MEETING SUMMARY

Coastal Oceans Task Force Meeting
Thursday June 12, 2014
Boca Raton Community Center
Silver Palm East Room
150 Crawford Blvd, Boca Raton, FL 33432

COTF members present:

John Haddox, Martin County Commission
Eula Clarke, City of Stuart
Steven Abrams, Palm Beach County Commission
Susan Haynie, City of Boca Raton
Claire Schubert, Town of Hillsboro Beach Commission
Stuart Dodd, Town of Lauderdale-by-the-Sea
Dana Wusinich-Mendez, National Oceanic and Atmospheric Administration
Dick Dodge, Nova Southeastern University Oceanographic Center
Jeff Torode, South Florida Dive Headquarters
Mike Kennedy, Recreational Fishing
James Byrne, The Nature Conservancy
John Sprague, MIAF

Alternates present:

Jamie Monty, FDEP, Coral Reef Conservation Program
Kevin Senecal, Divers Direct
Ed Tichenor, Reef Rescue

COTF Members absent:

Dawn Pardo, City of Riviera Beach
Bonnie Fischer, Town of South Palm Beach
Kristin Jacobs, Broward County Commission
Alex Lewy, City of Hallandale Beach
Frank Caplan, Village of Key Biscayne
Daniel Dietch, Town of Surfside
Chuck Collins, Florida Fish & Wildlife Conservation, Regional Director
Joanna Walczak, FDEP, Coral Reef Conservation Program
Bob Jones, Southeastern Fisheries Association
Becky Hope, Port of Miami

Also present:

Dan Clark, Cry of the Water
Stephanie Clark, Cry of the Water
Meghan Balling- FDEP, Coral Reef Conservation Program
Stan Pannaman, Sierra Club

Meeting was called to order at approximately 1:35 PM by Steven Abrams, Vice-Chair

No roll was called.

A motion to approve May 8th, 2014 meeting summary as published was made by E. Clark, seconded by C. Schubert, and passed unanimously.

1st Presentation: Incorporating Social Science Into Coastal Planning: Approaches and Examples

Dr. Manoj Shivlani, Center for Independent Experts, Lead Coordinator; Northern Taiga Ventures, Inc.

Dr. Shivlani presented his research regarding the relationships between the different stakeholders who interact with the coasts and ocean and how the knowledge of their uses and patterns of use can be used to reinforce or modify stakeholder values and behaviors towards sustainability.

For research purposes, stakeholders are defined as individuals belonging to larger groups that have a varying interest in a resource/issue. Based on the proximity of the stakeholders to a resource/issue, they can be divided into primary, secondary, and tertiary stakeholders (Pomeroy). Also, stakeholders are selected based on the scope and objectives of a study.

For example, stakeholders in Biscayne Bay would be divided as follows:

- Primary: Commercial fishers, recreational fishers, boaters, divers, marine industry, ports, marinas, beach visitors, and those who participate in water-based activities.
- Secondary: Cities and county, coastal residents, local environmental organizations.
- Tertiary: Federal resource management agencies, national environmental and interest groups.

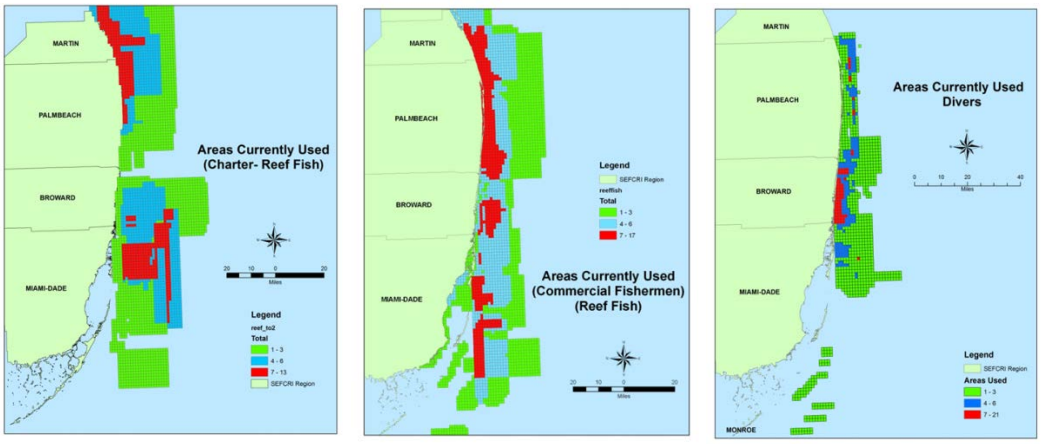
Once the stakeholders have been identified and categorized, an important step in coastal planning is determining uses and use patterns. This approach has now been formalized into coastal and marine spatial planning (CMSP), but for the purposes of this study he is referring more to a determination of uses and use patterns in informing CMSP and other coastal planning approaches.

