Introduction

With Florida facing continual shoreline attrition due to normal sand migration, weather events and the “slow” emergency of sea level rise, coastal armoring is the “answer du jour” for protecting private property from sea water intrusion. Questions remain, however as to the effectiveness of coastal hardening as well as its impact on beach habitat. The objective of this session was to study the complex triangle of beach dynamics, coastal protection strategies/policies and sea turtle nesting. Southern Brevard County has the highest density of loggerhead and green turtle nesting sites in the western hemisphere and Vero Beach was selected as the venue for the session. The focus of skill set training at Vero Beach was Effective Negotiation.
Coastal Armoring: Session 6 began with a brief overview of growth and natural resource management in Vero Beach and Brevard County. Particular emphasis was placed on description of the changes occurring in the outlying (western) areas of the County where agriculture (citrus groves) continue to be pressured by and converted into housing developments. Tom Anderson and Thomas Ruppert, Attorneys from the University of Florida’s Center for Governmental Responsibility (CGR) followed the overview with a research-based presentation focused on coastal issues, specifically: 1) the current state of Florida’s beaches, 2) the policy framework used to protect sea turtle nesting habitat in Florida, 3) the shortcomings of current policy and implementation, and 4) proposed policy innovations.

The primary causes of coastal erosion in Florida are storms, armoring, inlets and sea level rise. The state of Florida has little formal policy and few programs for addressing sea level rise issues. Sea levels are predicted to rise 0.18 to 0.59 meters over the next 90 years which could have devastating impacts on the State. It is unknown what the rate of this rise will be and there is concern that it will happen faster than earlier predictions suggest. Each 1 foot of vertical sea level rise equals 500 to 1,000 horizontal feet of beach recession, so the impacts on public beaches, adjacent lands, and beachfront development would likely be quite substantial. The presenters pointed out that 59 percent of Florida’s beaches are currently eroding and 47 percent are critically eroding. Although numerous techniques are employed to stabilize and “protect” beaches, many of these strategies actually exacerbate erosion over the long (and sometimes short) run.

To assess Florida policy regarding coastal beach management, the CGR’s Conservation Clinic carried out a review of state permits for coastal armoring as granted by permitting agencies in Tallahassee. They found that permit files generally contained little explanation of the state’s justification for approving beach armoring applications and also noted that sea level rise was not (and is not) being considered in the permitting process. After a thorough review they concluded that permitting criteria are not uniform and are often be politically influenced; few of the armoring projects examined during the research had been denied. In considering the implications for Sea Turtle nesting and conservation, the reviewers expressed concern and noted in addition to permitting issues the lack of a statewide Habitat Conservation Plan for sea turtles raises the question of whether the Federal Endangered Species Act is being implemented appropriately.

Although the state of Florida has numerous policies that seek protection of coastal resources through inland-focused development, natural shoreline maintenance and endangered species protection, the presentation made it apparent that coastal armoring decisions in particular are made on an incremental basis. Armoring permits did not often consider offsite impacts to adjacent private property, adjacent public property (the beach), and endangered species (cumulative impacts). Furthermore, the state has determined that beach nourishment is in the public interest and has spent hundreds of millions of dollars annually to bring sand to depleted shorelines. Since taxpayers subsidize coastal development through the Citizens Property Insurance Corp, the most prevalent provider of insurance for high-risk coastal properties, policies are actually encouraging beach protection and beach destruction at the same time, a conflict that needs to be addressed for sake of turtles, tourists and taxes.
**Principled Negotiation:** Later in the afternoon the session focus turned to negotiation skills with NRLI Fellows participating in applied exercises on effective negotiation, diplomacy and dispute resolution. The group began by reflecting on lessons-learned from their own work-related negotiation experiences. These experiences were summarized and compared to basic conceptual tools for negotiation gleaned from Fisher and Uri's classic text *Getting to Yes*. These included:

- Separating the people from the problem
- Expanding the pie
- Focusing on interests vs. positions
- Using agreed upon, objective criteria for agreements,
- Best/Worst Alternative to a Negotiated agreement (BATNA/WATNA).

Fellows also discussed alternatives to negotiation for situations when “Interest-based problem solving” is not necessary or desirable; litigation, boycotts, building grass-roots support for a cause, waiting for public sentiment to change and/or simply avoiding the issue in question were all discussed as viable strategies. Disputes are resolved one of three ways, through negotiation (reconciling interests), the legal system (determine rights), and via politics (power plays).

