4-H Marine Science Program Members Guide
Field Study of the Marine Environment Leader's Guide
Fins and Scales Project Manual
Intertidal Zone Project Guide
Life in the Sea Project Guide and Record
Life in the Sea Leader's Guide
Starting and Maintaining a Marine Aquarium Member's Guide and Project Record
Wetlands Project Manual

7. Recognition Opportunities:

4-H project records and demonstration categories of competition are available for those 4-H'ers wishing to compete for the various forms of club, county, district and state recognition for outstanding achievement in the marine program. 4-H'ers receive medals, trophies, certificates, State 4-H Congress trips and National 4-H Congress trips through the Florida 4-H Foundation.
8. Results:

During the past 10 years, over 50,000 youth and 10,000 adults have been involved in 4-H Marine education projects and activities in over 80 percent of the counties in Florida - a dramatic increase compared to zero enrollment when the program began.

The 4-H marine program was tested with a 4-H program consequences evaluation model designed by the USDA Extension Evaluation Section and applied by the University of Florida Extension Program Evaluation Department. Strong evidence in the form of newfound behavioral changes occurring in a random sample of 4-H marine program participants indicated increased intellectual and physical abilities directly attributable to 4-H.

Florida has been willingly utilized as a 4-H marine program "stepping stone" for other states and countries to the following extent: The 4-H Department has responded to formal requests from over 300 public and private educators in over 35 states Sweden, Australia, Mexico, and the Virgin Islands for information pertaining to Florida 4-H marine strategies and materials.

- Two states (N. Carolina, Virginia) utilized components of the Florida "model" to help obtain substantial funding from Sea Grant to implement their 4-H marine education programs.

- Florida has been publicly acknowledged, at many regional and national conferences of 4-H educators, for serving as a dependable marine education resource. The USDA Extension 4-H staff and the National 4-H Council Staff have periodically requested 4-H marine program advisory services from Florida.

National Review

1. Nationally, 4-H enrollment in the marine project area included 20,660 males and 19,376 females totaling 40,036 - 100% increase during the last 10 years in which over 375,000 4-H'ers have been involved in marine education. Furthermore, there has been an extremely well balanced boy/girl ratio, which is not necessarily the case in other 4-H curriculum areas.

2. Geographically, the U.S. northeastern and southeastern ES-237 reporting regions have traditionally shown above average 4-H marine enrollments. However, there is a fairly broad distribution of state reporting 4-H marine activity throughout the nation. And, over the last 10 years the average annual frequency of states involved in 4-H marine programming has been 34, which represents 68% of 50 states!

3. The high level of interest shown by 4-H'ers, volunteers, Extension personnel, sponsors and others attracted to this program has also attracted county, state regional and national mass media coverage. Some include:

- Sea Grant '70's periodical published by Texas A&M University
- Marine Advisory Program Newsletters
- Extensions Service Review, U.S. Department of Agriculture Information Services
Sea Frontiers published by International Oceanographic Foundation
State newspaper articles and television programs

This media coverage facilitates positive donor relations, specific program visibility and general public awareness of Sea Grant and 4-H as compatible and worthwhile organizations.

States Involved _FY 1984_

1. **Eastern Region:**
   - Connecticut
   - Delaware
   - Maine
   - Massachusetts
   - New Hampshire
   - New Jersey
   - Rhode Island
   - Vermont

2. **Central Region:**
   - Indiana
   - Michigan
   - Ohio
   - Wisconsin

3. **Southern Region:**
   - Alabama
   - Arkansas
   - Florida
   - Georgia
   - Kentucky
   - Louisiana
   - Mississippi
   - North Carolina
   - South Carolina
   - Texas
   - Virginia
   - Puerto Rico

4. **Western Region:**
   - Alaska
   - California
   - Hawaii
   - Oregon
   - Utah
   - Washington
   - Guam (territory)

**4-H Examples**

1. **Alabama:**
   State 4-H Personnel and Advisory Service Staff have jointly planned and organized marine 4-H camps in the past and have scheduled the 1985 camp for August.

2. **Arkansas:**
   Marine youth camps.

3. **California:**
   Training 4-H leaders. World of Water Competition. 4-H Day at Marineland.
4. Connecticut:

4-H agents and leaders have participated in marine resource training programs resulting in several 4-H agents incorporating materials into their education programs. Emphasis has been placed upon training 4-H volunteer leaders at the state and regional levels.

5. Illinois - Indiana:

Marine science module on "Wetlands" published in cooperation with 4-H Foundation. Great Lakes heritage module developed and under consideration.

6. Louisiana:

4-H seafood contests are conducted in numerous coastal parishes. In one area, over 800 entries were made in the contests. It is anticipated that in the near future, a statewide seafood contest will be conducted. The seafood industry has expressed interest in supporting such a contest. 4-H agents are heavily involved in these contests as well as other seafood fairs and festivals.

7. Maine:

Programs using a marine demo trailer and classes for schools and the general public.

8. Maryland:

Will have first 4-H marine camp in 1985. An oyster culture project which won a national award.

9. Massachusetts:

Use a traveling 4-H sea museum trailer for display and contacts at beach parking lots, schools, malls. Turtle nesting beach surveys are a popular activity.

10. Michigan:

Great Lakes 4-H camp: A one week junior leaders training program that takes place on Beaver Island in Lake Michigan.

11. Minnesota:

4-H Sailing: A joint Sea Grant Extension-St. Louis County 4-H effort. Offered for youth 9-19 on the St. Louis River. The program goes from building specialized 8' boats in winter to learning to sail them in the summer. Program is extremely popular and has picked up national exposure. Special boats were designed for this program and it appears they will be marketed nationally.
12. Mississippi:

Joint Sea Grant/CES programs have introduced youth groups to the marine and coastal environment through the use of marine education field trips. These programs have emphasized the multiple user group concept.

