

COASTAL CONNECTIONS



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COASTAL MANAGEMENT PROFILE



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Hometown: Amarillo, Texas

Education: BA in public administration, West Texas A&M; MA in regional planning, University of North Carolina at Chapel Hill

Most fulfilling aspect of your job: It is very fulfilling to help the staff be successful and accomplish our mission.

On par with helping the staff, my interactions with our visitors to the reserve are rewarding.

Most challenging aspect of your job: Getting everything completed within a 40-hour workweek.

One work-related accomplishment you're proud of: I have a dry erase board in my office. On the board, I write short-term tasks that need to be completed. Every Monday, I review the board and erase completed tasks. It can be a good way to

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THIS ISSUE'S FOCUS

THE HUMAN TOUCH

Just what is social science? Most people have heard the term before, but how many really understand what it means and what it can offer to coastal management? Sometimes used in conjunction with the term human dimensions, social science is the process of explaining, describing, and predicting how individuals and groups act and behave.

Some of the most challenging decisions in coastal management depend on the relationship between people and the environment. Coastal managers have become increasingly aware of the importance and helpfulness of using social science information and tools.

Most environmental research is within the field of natural sciences; however, the experience of coastal managers has shown that a better understanding of the human dimensions of coastal issues is as important as understanding the biological and physical aspects.

Observing, surveying, and assessing the public are just a few of the many methods for understanding a community's attitudes, perceptions, and needs. As described in the following section, finding the right techniques for each management decision can mean all the difference.

Opening the Lines of Communication

In the mid-1980s, the South Atlantic Fishery Management Council (SAFMC) was receiving major criticism for the way it was choosing its advisory panels. SAFMC wanted to establish and maintain stronger ties and find a more effective method of locating influential members within the fishing community.

According to John Maiolo, professor emeritus for East Carolina University (ECU), "they [SAFMC] were getting criticized from underneath and above for playing the buddy game and needed to find an objective way to select people to their advisory panels that were truly representative of the fishing network."

To achieve its goals, SAFMC sponsored research through ECU to identify ways to improve communication between the council and local fishermen.

The questions of "how can we give them a tool they can use, where do you start, and how do you get something to stop," needed to be addressed, says Maiolo, principal investigator of the research. "Connecting lines among people in the network had to be established."

The goal of the study was to identify influential charter, commercial, and recreational fishermen within the king mackerel fishing community in North Carolina and throughout the Southeast.

"To begin the process, we randomly sampled people the council believed were ones others relied on in the networks for information," says Maiolo.

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start a week and does make me proud.

One personal accomplishment you're proud of: Our children are wonderful little people!

Things you do in your spare time: As a parent of three children ages 7, 5, and 18 months, I seldom use the words "spare" and "time" in the same sentence. Prior to parenthood, I really enjoyed bike riding.

Family: "Remarkably tolerant" wife, Candice; "highly intelligent" son, Josh; and daughters, Sara, "highly evolved personality," and baby Hannah, "well aware of her cuteness."

Favorite movie: *The Shawshank Redemption*

In your CD player right now: Tish Hinojosa, *A Heart Wide Open*.

"Growing up in cattle country in the High Plains of Texas, I did not see the ocean until I served in the Navy after high school and community college. I had a tremendous experience in grad school that set the course for what I hope is the rest of my career."

The Lopez family lives in Huron, Ohio, within canoe commuting distance of the reserve.

"Although we have moved around a lot in the past few years, we believe that we have made a home here in Ohio. We have a full schedule of school concerts, baseball, basketball, and t-ball games on weekends. When the opportunity presents itself, I try to foster my son's interest in fishing in Lake Erie. My wife has returned to college to take night classes, so I spend a lot of my evenings making dinner, reviewing homework, and reading stories."

Using social network analysis, participants were asked to list three individuals they talked the most with in the fishing community. The identified individuals were then asked the same question until no new names were presented. Data were used to create a map to understand the groupings of the fishermen, who they communicate with, and their relationship patterns.

Fishermen were interviewed at home and work over the telephone and in person. Locals trained in interview administration and experienced interviewers from ECU gathered the information. Forms were provided, and those who scored the highest were seen as the key members. Age, number of years in the community, experience, periodicals they subscribed to, education, income generated through fishing, and membership in organizations were all taken into consideration.

"It's a complicated, expensive process, and we needed to find a way to shorten it," Maiolo explains. "We had to establish what they talked about and how often they talked. As a result, we looked for the most important characteristics that the fishery managers could easily identify."

"We found the most influential people had a great deal of experience, belonged to several organizations, and read many different periodicals," says Maiolo. "These features were easily identified. The ones that were most aware of what was going on and were looked to for information were the ones that went out and got the information."

Of the 238 king mackerel fishermen in the social network map, 10 individuals were revealed as having primary influence within the fishing community—two were commercial and

recreational fishermen and the rest were charter boat fishermen. When asked, resource managers identified only one of the ten individuals they thought to be most influential. The research showed that some areas and industries are more dependent on social networks than others and interviews can help assess needs and implement strategies. With the new list of key names, SAFMC was able to refocus its search and periodically update the advisory panel selections using information from their surveys.

"Apparently the method still works," explains Maiolo. "The technique [SAFMC's advisory panel process] is still used today and as far as I know, the criticism has all but gone away."

Following the mackerel fisherman activity, Maiolo used the same methods in the shrimp fishery, in identifying community leaders to examine offshore drilling, and in many other research cases involving coastal communities—all with positive results.

