SEFSC & AOML Collaboration in South Florida Ecosystem Restoration (SFER)

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6/1/2009

Joint Projects

Juvenile Spotted Seatrout monitoring in Florida Bay

Marine & Estuarine Goal Setting for South Florida (MARES)

AOML Projects

Salinity, circulation and water quality monitoring

SEFSC Projects

Shoreline Visual Fish

Alongshore Epifauna

Fish and Invertebrate Assessment Network

Scientific Cross Collaboration

Speak with one voice on numerous scientific oversight panels to ensure the coastal ecosystem is not neglected in South Florida Ecosystem Restoration

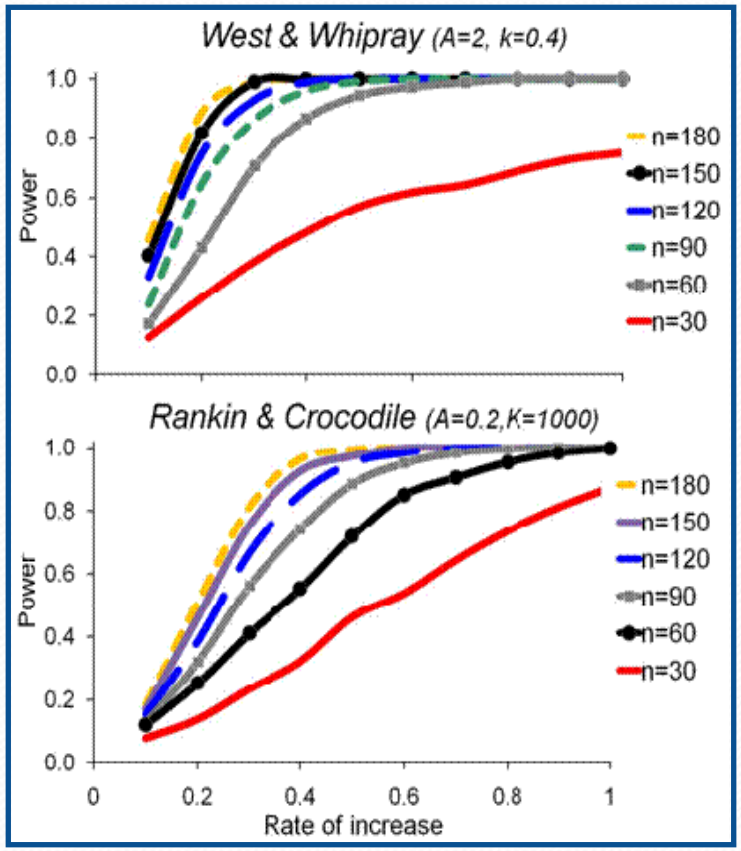
Juvenile Spotted Seatrout

- Part of the Comprehensive Everglades Restoration Monitoring and Assessment Plan
- Developed 2 power analyses to guide future sampling
- Established the current distribution of juvenile spotted seatrout in Florida Bay
- Quantified the relationship between salinity and Juvenile Spotted Seatrout

Power Analyses

Developed jointly between SEFSC (Serafy & Porch) and AOML (Kelble) to guide future sampling