13. New Jersey:

Development, promotion and implementation of a comprehensive educational program in marine science within the 4-H club structure is now progressing.

14. North Carolina:

4-H marine science camp, and 4-H projects in marine awareness.

15. New Hampshire:

Approximately 50 4-H members in the 10 counties are enrolled in a Marine Science project/activity. Twenty-four teens participated in either 2 week "Oceanbound" or about one week "Sailing" trip program operated by N.H. 4-H Camps last year. One week of each is planned again for '85. Marine Science is one of two special programs conducted by half-time 4-H agent in Rockingham County whose job is to reach non-traditional audiences.

16. Ohio:

Developing a Sea Camp program at the Kelly's Island 4-H camp.

17. Oregon:

Have worked with the 4-H staff in Curry County to develop educational materials on the salmon and trout enhancement program such as: How to do a Stream Survey, Life Cycle of Salmon and Steelhead, Habitat Requirements of Salmon and Steelhead, etc.

18. Rhode Island:

Mobile marine education program has continued to operate for 5 years now. About 15,000 youth receive instruction through contracts with the schools for the "Blue Lobster" program. Marine life in handling tanks and student intern support the teacher naturalist in this instruction. Moving equipment to different schools each week provides the mobility and flexibility necessary for success.

19. Georgia:

The Jekyll Island 4-H center has been established with CES operating the facility, and MHPLEX provide marine resources programming. In the past year approximately 2800 participated in marine resource programs at the facility.
Conclusion

1. This is a popular and effective 4-H curriculum area, systematically developed from a proven need and generously supported by the people and programs of the Land Grant and Sea Grant Institutions. And, the program is still growing.

2. The many expressions of recognition and appreciation this program has received are typified by the words of a 17-year-old James Perry, State 4-H Marine Achievement recipient from Putnam County, Florida:

"Thank you for 4-H and the Marine Science Program for capturing my interests, educating me and increasing my recreational pleasures for a lifetime".

3. Ladies and gentlemen, I've appreciated and enjoyed this occasion to share the good news of the 4-H/Sea Grant "connection". If only one word could be used to describe the future of 4-H marine education that word would be opportunity. Thank you.
A REVIEW OF ACCOMPLISHMENTS AND OPPORTUNITIES
IN MARINE EXTENSION PROGRAMS AND CRD

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It is my pleasure to address the topic of "accomplishments and opportunities in Marine Extension Programs and CRD." For the past eight years as assistant director of Cornell Cooperative Extension for Rural and Community Development programs, I have been deeply involved in the Sea Grant Extension program. Prior to that I was involved in the establishment of the New York Sea Grant Program effort from its beginning. As a county extension agent in Orleans County, New York, on the south shore of Lake Ontario, I was involved in early discussions and worked closely with some of the pioneers who established the New York effort. After moving to Cornell in 1974 into extension administration, I continued working closely with Sea Grant as an extension representative in northern New York supporting program efforts in the eastern Lake Ontario-St. Lawrence Valley. It is from this background that I share my strong philosophical and programmatic commitment to the principles and ideals of Sea Grant as an important partner in the total Cooperative Extension program effort in New York State.

It would be easy for me to utilize my allocated ten minutes just discussing the New York program. However, I have included input from Dr. Jim Barron, Washington State University, who currently chairs the ECOP-CRD/Public Affairs Subcommittee, and input from surveys conducted by Marion Clarke in preparation for this workshop.

Other presentations which will explore opportunities for joint programming in agriculture, home economics and 4-H Youth Development, document the appropriateness of it with the Sea Grant Extension Program. However, I know of no area in Cooperative Extension more ideally suited for joint program efforts than Sea Grant. It would be very easy to encompass all of Sea Grant program initiatives under the label of CRD; however, we need to be targeted in assessing the goals and objectives of each extension program area and to fully appreciate that Sea Grant is an important contributor to any state's total Cooperative Extension program effort. This has certainly been the case in New York and under Bruce Wilkins' able leadership as a state program leader, we have been able to work hand in hand in a spirit of cooperation with our ultimate goal being an improved Sea Grant/Cooperative Extension program effort.

Let's examine why Sea Grant has been highly successful in becoming institutionalized and recognized as a high impact program effort in Cooperative Extension.

First, Sea Grant programs have been planned at the grass roots level and they have been based on the needs of the clientele. There was concern in the early days that Sea Grant would be a "top down" program effort, but we can rest assured today that Sea Grant is in the hands of the users and that these people have a great sense of pride, ownership, and commitment to the program. It has provided a level of credibility that few other agencies or organizations can truly achieve. This is documented in the continued funding and support of Congress for Sea Grant.

Yes, there have been times when it would have been easy to drift away from this grass roots philosophy, which is so important in understanding Cooperative Extension programs.
Secondly, Sea Grant has built its reputation through the years by a proactive program rather than a reactive one. To me, there is a lot of difference. People associate proactive programs with leadership and reactive programs with followers of the crowd. I believe the majority of people want Sea Grant to assume a leadership role and provide programs that will cause things to happen, rather than trying to respond to changes after they have occurred. Establishment of program advisory committees and the involvement of program participants in determining the direction and focus of the program, has been an increasing strength of Sea Grant.

Thirdly, Sea Grant has built its reputation on the technical competence of its staff. We have clearly demonstrated this in all areas of program as we have responded to the needs of coastal residents, groups, organizations across this country. People look to Sea Grant as a source of objective educational information that is research based. We have the documentation to substantiate the program impact and no other program has better evaluated its program impact than Sea Grant.