This is important because it lets us know about the relationships between use and resource conditions. It helps identify areas of crowding, overuse, and conflict and

provides for a way to have stakeholders participate more directly in any decision-making process.

Here are some examples:

1. The maps below show use patterns among three different stakeholder groups. The use patterns demonstrate areas in which uses overlap and in others where uses are separated. This type of information is invaluable in setting up limits, mooring buoys, and other management measures.



2. Commercial fishers actively participated in 1998-99 to identify areas of use by species in part to develop the Dry Tortugas Ecological Reserve (DTER). The DTER was voted on unanimously in 1999 by a stakeholder working group and implemented in 2001.

Stakeholder values are important because they can be used to build stakeholder support towards particular actions. In cases where the values do not match up with resource protection and sustainability measures, the information can be used as a means by which to improve outreach and education.

Stakeholder views (attitudes, perceptions, and beliefs) are paramount to coastal planning. Stakeholder views may help in identify potential management mismatches. This should result in the need for better education and outreach. Stakeholder views can also help to guide management and planning activities. This will help in developing consensus and build impetus for action.

Social science research in the Florida Keys determined that many stakeholders were against the implementation of Florida Keys National Marine Sanctuary and especially its no-take zones. The FKNMS used a top-down approach and neglected to incorporate stakeholder input, arguing that opposition was driven by interest groups, the result being that in 1996, 55% of Monroe County voters rejected the Sanctuary. This led to the FKNMS reconsidering how it would implement its zones and adopting the Tortugas process.

Social science represents the 'human' side of science and can provide valuable information in formulating policy. Determining stakeholder uses are key to understanding how regulatory measures can affect those uses. Understanding human values and views can yield strong support for measures. Shared views across stakeholders groups suggest strong baseline support for action. Monitoring and adaptability can strengthen measures. Adaptive mechanisms can be built into planning measures that account for unintended outcomes.

Recommendations:

1. Too often, social science is added to planning measures, such that the human dimensions are accounted for as impacts after the planning effects take place. Human dimension's research should be incorporated at the planning stage, as it can provide invaluable information on the success of the measure and on its overall impacts.

2. Social science is often considered as a snapshot, or a reference point, and therefore is often unable to provide meaningful information on future activities. Social parameters, such as use, participation, impacts, etc., all change over time, and we need to consider a continuous data series, indicators, or other cost-effective approaches to assess the human dimension via a monitoring program.

   Example: there are several studies monitoring fisheries in marine protected areas, such as the Tortugas Ecological Reserve, but none on changes in commercial fishing communities.

3. Stakeholder involvement is often one-directional and therefore leads to fatigue or a sense of ineffectiveness among stakeholders. This can and should be changed by conducting more participatory activities in which stakeholders can provide information and participate decision-making. Co-management approaches in some areas, community working groups in others, and advisory councils in others are all good examples of improving stakeholder participation and communication.

Questions:

Have you ever done studies analyzing the relationship between where the fish are and where the reefs are or the people are? *No, but we have made our research available to other organizations who may be interested in doing those studies. That is one of the goals of the SEFCRI decision support tool for the Our Florida Reefs initiative working groups is to have data such as that arranged in layers so the different elements and how they interact can be studied. J. Walczak, responder*

Do you have a way of gauging participation and satisfaction? Example: many groups such as ours meet in the daytime when it may not be convenient for stakeholders who have jobs that are in conflict with our meeting times and therefore you will not get "buy in" from those stakeholders. *That is always a problem. We try and offer the information*

in many different ways; the internet, direct mailings, radio and TV, etc. The idea that everyone has time to come to actual meetings may be outdated.

Comments: There has been much discussion regarding meetings and participation in them by stakeholders. Many different approaches, times and interactions are used to try and get the biggest response.