Subsequent to the conceptual discussion, Fellows worked through the first part of a negotiation skills simulation exercise called “Unhappy Trails”. The activity involved negotiation over the planning and establishment of a “rails-to-trails” project that would cut across an area characterized by diverse land-uses and stakeholders. The Fellows were divided into groups representing three different stakeholder groups and presented with fact-sheets that allowed them to assume the identities of the negotiating parties. Key underlying issues included individual property rights, public access, recreation and economic development strategies. The objective; to resolve the dispute in a way that met their interests while using techniques learned earlier in the session. On day-I each group was given time to achieve consensus among its own members as to how it could best approach the negotiation then plan for a Day II negotiation summit. These “internal” discussions may have been as challenging as the actual negotiation with the other parties. Negotiation planning included:

1. Clarifying thinking (identify your interests and desired outcomes)
2. Considering alternatives to negotiation (BATNA/WATNA)
3. Considering ways to “level the playing field” or increase negotiating power (ex. Alliances, attorneys, marketing, networking, mediation)

Attempting to understand the other parties and their interests, resources, BATNAs (try to imagine at least 5 different interests for each opposing party).

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**Sea Turtle walk:**

After a break for dinner at Mulligan’s restaurant the Fellows gathered for an evening presentation on sea turtles and sea turtle observation prepared by Fellows Jane Provancha and Jennifer Winters who were joined by a Brevard County sea turtle specialist. The NRLI group was provided with information on the natural history and current status of Florida sea turtles (Green, Leatherback, Hawksbill, Kemp and Loggerhead) and instructed on the protocols for the “turtle walk” that would follow. After traveling north in vans, small groups later walked the beach searching for tell-tale turtle tracks with Provancha, Winters and the County specialist serving as guides. After initial disappointment the groups were rewarded shortly after midnight with a spectacular green turtle sighting. The female Green climbed up on the beach and began to dig a nest as the fellows watched from a distance. Although she aborted her nesting efforts (the guides explained that green turtles are known for being finicky) and returned to the ocean, the experience was a marked one that helped turn an abstract discussion of turtle conservation into a more visceral consideration of the impact of development and coastal armoring on endangered species. Fellows also learned that the sea turtle nesting sights marked off and protected on beaches represent on about 10% of the total number of nesting sights which are regularly monitored by county specialists.

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**TURTLE WALK-TURTLE TALK**
**Field Trip:** The morning after the turtle walk, a slightly-groggy group met on beach behind the hotel for a walking survey of different types of coastal armoring and construction. The tour was led by Ichthyologist **Jonathan Gorham** – County Coastal Resources Manager for Indian River who pointed out examples and helped Fellows understand the costs, benefits and effectiveness of different types of shore-hardening, along with their impacts on beach species, most notably sea turtles. Shoreline “hardening” techniques observed included:

- **Dunes** – “Softest” method; a natural and vital component of Florida’s beaches. Dunes “feed the beach” by distributing sand as shorelines ebb and flow over time. The process assures turtle-nesting habitat. Dunes are not robust enough to resist major storms and the desire for “ocean views leads property owners like to build between dunes and the shoreline disrupting the natural sand migration process.

- **Seawalls** – Large metal plates embedded in the beach in front of construction. Protect properties from waves but exacerbate beach erosion. If neighboring properties are not similarly armored, create domino effect.

- **Stacked Geotube Revetments** – Piles of 8-10 flexible “tubes” filled with sand and buried. The large footprint created affects turtle nesting area availability because geotubes must maintain 3 feet of sand coverage (difficult) if effective turtle nesting is to occur on top of them. Escarpments usually form.

- **Prefabricated Erosion Protection (PEP)** – Submerged narrow-crested breakwater located about 100 yards off-shore. PEPs are meant to reduce wave height, diminishing erosion and maintaining a stable shoreline.

**NEGOITIATING EFFECTIVELY II**

**Intro to Principled Negotiation II – “Diplomacy” and “Unhappy Trails”**


After a break for lunch, the project team briefly reviewed the steps involved in “classic” diplomacy (negotiation) as once taught to heads of State:

1. State the problem
2. Admit your own error
3. State the error of the other party
4. Propose specific actions/solutions
5. Invite mutual acceptance of proposed actions

Illustrate the negative consequences of refusal and positive consequences of acceptance.