Fourthly, Sea Grant's funding is zero-based budgeting which constantly forces all of us to have at our finger tips accountability data that responds to the numerous "fire drills" that continue to rage as to whether or not Sea Grant should be funded.

With this as background, let's examine the changes occurring in CRD programming. We have seen CRD move through a progression of being a highly process oriented educational program to now focus heavily on technical subject matter areas such as economic development, local government education, natural resources policy, groundwater, and environmental issues. This has focused the content areas of CRD programming much more closely with the thrust of Sea Grant Extension efforts.

Yes, it's important to have the content as the bricks, but we also need the process as the motor in which to ultimately achieve total program balance. Sea Grant programs are aimed at individuals and firms in marine related business, much like extension has dealt with agribusiness. There are significant set of problems, issues, and concerns that are community or public issues which most appropriately bring Sea Grant programming and CRD programming into the same philosophical grounds. Obviously, in this area there is much to be gained from collaboration, cooperation and ultimate integration between Sea Grant's marine advisory services and Extension's CRD programs.

Let me underscore once again my deep philosophical commitment to viewing Sea Grant Extension programming, CRD, or Community Issues Programs, as one important total program effort regardless of how we label it.

As we examine appropriate areas of program interface, let's begin with economic development. Port development, tourism, sports fisheries, community support of issues which provide the ideal grounds for which we can blend together and team up the resources of Sea Grant and Cooperative Extension to respond to these needs. Mississippi has conducted a comprehensive study on the coastal tourism industry. New York has held statewide meetings on bed and breakfast business development to identify several programs.

In the area of natural resources and public policy education, environmental issues abound in marine areas, sometimes extending well inland to where sources of pollution can affect aquaculture and well offshore, to where effects of onshore activities may ultimately impact. New Jersey has conducted programs for municipal and state officials
and local organizations to assist in the prevention of coastal erosion and dredging options for channel improvement.

Organizational leadership development. The fishing industry and other marine related groups are like traditional extension clientele. Fiercely independent and often isolated from much of society. With new technology, changing markets, economic conditions and community pressure they need to work together in new ways. To be effective they need the organizational and leadership skills training so effectively provided through Cooperative Extension educational programs. South Carolina's leadership training in state and national marine issues for local leaders is a good example.

The partners and parallels document emanating out of the task force on Sea Grant relationships in June of 1979 was a visionary report which provided a very important philosophical framework for us to pursue in integrating our joint program efforts. This report explored the commonality, the common ground, and common goals of Cooperative Extension and the Sea Grant advisory service. Priorities to identify problems, increase awareness, conduct conservation education, and develop linkages and networks were key. The report identified national programs in common that related to environment, economic development, coastal recreation, consumer and public issues, which today we have fully blended together our resources to programs in these areas.

Each state has used different strategies to best achieve joint Sea Grant/CRD program efforts. In New York our commitment has been to effectively capitalize on the strengths of Sea Grant and Cooperative Extension for the ultimate benefit of the residents of the state. Other presentations regarding the pluses and minuses, or pros and cons of Sea Grant - Cooperative Extension has benefited equally by having important new audiences available, new opportunities for extension staff audiences to become involved in tourism, bed and breakfast, seafood education, marine youth education efforts, and to have the synergies resulting from the creative challenges that come with any new program area. Obviously, state residents have benefited by having a broader range of resources available to meet needs.

In summary, we are still very much in the transitional process of fully exploring and identifying the best combination of staffing and programming to the ultimate benefit of Sea Grant marine educational programs and CRD programs. I hope the process will never stop. Because it is out of the dynamics of exploring joint program efforts and tailoring existing program resources to meet the needs of marine and coastal interests that we achieve program improvement and upgrading.

Obviously, I would like to see the integration process move faster, however, I must be a realist in accepting the decentralized nature of our national extension and Sea Grant system. However, it is important that we fully understand and explore the opportunities resulting from joint Sea Grant - CRD program efforts. The opportunities are endless and we need to continue to have the vision necessary to capitalize upon them.

I am extremely proud of what Sea Grant has accomplished in New York State and nationally. It has been a source of inspiration for me to have had the opportunity to be involved in the development of the Sea Grant program. The institutionalization and integration process into Cooperative Extension has not been easy, but as documented by the reality of this workshop we have made major progress. It is not just a question of Sea Grant and CRD, it is the bigger question of Sea Grant and Cooperative Extension on which we must focus and establish our priorities.
This workshop is important because it documents the recognition, the interest and the commitment, and vision on the part of Cooperative Extension/Sea Grant administrators to capitalize on the success we have to date, and in planning for the future.

I wish to thank the planning committee and others for making this workshop a reality. I hope that this is only the beginning of future opportunities to share, explore, and to capitalize on both the successes and failures of joint Sea Grant/Cooperative Extension program efforts.
IMPLEMENTING MARINE EXTENSION PROGRAM

SEA GRANT IN STATE COOPERATIVE EXTENSION PROGRAMS

Peter Horne
University of New Hampshire

A New Hampshire Perspective

It is timely that I have an opportunity to attend this ECOP/Sea Grant Workshop. My compliments to Dr. Marion Clarke and the conference committee who have planned an excellent agenda.

Brian Doyle, Program Director for the University of New Hampshire Sea Grant Marine Advisory Program, and I both came down here to benefit from your deliberations within the next few days in hopes that a proposal we are making at the University of New Hampshire to integrate the Sea Grant Program with the Extension Program will be a strong one. The purpose of our proposed integration is to combine resources for the ultimate benefit of our clientele. I would like to discuss the factors which we are considering in our rationale and sketch out our plan of action with the expectation that we'll have a stronger proposal after our discussion with you.

