Habitats

- Shellfish aggregations:
 - Oyster reef.
 - Hard clam beds.
 - Scallop beds.
 - Dead shell accumulations.
- Other sessile fauna:
 - Primary coral reef architecture.
 - Patch reef, soft coral, anemones amidst soft sediment.
 - Live rock.
- Macroalgae: Fucus, Ulva, Laminaria, Sargassum.
- Submerged aquatic vegetation (SAV):
 - Tidal fresh and oligohaline spp.
 - Mesohaline and polyhaline spp.
- Tidal vegetation:
 - Saltwater marsh.
 - Brackish marsh.
 - Tidal freshwater marsh.
 - Mangroves.

- Coastal inert substrate:
 - Loose fine bottom (sand, silt, mud).
 - Loose coarse bottom (gravel, cobble).
 - Firm hard bottom.
 - Structured sand.
- Riverine:
 - Higher gradient headwater tributaries.
 - Lower gradient tributaries.
 - Higher gradient large mainstem rivers.
 - Lower gradient large mainstem rivers.
 - Low order coastal streams.
 - Non-tidal freshwater mussel beds.
 - Coastal headwater ponds.
 - Non-tidal freshwater marshes.

Species

- All ASMFC-managed species.
- All Council-managed species (NEFMC, MAFMC, SAFMC) with life stages occurring within 3-mile state limit.
- All other *native* diadromous species.
- Select state-managed species (e.g., blue crab) and unmanaged species (e.g., oyster toadfish, Atlantic silverside).
- Not included:
 - Bivalves (counted as habitat).
 - Species with no marine or estuarine life stage.
- Totals by region:
 - New England = 36
 - Mid-Atlantic = 55
 - South Atlantic = 62
 - South Florida = 62

Methods I: Rankings.

- Separate matrices completed for each of four sub-regions to accommodate:
 - Different species assemblages
 - Geographic variation in habitat use (and availability)
- Regional leads assembled teams of experts, each assigned set of species.
- Used published articles, grey literature, personal observations and personal communication, all documented in accompanying bibliography and notes pages for each species.
- Assigned one of six ranks to each node (species life stage-habitat type combination):
 - U = unknown (not very useful designation)
 - Blank = not present
 - L = Low = Infrequent or occasional use
 - M = Medium = Regular but non-essential use
 - H = High = Important use; loss results in significant impact on popn.
 - VH = Very High = Essential; species cannot persist without.
- Converted ranks to numerical scores for analysis.

Methods II: Review.

- Overall goal: Minimize subjectivity in a process where subjectivity is inevitable.
- Initial check for the "red face" test:
 - Nonsensical rankings (habitats or species where they don't belong).
 - Poor referencing or documentation.
 - Overzealousness/hypercautiousness (i.e., too many scores or too many high scores.
- Comparison of matrices from different regions for a given species by scorers where "red face" test is met.
- Review panel convened to:
 - Revise and calibrate where possible
 - Indentify questions for original scorers
 - Identify outside experts where needed
- Outside experts review where expertise are lacking.
- Review panel reconvened (by phone) to revise and calibrate outside expert changes (done!).

Methods III: Scoring & Analysis.

- L/M/H/VH ranks converted to:
 - 1/2/3.5/4 values.
 - 1 for any rank, 0 otherwise to evaluate simple presence/absence.
 - (other systems considered and still possible)
- Ranked habitats in terms of:
 - Highest aggregate score.
 - Highest # of H/VH.
 - Highest # of L/M.
 - Highest # any rank.
 - Ration of H/VH to L/M.

Results I: New England

New England	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Highest Habitat <i>Category</i> Score	Coastal Inert Substrate	Riverine	SAV	Marine & Est. Shellfishbeds	Tidal Vegetation
Highest Habitat <i>Type</i> Score	Loose Fine Bottom	Loose Coarse Bottom	Structured Sand	Firm Hard Bottom AND Mesohaline- Polyhaline spp.	
Which falls under the following Habitat Category:	Coastal Inert Substrate	Coastal Inert Substrate	Coastal Inert Substrate	Coastal Inert Substrate AND SAV	

Results II: Mid-Atlantic

Mid Atlantic	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Highest Habitat <i>Category</i> Score	Coastal Inert substrate	Riverine	SAV	Marine & Est. Shellfish beds	Tidal Vegetation
Highest Habitat <i>Type</i> Score	Loose Fine Bottom	Mesohaline -Polyhaline spp.	Lower Gradient Large Mainstem River	Loose Coarse Bottom	Structured Sand Habitat
Which falls under the following Habitat Category:	Coastal Inert Substrate	SAV	Riverine	Coastal Inert Substrate	Tidal Vegetation

Results III: South Atlantic

South Atlantic	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Highest Habitat <i>Category</i> Score	Coastal Inert Substrate	Tidal Vegetation	Riverine	SAV	Marine and Estuarine Shellfish Beds
Highest Habitat <i>Type</i> Score	Saltwater/ Brackish Marsh	Loose Fine Bottom	Mesohaline- Polyhaline spp.	Lower Gradient Large Mainstem River	Tidal FW marshes
Which falls under the following Habitat Category:	Tidal Vegetation	Coastal Intert Substrate	SAV	Riverine	Tidal Vegetation

Results IV: South Florida

South Florida	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Highest Habitat Category Score	Other Sessile fauna	Coastal Inert substrate	Tidal vegetation	Riverine	SAV
Highest Habitat Type Score	Patch reef, soft coral or anemones amidst soft sediment	Primary Coral Reef Architecture	Live rock	Firm hard bottom	Loose fine bottom
Which falls under the following Habitat Category:	Other Sessile fauna	Other Sessile fauna	Other Sessile fauna	Coastal Inert Substrate	Coastal Inert Substrate

Future Directions for Analysis

- Totals by management category (e.g., ASMFC-managed species only).
- Totals by life stage (e.g., only Juv/YOY for most important nursery habitats).
- Weighting by trophic linkages.
- Economic analyses?