2nd Presentation: Economic value of our coasts in southeast Florida
Grace M. Johns, Ph.D., Economist, Hazen and Sawyer

This presentation discussed the linkages between the physical state of the coastal ecosystem and its value to humans; the benefits of estimating the value of coastal ecosystem services; examples of Florida coastal ecosystem services valuation studies; economic indicators of ecosystem services; and recommendations for future research.

Recreation, aesthetics, and climate are common property because they can be enjoyed without exclusion. Individuals make decisions based on what is best for the individual given opportunities and constraints. When a resource is common property, individual decisions to protect the resource are not sufficient. Common property resources require common ecosystem management through government regulations and incentives.

Regulations and incentives are most effective when based on shared knowledge. The major tasks are to: (1) Conduct applied research on the types, uses, and values of the ecosystem services provided; (2) Institute public outreach to disseminate results; (3) Develop incentives and regulations that effectively protect the services provided; (4) Implement annual ecosystem services monitoring and (5) Repeat steps (1) through (5).

There are four linkages between the Physical State of the Coastal Ecosystem and Values to Humans. (1) The Physical State of the Coastal Ecosystem determines the Coastal Ecosystem Attributes That People Care About which determines (2) the Coastal Ecosystem Services which determines the (3) Ecosystems Services Values to Humans (Monetary, Cultural, Social values) which determines how we (4) treat the Physical State of the Coastal Ecosystem. This cycle repeats itself.

The physical states of the coastal ecosystem include the water column; fisheries; coral and hard bottom; mangroves; beaches; coastal wetlands; inshore flats; submerged aquatic vegetation / seagrasses; oyster reefs; and offshore benthic habitat.

The coastal ecosystem attributes that people care about include: abundant and safe seafood; air quality; beach and shoreline quality; climate regulation; erosion and storm protection; extent and quality of plant life; large number and variety of healthy coral, fish, birds and large wildlife; maritime landscapes and coastal views; and natural filter for storm water runoff.

These ecosystem attributes combine to provide coastal ecosystem services which are Recreational Opportunities; Food Supply; Climate Stability; Educational Opportunities;

Aesthetic Environments / Cultural Identity; Existence of Plants / Wildlife; Ornamental Resources; Pollution Treatment; Property Protection; and Scientific Resources.

Ecosystem service values are tied to the quality and quantity of ecosystem attributes. These values include income and employment from recreation expenditures, commercial fishing expenditures and profits; and human well-being reflected through property values, avoided costs, and willingness-to-pay for seafood and coastal recreation. These values are linked to the "State of the Ecosystem". Information on economic values helps to select and validate effective management alternatives.

Knowledge of economic values improves ecosystem management. Valuation methods include survey research, statistical analysis of economic data, and economic input-output modeling. While the value of ecosystem services is "infinite" to some, this assessment is not helpful in making management and fiscal decisions. Good estimates of economic value improve decision making and long term ecosystem management.

Economic Valuation Examples:

1. Attendance at southeast Florida's National and State parks located along the coast totaled 2.7 million person-days in 2011. The estimated value to recreators of days spent recreating on the coast at beaches and offshore is at least $30 per person-day. Therefore the total value of coastal parks in south Florida to recreational users is at least $81 million per year. This value does not include the income received by residents as people spend money to recreate along the coast.

2. Residents and visitors spent 10.9 million person-days recreating on the Indian River Lagoon in eastern Florida in 2007. A person-day is one person participating in a recreation activity for all or a part of one day. Even though multiple activities can take place during a day, only one primary activity is counted per person per day. The three most popular primary activities were fin fishing; swimming or wading; and power boating. The annual value of the Indian River Lagoon in 2007 was $3.7 billion. Most of this value is the value enjoyed by those who recreate on the Lagoon and those who live on or near the Lagoon. The Lagoon also generated $630 million in income to the residents of the five Indian River Lagoon counties as residents and visitors spent money to recreate on the Lagoon. The St. Johns River Water Management District uses this study's results to convey the benefits of protecting and enhancing the lagoon's ecosystems in public outreach materials. The values are used to justify public funding to protect and enhance the Lagoon's ecosystems and are considered in annual IRL program work plans.

3. Residents and visitors spent 65.5 million person-days recreating on Biscayne Bay in Miami-Dade County, Florida in 2004. The three most popular recreation activities were viewing the Bay from shore; swimming from shore; and fishing from a boat. Biscayne Bay recreation generated $2.1 billion in income to county residents and was responsible for 57,100 jobs. This is 3.4 percent of Miami-Dade County's economy.