First of all, I believe we are all committed to the land grant mission which is to apply the resources of higher education toward the socioeconomic well-being of people. Whatever the program area, the process of identifying problems and committing our resources to solving those problems needs to be a thoughtful one. To accomplish this, we need to examine our organizational strengths and weaknesses, we need to be flexible and to keep in mind that the primary reason for linking with other organizational resources is to be more effective in fulfilling our mission.

This is the case in New Hampshire, and I'd like to share the situation with you to demonstrate the need to proceed with our plan for program integration. The Gulf of Maine is a magnificent resource and, as one can tell from looking at this coastal outline, it reaches from the tip of Cape Cod, Massachusetts to the Atlantic Provinces. (See attachment) A full range of marine activities takes place both offshore and along the coast of the three states and the Atlantic Provinces which border the Gulf. The Universities of New Hampshire and Maine are jointly designated as a Sea Grant College and, by this designation, share in program resources that support a Sea Grant Marine Advisory Program directed toward the marine community within the Gulf of Maine. The New Hampshire coast is only 18 miles long, whereas Maine's coast, if you unfold its accordion-like coastline, is over 3,000 miles. Add to that its 2,500 islands, and one can see that New Hampshire is minuscule in comparison. But, don't let this fool you. The users of the Gulf of Maine don't think of its size. They are simply interested in finding ways to conduct their individual enterprises or enjoy the recreational value of the resource. The harbors are full. There are clam management issues, aquaculture development issues, sport fishing, commercial fishing and commerce and industrial activities, side by side, to mention a few. One small section of the New Hampshire coast, called Hampton Beach, hosts over 100,000 people a day on its narrow strip of sand. The 7,000 acres of marsh land in New Hampshire are under constant pressure by the developers, and public policy issues abound related to the wise use of this resource over the long term.
In Maine and New Hampshire over 90 percent of the population live within 30 miles of the coast, and, in the coastal area of New Hampshire and southwestern Maine, two of the fastest growing counties in the United States are receiving newcomers every day. It is apparent that the users and the issues which emerge from the intermingling of people and the sea have no regard for state lines.

Since the Universities of New Hampshire and Maine are relatively small, it has made sense to combine the research and Extension resources of both Universities to be more effective in addressing the problems described above. In fact, the New England land grant Universities have several joint agreements to share expertise across state lines on a bi-state and regional basis where it can improve efficiency.

A key value which people hold in the two states is to have local accessibility to the resources of the University through the Cooperative Extension Service. The campuses of the Universities of Maine and New Hampshire are 200 miles apart, and yet, the county Extension offices that stretch between the two Universities offer local accessibility and the opportunity to tailor-make Extension programs to the needs of the people along the coast. For example, this networking capability has enabled local leaders from coastal communities in Maine to join their counterparts from New Hampshire in leadership development programs which have been sponsored by the W.K. Kellogg Foundation. The Maine-New Hampshire Marine Cooperators network has facilitated communications among Extension agents, Sea Grant and other state agency personnel to scope out research problems and to develop cooperative efforts.

The point is that the outreach capability of Extension, working closely with Sea Grant, is growing. These Maine-New Hampshire efforts have resulted in some excellent programs: i.e., 4-H Marine Science, Harbor Management, Clam Management, Nutrition Education and Fisheries Technology.

We are now at a point in our development where Extension programs in New Hampshire can be strengthened by a formal relationship with Sea Grant. The Cooperative Extension Service would like to be more responsive to the marine community, and it is in a position to make the necessary changes toward that end. The Maine-New Hampshire Sea Grant Marine Advisory Program which has successfully conducted programs in Marine Education, Commercial Fisheries, Coastal Resources Management and Marine Recreation/Tourism during the past eight years can benefit from the resources and delivery system of a larger network with local input through county councils in both states. There is a need on the coast of New Hampshire to be more active in both sport and commercial fisheries, aquaculture, and estuarine extension work. By combining resources, there is an opportunity to expand programs in this area. The College of Life Sciences and Agriculture at the University of New Hampshire, of which the Extension Service is a close affiliate, has a strong biological knowledge base which can be enlisted toward solving problems in the marine community. The Director of the Cooperative Extension Service at the University of New Hampshire reports to the Vice President for Academic Affairs and has access to disciplines beyond the College of Life Sciences and Agriculture should it be necessary.

All in all, we feel, by integrating our programs, we can offer more problem solving capability to clientele in New Hampshire. We also believe we can improve our efficiency and broaden our local base of support.

Our proposed plan of action is as follows. The University of New Hampshire Sea Grant Marine Advisory Program will become a fifth program area of the Cooperative Extension Service. It will be called the Sea Grant Extension Program. Brian Doyle,
Program Director of the University of New Hampshire Sea Grant Marine Advisory Program, will become a program leader and will participate equally in program development and administration with the other program leaders in agriculture, forestry, 4-H and home economics. Although the Sea Grant Advisory Program is much smaller, it is strong, and with visibility and full status within our organization, it will flourish both at the state and county level. If this plan is accepted, we fully intend to provide the support necessary for this program to be successful.

The two coastal county Extension councils will be asked to participate in supporting an Extension agent to initially serve the New Hampshire marine community in the area of fisheries, aquaculture and marine resource management. The Extension agent in this position will be backed up by Sea Grant Extension specialist resources in both New Hampshire and Maine. The two University of New Hampshire Sea Grant marine education specialists will become marine Extension specialists and will hold extension educator rank. The Cooperative Extension Service personnel system provides for more systematic recognition and support. Sea Grant educational specialists will continue to carry out their plans of work with both formal and educational groups such as schools and informal adult and youth groups. They will also help expand the 4-H Marine Programs initiated by agents in the field.