Overview

- What is the Matrix? → Assessment of the importance of coastal & inland habitats for *selected* fish species in terms of:
 - Shelter.
 - Direct trophic links.
 - Spawning.
 - Nurseries.
- What is the Matrix NOT? → Assessment of either the status or the full ecological importance of these habitats in terms of:
 - Nutrient processing.
 - Securing sediments.
 - Maintaining water quality (filtration, etc.).
 - Broader trophic linkages.

Lessons Learned

- Takes a LONG time! (3 months became 2 years...)
- Always understanding purpose.
- Documentation proved to be key.
- Strong regional leaders.
- Requires careful consideration and definition of habitat categories (species list can be more fluid).
- Regional differences in habitat categories.
- Trade-offs between lumping and splitting.
- Keeping perspective on the importance of any single cell or even single species, but...
- ...beware of death by a thousand cuts.
- Non-reef-forming bivalves are "fish" more than habitat?
- Be clear about treatment of pelagics.

Species







ACFHP Strategic Planning Meeting #4: Priority Habitats, Locations, and Actions







July 8 & 9, 2009 Providence, Rhode Island

Determining Priority Habitats



- Matrix Results (i.e., species abundance)
- Consideration of factors not related to abundance of species (e.g., rarity, high potential for restoration/ protection/etc.)
- Determine <u>Top 3</u> Priority Habitats (categories or types) for <u>your</u> region

Focal Area Considerations

- Examine threat maps
- Consider Regional Priority Habitats (see previous discussion)
- Consider Focal Area Criteria:
 - 1. provides especially good opportunities for conservation(where significant progress could be made to protect habitats that are rare or in especially good shape).
 - 2. provides opportunities to significantly address key threats
 - 3. provides an especially important learning or testing ground for new strategies, tools or partnerships

Process for Determining Focal Areas

- Break into Regional Groups
- Write your 3 chosen *focal areas* on a sticky
- Think about how your chosen *focal areas* address the considerations on the previous slide
- Make new stickies if you change your mind
- Prioritize your 3 areas based on your impression of ACFHP's ability to make significant progress on the considerations on the previous slide

Process for Focal Areas Continued

- <u>Round Robin</u>: Each individual sticks their top area on the map and explains their thoughts; this goes around one by one for three rounds until everyone's top three areas are posted
- Ask clarifying <u>questions</u> about the proposed areas
- <u>Clarification</u> and <u>lumping</u>
- <u>Draft</u> set of *focal areas*

Process for Focal Areas Continued

- Look at draft set of *focal areas*
- Determine which two areas best address the conservation of the Top 3 Regional Priority Habitats
- Choose a spokesperson to report this determination out to the group and the justification behind it
- Rewrite the proposed areas on a fresh sheet

Process for Focal Areas Continued

- Reconvene Full Group
- Regional representatives report out
- Examine full set of focal areas
 - Note: These are not the only places that ACFHP will work or support work
 - Note: The goal is to focus our resources and have places where we truly feel we can make tangible results that will add up to something meaningful at the partnership scale

Size of Focal Areas

- River system or distinct coastal area
 - Whitewater to bluewater connection
 - In otherwords, if someone identifies a river, the final area might include the HUC, CDA, EDA, and marine area
- "The strategic plan identifies a number of geographic focus areas that are high priority for achieving strategic goals." –K. Hepler

Maps Provided By Region Include

- Natural Cover
- Density of Dams
- Density of Roads
- H2O Quality
- Eutrophication
- Benthic Health
- Marine Impacts
- Blank map with unit areas outlined (for scribbling on)

Goals, Objectives, & Actions

- Based on the conference call discussions we developed objectives and strategies
- We culled down the threats a bit, based on discussions of feasibility and overall impact that happened on the calls
- Now we will review these draft objectives and strategies and prioritize them

The Plan for The Plan: Step 1 Reviewing Goals and Objectives

- Review previously agreed upon goals
- Decide if the goals are supported by the objectives (i.e., do the objectives add up to the goals?)
- Are the objectives reasonable based on previous discussions, and is there any major heartache moving forward with them?

The Plan for The Plan: Step 2 Reviewing Objectives and Strategies

- One objective at a time
- Consider:
 - Do these strategies add up to this objective?
 - Will they produce meaningful results for this objective?
 - If not, what strategies are missing to accomplish this objective from the standpoint of what ACFHP can reasonably accomplish?

The Plan for The Plan: Step 3 Prioritizing Objectives

- Think!! This represents a lot of work!!
- Oh Heartache! We must compromise and focus our efforts!!
- Each person has 3 hand votes
- Vote to prioritize near-term (3-5 year) objectives
 - Consider limited resources
 - Consider ACFHP potential to make a difference



The Plan for The Plan: Next Steps

- If there is time:
 - Discuss what tangibly could be done in 3-5 years for each strategy
 - If no time, send ideas via email to Emily
- Conservation Plan Working Group will meet via conference call to discuss writing the plan and polishing the results from this meeting
- Eventually, the draft plan will be sent to the group for a brief review before submission to NFHAP
- Later in this meeting we will discuss outside stakeholder review