4. Residents and visitors spent 29 million person-days snorkeling, diving and fishing on southeast Florida's natural and artificial reefs in 2001. The annual value of southeast Florida reefs to users was $3.3 billion. This study also provided a one year snapshot of the jobs and income created in each county (Martin, Palm Beach, Broward, Miami-Dade and Monroe) from these activities; users' willingness-to-pay for new artificial reefs; and resident support for no-take zones.

Economic indicators provide a link between (1) ecosystem health, (2) human well-being, and (3) ecosystem service value. They can be measured each year to obtain immediate feedback. Used with ecologic indicators to assess the status of ecosystems, economic indicators help to prioritize management goals and validate management success. Examples of economic indicators include the percent change from year-to-year in:

- Beach & wildlife-related recreation – Attendance at coastal parks;
- Offshore marine recreation – Number of recreational boats registered in counties;
- Food supply, commercial fishery – Pounds of seafood landed commercially in counties;
- Ornamental resources – Number of live marine organisms landed commercially in counties; and,
- Property protection – Dollar value of insured flood damage claims paid.

Economic values put a human face on the "State of the Ecosystem" to garner attention from policy makers and to emphasize the popular notion of providing jobs and expanding or sustaining the economy. Dollar values are an important component of benefit-cost analysis and can be used to determine compensation from natural resource damages. Information on economic values can be useful in selecting and validating management alternatives. However, values of Florida marine ecosystem services are not routinely estimated and existing studies are dated.

Recommendations to support coastal ecosystem decision-making include funding basic valuation research on a regular basis to keep values up-to-date and conducting economic studies that address the impact of management decisions on value. In addition studies that identify the relationships between economic indicators of ecosystem services and influencing factors are needed in order to net out the effect of ecosystem attribute quantity and quality on the value of the economic indicator.

Questions: How do you determine the consumer surplus? *The way we have been doing it is with contingent valuation surveys where we ask the interviewees a series of yes or no questions and from those responses infer what the value is to the whole sample.*

Regarding the reef study, what questions were you studying? *Use value and economic contribution. We used recreational expenditures, recreational use value, and the income generated.*

For other studies, the main thing is figure out how you are going to use the information you receive in order to design your study. The more well thought out the study is, the better the information received will be. You need to prioritize requirements depending on how much money is available for the research. Real estate values are researched differently and sometimes are not useful.

SEFCRI update: Meghan Balling, FDEP, Our Florida Reefs (OFR) As said before, there is standing meeting dates on the 3rd and 4th Wednesday of every month for the south and north working groups. Last month James A. Bohnsack, Ph.D and Kurtis Gregg, M.S. presented Fishery-Dependent Data Collection; David Gilliam presented Composition and Status of Southeast Florida's Coral Reefs and Brian K. Walker the The Seascape of the Northern Florida Reef Tract. Next month Manoj Shivlani Ph.D. will present his current research. A new public service announcement with Philippe Cousteau was created. This makes a total of 8 PSAs, 2 in Spanish.

Draft list of recommendations from presenters: C. Schubert asked that Inlet Management Plan should be added to list of recommendations as a separate item, not part of a larger coastal sand management item. A short discussion regarding the disparity of sand bypass movement requirements for different inlets followed.

S. Abrams advised that K. Jacobs requests that interim recommendations be considered for adoption. This would require staff to start prioritizing and categorize our current recommendation list. This could be accomplished over the summer hiatus. Staff will bring back a prioritized and categorized list to the September meeting for discussion. This interim recommendation list will be confined to topics already presented to the members.

New business: There will be a summer hiatus. Meetings will resume in September 11, 2014. Venue to be decided by staff.

Public Comment: Tanya Tweeton, SE Florida Sierra Marine Team 1) Stakeholders need to be encouraged to become more involved. 2) The Indian River lagoon is currently "dead" and the data collected by Dr. Shivlani in 2007 is no longer current. Who would fund any new studies? *New studies will be part of our commendations.*

Stan Panamann, Broward Sierra Club, 1) Why isn't there anyone looking at Lake Okeechobee and the fact that the runoff pollution into it is causing all the problems? *That is on our list of recommendations, #1 and #2.*

Meeting adjourned 3:10 PM.