The Sea Grant Extension program will have access to all the computer, leadership development and training resources available to the University of New Hampshire Cooperative Extension Service, its cooperators in New England and throughout the land grant system. The Sea Grant Marine Advisory budget will be committed to this program. Both Sea Grant and the Cooperative Extension Service will share in publications, communications and marketing programs which will benefit all parties.

A memorandum of understanding will be developed which will specifically address these arrangements. It will be reviewed annually to determine the effectiveness of this working relationship and adjustments will be made as necessary over time. If, after a given period, it is determined that the integration is not working, then both parties will have the option to discontinue the agreement according to a systematic plan.

In summary, we have an excellent opportunity to build a program which rests on the insights and experience of others. We know that twenty out of thirty Sea Grant Marine Advisory programs across the United States are currently affiliated or integrated with the Cooperative Extension Service. We are open and flexible as we move toward this integration and would welcome your comments and suggestions.

Given the circumstances of limited financial resources, individuals and organizations of like mind can serve clientele more efficiently if they combine their resources in a systematic way. This approach has been successfully demonstrated at other institutions. We, too, are prepared to take the cooperative action necessary to make a difference in the way people use the Gulf of Maine resource base toward their socioeconomic well-being.

It's a pleasure to be here, and I look forward to hearing your suggestions based on your Sea Grant Extension experiences over the past twenty years.
Minnesota's Sea Grant Extension Program is integrated into the Agricultural Extension Service of the University of Minnesota. The philosophy guiding the program is similar to that of the total Extension Service.

First and foremost, we are an educational program. Our purpose, like most land-grant institutions, is to extend the knowledge base of the University in forms and formats that bear on people's problems. Likewise, as connoisseurs of the local or grass roots perspective, we have a responsibility to be strong participants in setting the University's agenda, especially as it relates to research and public policy. Our goal then, is to develop and advance the decision-making capacity of Minnesota citizens. We do that by offering high quality continuing education programs to targeted individuals and groups that increase awareness, address areas of concern and conflict, and generally foster change through a growth and development model. That means we strive to be much more than information providers, or experts, in specialized areas of knowledge or technology.

To hold ourselves accountable to this mission we have developed value statements, or things we believe in, to help guide our decisions and hold us accountable. A few of the values which guide our work include:

1. Our teaching should emphasize the development of problem-solving skills.

2. As University educators, we should stress perspective, overview and analysis.

3. Volunteers should be involved in our delivery system to the maximum extent possible.

4. It is in the best interest of Minnesota citizens to attain a global perspective and understanding on issues related to their lives. Therefore, we should provide leadership in extending University resources internationally.

5. We should contribute to regional and national Extension efforts. Many issues which face Minnesota are broad in scope. We seek to minimize costs and enhance quality through joint program efforts.

6. A quality research program at the University is essential to a quality Extension program. Extension serves as the conduit for client needs to be translated into research priorities.

7. Extension strives to develop and maintain flexibility to allocate resources to meet emerging societal need. Extension faculty must resources be on the "cutting edge" of change.

8. Programs should be the result of dynamic, interactive process that reflects local needs, University expertise, and national priorities. Efforts at the local level should reflect the partnership between the county and the University.
9. We have a unique partnership among counties, the University and U.S.D.A.; this partnership should be strengthened.

10. It is in the best interest of all citizens that we function to minimize rural/urban dichotomies to develop a society free of artificial divisions.

11. The resources and knowledge of the total University should be available to the Agricultural Extension Service. We seek to develop structures and an environment which encourages interdisciplinary programming.

12. We constantly endeavor to integrate the three functions of the land-grant philosophy — teaching, research and extension.

13. Staff are our most important resource; we must develop policies, resources, and an environment which attract, retain and motivate quality staff.

14. Staff must practice an ethic of life-long learning; therefore, a quality staff development program is essential.

15. We have a special obligation to rural Minnesota. In addition, our programs should be available in urban areas to the extent resources allow.

16. Extension faculty must be effective educators and be competent in the use of educational principles and methods, as well as subject matter.

17. Extension must be aggressive in seeking public and private funding beyond regular appropriations.

We believe these value statements are the beacon by which we guide our decisions. They help us take the philosophical statements of our mission and bring them to life.

October 1985 will mark the beginning of the twelfth year for the Minnesota Sea Grant Extension Program. The program was initiated by the Continuing Education and Extension Program and the Agricultural Extension Service. The Sea Grant research effort was initiated in 1977 with four projects. In 1983, continuing Education and Extension withdrew financial support, and is no longer involved.

The Program is administered jointly through the Agricultural Extension Service and the Sea Grant Program. Sea Grant Extension appointments are in the Agricultural Extension Service, Community Natural Resource Development (CNRD) program area. Agricultural Extension Service pays 20-25 percent of Sea Grant agents' salaries, and Sea Grant agents have similar rights and responsibilities to other agents with AES appointments. The relationship allows Sea Grant agents access to all county extension programs and state extension specialists. Sea Grant agents are considered Northeast District CNRD staff by Agricultural Extension Service for purposes of coordination and administration. All planning and reporting is handled jointly by the CNRD program area and the Sea Grant Program. Sea Grant staff take staff development and training offerings through the Agricultural Extension Service.

Currently, the Sea Grant Extension Program is primarily limited to the Great Lakes coastal area. That comprises three counties, or about 3.5% of our total counties, serving approximately 6% of the state's total population. The coast is 206 miles long, 32 of which are within the city of Duluth. It is a major recreational resource within an international seaport. The Sea Grant Extension Director supervises the work of five
regional or multi-county staff, all located at the University of Minnesota-Duluth campus, and he coordinates the work of one campus-based specialist, located on the St. Paul campus. The agents are accountable through the Sea Grant Extension Director to the area CNRD program area. The Sea Grant Extension Director is administratively responsible to both the Sea Grant Director and the Associate Director of CNRD.