Methods for the Masses

In natural resource management, three recognized stages can be utilized in most decision-making processes. The stages—planning, implementation, and evaluation—are helpful in assessing a situation and determining the best course of action. Social science tools can be used in any or all of the stages to help provide information about social, economic, and cultural conditions within the community.

Phase One: In the first stage, when coastal managers are studying an issue and deciding what strategy they might pursue,

social science tools and information resources can provide helpful information about current conditions.

Potential tools to use: census, economic data, resource use patterns, a cost-benefit analysis, and needs assessments.

Phase Two: After a course of action has been decided upon, the implementation phase brings additional needs for people-related information.

Potential tools to use: surveys, social network analyses to identify key constituents, and focus groups.

Phase Three: Evaluation is an important but often overlooked part of the process. Social science methods can help measure impacts and identify future needs and strategies.

Potential tools to use: observation, interviews, and content analysis.

For more information, check out Research Resources for the Social Sciences, www.socsciresearch.com, or the Web Center for Social Research Methods at www.socialresearchmethods.net.

Tools of the Trade

- **Case study research** – An in-depth investigation at a specific location. Case studies may help managers understand the beliefs, perceptions, interactions, and attitudes of the groups researchers wish to examine.
- **Focus groups** – A structured process with usually eight to twelve participants that gathers opinions on a series of predetermined questions. The goal is to gather a range of opinions and ideas.
- **Observation** – A technique to collect information through personal or recorded observation. Study participation is sometimes required.

- **Social assessment** – An assessment to determine changes, social structures, and processes within a certain group or community. The technique gauges political, social, and economic trends in the community and the roles of race, age, and gender.
- **Survey** – A standard list of questions administered formally or informally in person or by phone, Internet, or mail.

Additional tools include comparative research, content analysis, cost-benefit analysis, demographic analysis, ethnography, historical research, interviews, network analysis, non-market valuation, predictive modeling, rapid rural appraisal, secondary data analysis, social impact assessment, and social network analysis.

Interest Piqued?

Web Resources

The National Oceanic and Atmospheric Administration (NOAA) created a Web site for coastal officials or managers interested in learning the roles of social science.

Features:

- Introduction to social science methods and themes
- A wide range of social science tools
- Case studies
- Print and on-line references

Check out the Web site at www.csc.noaa.gov/mpass/.

Training

For more information or to request training on social science, contact the Center's Coastal Learning Services program at nos.csc.CLS_trainers@noaa.gov.

Pondering Potential Problems

Social science can help answer many critical questions. Here are some key issues to consider:

- How prepared is your community for natural disasters?
- Does the public have adequate access to coastal resources in your area?
- How dependent is your community and local economy on the quality of the natural coastal environment?
- Does your community understand the value of your cultural and historic resources?
- How much do you know about your community's attitudes and perceptions towards the coastal environment?
- How has recent development impacted traditional uses of the coast?
- Do the decision makers in your community have the information and training they need to make well-informed decisions?
- How does tourism impact the character of your community?
- Is your community prepared for anticipated changes in your coastal area?
- Does your community strive to balance development with resource protection?
- How do human activities impact sensitive natural areas and wildlife in the coastal zone?

For more information, check out the Web site at www.csc.noaa.gov/mpass/.

Coastal Connections is a publication of the National Oceanic and Atmospheric Administration Coastal Services Center, produced for the coastal resource management community. Each issue of this free bimonthly newsletter focuses on a tool, information resource, or methodology of interest to the nation's coastal resource managers.

Please send us your questions and suggestions for future editions. To subscribe or contribute to the newsletter, contact our editors at

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NEWS AND NOTES

Maine Beaches Conference

This conference—titled *The Draw of the Sea: Yesterday, Today, and Tomorrow*—will be held Aug. 17, 2005, at York Community College in Wells, Maine. Conference session topics include tourism and its ties to the beach, rights to the sand, beach development through the centuries, monitoring beach water quality and profile changes, and planning with beach stakeholders. For more information, contact Kristen Whiting-Grant at kristen.whiting-grant@maine.edu.

OCEANS 2005 Meeting

The Marine Technology Society (MTS) and the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Oceanic Engineering Society (OES) will present the OCEANS 2005 Conference from September 19 through 23 at the Marriott Wardman Park Hotel in Washington, D.C. For more information, go to www.oceans2005.org.

Training Modules for Dock Management Workshops

NOAA's Office of Ocean and Coastal Resource Management and National Centers for Coastal Ocean Science have developed training modules and accompanying model PowerPoint presentations to help local and regional groups learn to sponsor their own dock management workshops. A description of the modules can be found at <http://coastalmanagement.noaa.gov/czm/dockpier.html>.

Accolades

The NOAA Coastal Services Center received three Awards of Excellence from the National Association of Government Communicators (NAGC) for *Coastal Services*, a national trade journal for coastal resource managers. *Coastal Services* won 2004 Blue Pencil/Gold Screen Awards in the internal magazine and writer's portfolio categories and for an article entitled "Tsunami! Preparing Hawaii for the Next Big Wave"... The Mississippi Department of Marine Resources (DMR) earned awards at the NAGC communication school. DMR received a second place award for its "BioBlitz" press kit and an Award of Excellence for the "Mississippi Boater's Guide."

Transitions

Pat Collins has been named program manager for Minnesota's Lake Superior Coastal Program.

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