The merits of such a strategy were discussed and then Fellows once again split into their stakeholder groups to review negotiation strategies and select representative negotiators. Once ready, the representatives engaged in spirited negotiation using many of the techniques learned on day I and in previous NRLI sessions (i.e., active listening). Those not directly engaged in the negotiation observed the process and took notes. Discussions were productive in the end and a settlement was reached. The negotiation provided considerable material for subsequent processing and the Fellows left with ideas for incorporating negotiation lessons-learned back in their home institutions.
**Framing:** To round out the introduction to negotiation, the Fellows were introduced to the concept of “Framing”. Framing refers to the way elements in a dispute or discussion are characterized and can not only shape the questions being asked, but also help determine the outcome of a negotiation. The three areas of framing introduced in NRLI included:

1. Framing ourselves (how I/we want to be perceived and understood; examples = powerful/vulnerable or upholder of rights/victim)
2. Framing others (how I/we want you/them to be perceived and understood; examples = friend/enemy, credible/not-trustworthy)
3. Framing issues (how the situation is characterized; examples = public good or private property rights, economic sense/environmental peril)

Often times, whoever manages to frame the issue in terms of their interests emerges the victor in a negotiation.

As in all NRLI sessions, a stakeholder panel was convened on the afternoon of day two with the issue focus being perspectives on balancing conservation and development on Florida’s coast. The panel, moderated by fellow Kevin Hennessy, included six members representing a variety of perspectives on the issue:

- Monica Smiley - Costa de Este Beach Resort
- Lou Saparito - Volunteer “turtle scout;”
- Richard Herren – Coordinator, Indian River County Sea Turtle nesting Program
- Megan Koperski - FWC imperiled species management and permitting – lighting and coastal development;
- Gary Appleson - Caribbean Conservation Corporation

Questions and discussion ranged widely and provided an opportunity for Fellows to put faces on a number of the perspectives involved in the debate. The opening questions posed by Hennessy helped frame the discussion:

**Question:** What would you like to see (our shorelines look like) twenty years from now?

**Panel Responses:**
- a heavily vegetated dune system
- coastal retreat
- a dynamic shift in vision
- more balance in development
- public access & turtle issues taking center stage
- a paradigm change

Day II concluded with a visit to the house/farm of NRLI Fellow Charles Shinn in Vero Beach. The group was treated to a relaxing and delicious homemade dinner (including homemade pies and cakes!) and experienced the warm hospitality (and patience…) of the Shinn family.
Practicum Overviews

Fellows reported out on their practicum projects by presenting the following information to another practicum group: Title, purpose/objectives, stakeholders/interests, Next steps and timeline, most significant challenges and project timeline. Progress was discussed and questions answered in a subsequent plenary session. A debrief of the Vero beach session including key take-home concepts and tools was then led by Fellows Dianne Hughes and Bryan Fluech.

Feedback Panel

The final activity of the Vero Beach Session was the “Feedback Panel” led by fellows Chrissy Hensel, Jennifer Winters and Steve Allen. Using “Pictionary” as a forum for soliciting/providing feedback from/to the group. After noting how much they enjoyed the session overall they provided the following feedback:

- A need to return to raising hands before speaking (too much interrupting)
- A request for earlier access to readings from project team to increase review time
- Concern that there were too many environmentalists on the stakeholder panel
- A reminder to be “tough on issues, easy on people”
- A “five-star” rating for the turtle-walk experience

Sea Turtles and Light Word Search

Loggerhead, green and leatherback sea turtles nest on the coasts of Florida. To help the sea turtles, humans can reduce light pollution by turning off unnecessary lights or shielding lights. They can also allow dune vegetation, such as sea grapes, to grow and block the light. Find the key words listed below in the word-find puzzle.

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| BIRDS       | HATCHLINGS | NIGHTTIME | DISORIENT | LEATHERBACK | SEA GRAPES | DUNE | LIGHT POLLUTION | SHIELD | FIRE ANTS | LIGHTS | TURTLE | GHOST CRABS | LOGGERHEAD | TURN OFF | GREEN | NEST | WATER |
|-------------|-------------|-----------|-----------|-------------|------------|------|----------------|--------|-----------|--------|--------|------------|------------|----------|--------|------|-------|-------|
| BIRD        | HATCHLING   | NIGHTTIME | DISORIENT | LEATHERBACK | SEA GRAPES | DUNE | LIGHT POLLUTION | SHIELD | FIRE ANTS | LIGHTS | TURTLE | GHOST CRABS | LOGGERHEAD | TURN OFF | GREEN | NEST | WATER |

This report forms part of a series written by current NRLI Fellows. Reports represent and are a product of the experiential learning process that is a highlight of the NRLI program and have not been formally peer reviewed.