Currently, the Sea Grant Extension efforts are divided into seven program components:

1. Marine Recreation and Tourism
2. Coastal Industries
3. Communications
4. Marine Education
5. Fisheries
6. Aquaculture
7. Coastal Engineering

If I were to characterize the program as it is regarded within the Agricultural Extension Service, I would say it is a high quality educational program with an exceptionally talented staff of agents. We see strong cooperation and coordination among AES and Sea Grant staff at the local level. The impact of Sea Grant Extension programs on the total Agricultural Extension Service, however, is limited because of the scope and size of the program. Programming is confined to the coastal region and the Sea Grant Extension staff comprise less than 2 percent of the total extension service faculty. Nevertheless, I believe the limited resources of both Sea Grant and Agricultural Extension Service are considerable enhanced by the integration of the programs.

Several problem areas exist and will continue to exist as we move forward with this partnership:

1. Integration in all areas, including Sea Grant, required strong commitment for cooperation, collaboration and communication. These three "C's" take a great deal of time and are essential if trust is to build and more high quality integrated programs are to be the result. It is difficult to protect the time to be certain these three "C's" are handled effectively.

2. Because integration is by its nature an ambiguous, not clearly defined state, there is always a tendency for undue amounts of time to be spent on clarifying boundaries, relationships and administrative spheres of control. The goal of effective integration is to lower such divisions and distinctions. Ironically, however, sometimes our philosophies are ahead of our implementation skills, and we find ourselves caught up in attempting to define a highly ambiguous condition and losing our philosophical compass-point in the process. In such instances, program suffers and the staff experience increased stress. We believe, however, that as trust builds, the need for precise definition should diminish. Here, as in many other instances, the AES underestimated the magnitude of the effort of working through the process. That is not to say it is not worth it. To the contrary, I think it is. It just means the task is more difficult than we imagined.

3. Within its borders, Minnesota has more surface water than any other state in the nation. Water quality has become a national and a state priority. Fifty-eight agencies, at last count, in Minnesota are engaged in water
quality work. There is a tremendous need for more leadership and coordination. Minnesota Agricultural Extension Service needs to be more responsive in the water quality area. On the one hand, Sea Grant Extension would appear to be uniquely qualified to provide some of that needed leadership and thereby expand its visibility and impact on the state and the organization. However, the coastal focus of the program seems to preclude this role and we are not particularly skilled at looking at options or negotiating compromises. A similar scenario could be mentioned with regard to water transportation. Sea Grant has done programming in this area around the port of Duluth, but many of the state's issues also involve the Mississippi River. What is the opportunity for Sea Grant to exert leadership? Similar examples could be given in tourism, fisheries, and public policy. To what extent can the state's needs and the state's priorities shape the scope and the function of the Sea Grant Extension program? Certainly, Agricultural Extension Service's commitment to Sea Grant and Sea Grant's potential for growth within the Agricultural Extension Service will hinge on the answer to that question.

To conclude, we are happy to have the Sea Grant Extension Program integrated into the CNRD program area of the Agricultural Extension Service. We think that we are basically compatible partners. The agents in Minnesota have strong programs and they are capable of educational leadership beyond the objectives and goals of their current program. We are committed to the communication, cooperation and collaboration needed to more fully develop our potential.
SEA GRANT IN STATE COOPERATIVE EXTENSION PROGRAMS

A SEA GRANT DIRECTOR'S VIEW

William Q. Wick, Director
Oregon State University Sea Grant College Program

"The ultimate goal of the Sea Grant concept is to exploit the ocean in the national interest," Harve Carlson, October 1965.

There is absolutely nothing in Sea Grant's enabling legislation that says Sea Grant Advisory Services (Extension Sea Grant-ESG) should be integrated with State Extension Services (ES). Nevertheless, ES is probably a suitable home for ESG—if ES, after 70 years, is flexible enough to accommodate Sea Grant's functional paradigm.

Understanding Sea Grant

Sea Grant was formed primarily by blue-water oceanographers. Some of them thought they had designed another much needed source of ocean research funding. What really emerged was a unique people-oriented, university-based marine resources development program. A year or two after program inauguration, 'hard science' had been augmented by 'soft science', if you will. A major infusion of academic talent had crawled under the tent from outside the traditional boundaries of marine science. Lawyers, economists, anthropologists and, yes—extensionists and others had enlisted in Sea Grant and brought a new dimension to ocean development: People had entered the marine equation. And, because of this, the extension element of Sea Grant has continued to grow—now to 30-40% of the pie at most Sea Grant Colleges.

Sea Grant, Like Land Grant, Is a State of Mind

Sea Grant is perceived to be a larger program than it is, locally and nationally—a small tail waving a big dog. At OSU, Sea Grant makes up about one-seventh of the $24 million annual marine budget, but many people assume that marine science, fisheries, ocean engineering, oceanography, etc., are synonymous with Sea Grant. Thus, Sea Grant is expected to be more and do more than it is capable of. One of our state Senators said, "Sea Grant is a good program but the research ship is always off South America."

Learning from each other

Athelstan Spilhaus seemed to really mean it when he called for 'county agents in hip boots'. After 17 years of experimentation, some conclusions can be drawn about this cooperative effort.

ESG-Sea Grant can and has learned from ES-Land Grant. But, ES, also can learn from ESG.

Consider this Extension mission statement: "The Oregon State University Extension Service provides education and information based on timely research to help Oregonians solve problems and develop skills related to youth, family, community, farm, forest, energy, and marine resources."
What does ESG get from ES?

Attitude—'smell of the hide'. A string of degrees does not an extensionist make—in fact, extension may be more art than science. I'm biased since I learned from office-sharing with an old time county agent.

Legitimacy—many Americans, rural or otherwise, know about Extension and county agents.

A method of operation, administration and training.

A cooperative funding model.

An army of colleagues.

Contrast this Ext/Sea Grant mission statement: "The Extension/Sea Grant Program provides training, education and technical assistance to people with ocean-related needs and interests. Major efforts are concentrated in fisheries and wildlife, marine engineering, food science and technology, economics, business, resource management, education, and recreation."

What does ES get from ESG?

An exciting new program area, more stimulating than rural civil defense, as I recall.

A sense of close functionality, among research, education, and extension. More on this later.

Some revised approaches to program delivery: interstate talent sharing, multi-state agent staffing, agents as specialists, increased use of research faculty for the extension function.

Access to a remarkable new collection of talent. In Oregon, for example, about half of the USDA Superior Service Awards since 1970, and many other recognitions have gone to ESG faculty. ESG in Oregon makes up about 5% of ES faculty.

Early Arguments

In the earliest days of Sea Grant I irritated colleagues by arguing that Sea Grant was simply a wet analogue of Land Grant and that marine advisory (ESG) programs were the same functional entity as ES. Elements on the other side replied in derision—'Do you mean the Agricul—tural Extension Service?' Perhaps some of you were involved. If so, you will remember that these were serious occasions that cost thousands of flight miles, days of time, and even a bucket of tears, if you can imagine.

But, then I became a Sea Grant College Director, and I've had reason, ever since, to ponder the question. I have found that there are differences between Land Grant and Sea Grant and differences between ES and ESG. Some of these are cosmetic; others are fundamental. Perhaps some have to do with aging. Let's look at some examples:

Size—Sea Grant is a small program, perhaps a tenth or less in total than even the ES part of Land Grant.
Historic—Land Grant's functions, specified in the Morrill, Hatch, and Smith-Lever Acts arose in three sequential human generations. Sea Grant's functions were established simultaneously. Because of this, Sea Grant maintains a functional closeness that Land Grant may have no chance of achieving. Schuh, "We (Land Grant Universities) need to revitalize the tripartite mission of training, research, and extension." Figure 1 helps me to understand the relationships among research, education and extension.

Competition and survival—Sea Grant people live by their wits, from budget to proposal and from year to year. Sea Grant is not merely slated for federal budget cuts; it's slated for annual extinction. This has made Sea Granters' alert, nervous, and somewhat belligerent. Fortunately, most elements of ES do not face this constant preoccupation with survival.

Each program is a friendly (?) competitor with all others.

The air of uncertainty has an effect on Sea Grant planning and conduct. Director's spend more time than they will admit in rebuilding positive attitudes. This is time lost from productivity.

ESG has pioneered new program delivery arrangements, out of necessity. These actions, such as talent sharing, are not usually the practice in ES.

Most of the 250 universities and colleges involved in the 29 program Sea Grant network are non Land Grant or private. Their extension philosophy is often underdeveloped.

Longevity may breed rigidity. Is Land Grant rigid? Sea Grant, to date, has been evolutionary. Freedom for new ideas can result in extraordinary productivity. As we, in Sea Grant, move toward more regimentation in planning and review, innovation may diminish. One of our best researchers told me—"little minds make little boxes."

Varied planning, proposing and reporting horizons between ES and ESG are an irritating difference. Can this be solved?

Sea Grant Research Myths and Realities

Sea Grant research is believed to be problem-oriented, localized and quick response. This is not true—in a sense that folks outside the universities can understand.

Fundable Sea Grant research is good science tending toward the basic side of the spectrum. Supporters, legislators, and the marine community presume that it is problem solving and wealth generating. It is, in time. The selected projects, however, may seldom match needs identified by ESG.

Fundable Sea Grant research is generic (national, regional), but is expected by constituents to be specific and localized.

Fundable Sea Grant research is futuristic and long term, but is perceived to be quick response.

These are the facts of life and cause the Sea Grant Director some heartburn. Who will conduct the suite of rapid response, crisis oriented, short term research projects?
Figure 2 illustrates the functional assignments for faculty in the OSU Sea Grant College. Other Sea Grant programs may vary in numbers but not fundamentals. Involved in Sea Grant are 81 faculty from five universities. These 81 total 36.6 full time equivalents (FTE's). Research involved 59 faculty, 20.4 FTE's. ESG totals 17 individuals, but 12.3 FTE's. Four faculty, 3.6 FTE's, are in administration and communications. These four are the only direct hires. ESG and research faculty are in other departments or other universities.

I describe this fascinating situation to explain a problem. There are times when I need and covet ESG for its faculty FTE's. I need help to take on the rapid response research and may need help in what I call "white hunting". I call on our ESG and they help, smiling most of the time. Both the ES and ESG Program Directors must agree to permit these occurrences. I predict that more and more of the short term studies will be conducted by ESG agents and specialists. California seems to be doing a good job at this now. This is certainly not new since ES has been involved in demonstration projects since time began. The difference may be in the complexity of emerging technologies.

As described in Partners and Parallels, there are several patterns in integration of ESG with ES. Most Sea Grant Colleges are administered from Land Grant campuses, the home of ES. The philosophical fit is comfortable, usually. Still, some of these have chosen not to integrate or to cooperate in segments. The caution may relate to unique Sea Grant needs or past experiences. Non Land Grant and private institutions have been especially cautious and uncomfortable.

Let me suggest, humbly, a more fundamental reason. Extension in Land Grant and Sea Grant may be operating under two paradigms. Admittedly, each overlaps the other.

1. In the Land Grant case, the primary goal is to improve the capabilities of people. Technical knowledge is the medium through which the training occurs. Experienced ESG agents in ES offices display this mode.

2. The central focus of the Sea Grant model seems to be a dedication toward making the functional elements of research, education, and extension mutually and closely supportive in developing the natural and human resources of the ocean arena.

Which paradigm fits Harve Carlson's statement?

At a later time, let's share a deep look at these questions. For the present, and for the OSU Sea Grant College, I am pleased that OSU has an integral relationship with ES.
SEA GRANT IN NEW YORK COOPERATIVE EXTENSION

Bruce Wilkins, Program Leader
New York Sea Grant Extension Program

New York has nearly 2500 miles of shoreline, most of that on the Atlantic. We are unique in having another 600 miles on the Great Lakes. Twelve million people live in our coastal counties.

And yet, as recently as 1971, no Cooperative Extension efforts were focused on marine or Great Lakes efforts. The 40 million pounds of food produced by New York fishermen were not considered when we in Extension said we were concerned with production of food and fiber.

Today - Cooperative Extension in New York has more than 25 positions with significant coastal emphasis. Marine efforts are a division, equivalent to agriculture or 4-H. And, I believe — know — Cooperative Extension and Sea Grant have benefited from this joint effort.

Sea Grant, competitively funded, has brought to Extension a vigor useful in any organization.

Extension has provided the strong philosophical and structural base valuable to Sea Grant, and students in our colleges are better served too.

We, as most in the survey, currently emphasize regional staffing. We have 12 regional extension specialists each trained in a specialty such as commercial fishing or processing, recreation industry, 4-H or coastal structures. We have seven campus-based staff including myself, none currently have full time extension responsibilities. Marine economics, food and nutrition, aquaculture are representative of these positions.

The staff we have targeted for growth in long range plans since 1976 are County staff. Four county agents today have 40-50% of their time committed to marine topics. All are in 4-H or home economics. Within the past two months, three other counties have decided to commit significant portions of existing positions to the marine area.

Muen of N.Y. Cooperative Extension's funding comes from counties. Today five counties contribute an additional $80,000 in salary support for specialized staff, one county contributes $60,000 of that.

In the past five years, we have shifted or eliminated 8 regional positions that had been largely supported by funds derived from Sea Grant. We are moving toward more state and county support for our Sea Grant efforts. There are many reasons for that, we can discuss those if you wish.

Sea Grant Extension efforts were set up 14 years ago as "Skunk Works". Perhaps you have read "In Search of Excellence" which describes elements important in today's successful organizations. If so, you know skunk works are entrepreneurial units within big organizations. Break a "champion" of an idea loose from many normal institutional constraints, give them tightly limited resources and tell them to get the job done. It is there that innovation is most likely to flourish in large organizations. The IBM PC was developed by a skunk works. The authors don't stress it but skunk works, though fine, must be blended back into the organization for long time survival.
If Sea Grant was or is a skunk works, what has or can contribute toward making it more fully a part of the Extension family? I have noted nearly 20 elements one might see as important. Some or all should have relevance in your situation as well as ours.

I'll look separately at state and county actions. We in this room presumably can influence the state items. These include:

A. A leader is present whose performance review and career is based primarily on making the marine effort successful. A champion—without this, forget it.

B. A name that gives credit to both partners. For example, Sea Grant Extension Program.

C. Have a staff position for marine efforts within Extension administration. Needn't be the person in A, but probably most logical.

D. Have representation on the state Extension advisory board from your marine constituency. Surprisingly few committees in most marine programs, yet this is a tenant of good extension programming.

E. Have the Extension Director on the Sea Grant College advisory or governing board.

F. Publication and media support for the Sea Grant Extension Program is identical to other Extension efforts. (Sea Grant Extension using the Sea Grant communicator seems poor).

G. Other support areas are as available to Sea Grant Extension staff as to others (penalty mail, awards, travel, computers).

H. Marine efforts gain equivalent fiscal support from funds controlled by the Director of Extension.

I. Where appropriate, divisional status is achieved.

J. Marine extension staff assume wider Extension leadership rolls.

K. Indirect costs for this extension effort equals that charged on Smith-Lever funds.

What about county action? In all states, county extension effort is extremely significant. What are some key steps, indicators of progress with county staff and programs?

1. Marine programs in counties are topics at meetings of district or regional administrators.

2. Some county staff time is committed to marine programming.

3. Marine topics are included in statewide meetings of county administrators.
4. Some county funds are committed to marine efforts.
5. Some county staff position descriptions include marine responsibilities.
6. A county committee with a marine focus is established.
7. Representation from the marine audience sits on the county extension board.
8. Technical competency for some county positions specifies a marine field.
9. County leaders selected from among those with marine background.
10. You tell me.

Certainly some sticky wickets have to be overcome. The different funding sources make that a reality. They can be overcome if we keep in mind what the primary intent is. Penalty mail, names, performance review procedures - we can find a win-win solution, if we commit ourselves to that.

It is in our minds that most of the problems exist, and we can change that, as well as our practices. A marvelous phrase of Aldo Leopold applies here. In writing of expanding opportunities for hunting he noted "The job of recreation engineering is not one of building roads into the still lovely wilderness, but of building receptivity into the still unlovely human mind."

There is, and there will be, a dynamic tension between any new organization seeking to make its place in a larger group. Sea Grant Extension programs within Cooperative Extension reflect that.

But, if we are committed to providing the maximum benefit to the peoples of our state, we will move through such barriers to imaginative and productive solutions.