Population Power Analysis

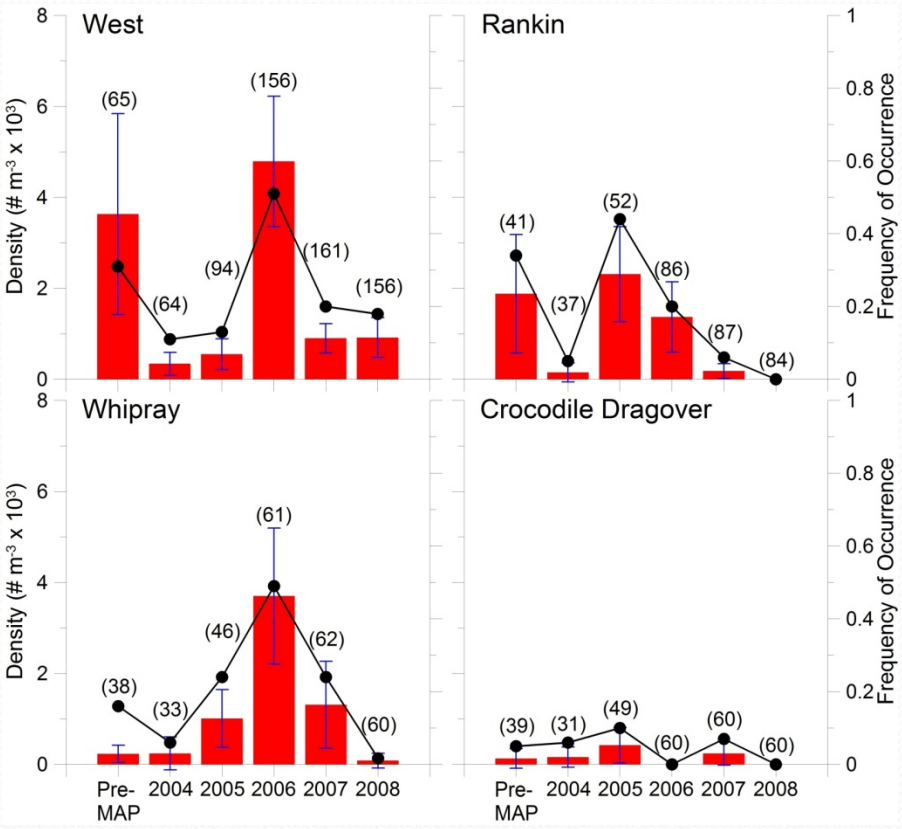


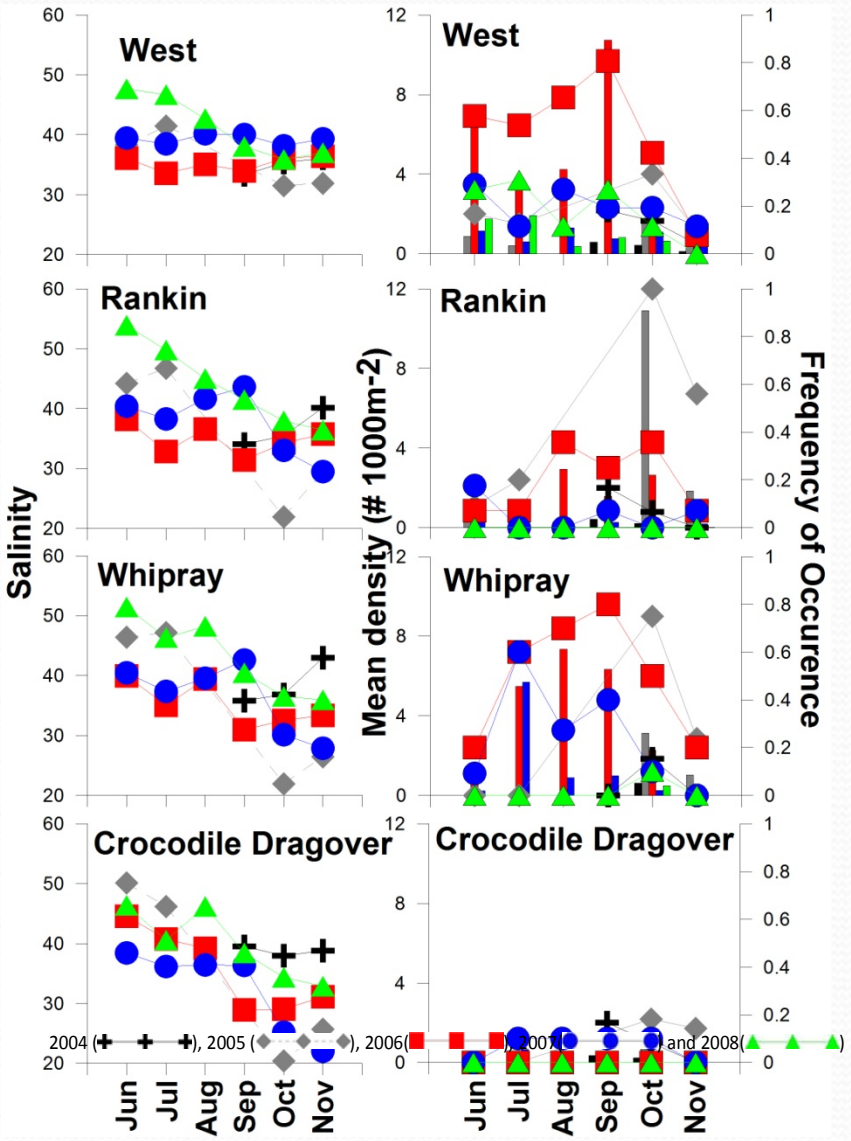
Binomial Power Analysis

	Percent change in frequency of occurrence					
	10	20	40	60	80	100
West	1928	472	119	55	31	20
Rankin	3251	833	224	105	61	40
Whipray	2436	594	154	69	40	26
Crocodile Dragover	16371	3346	986	443	270	176

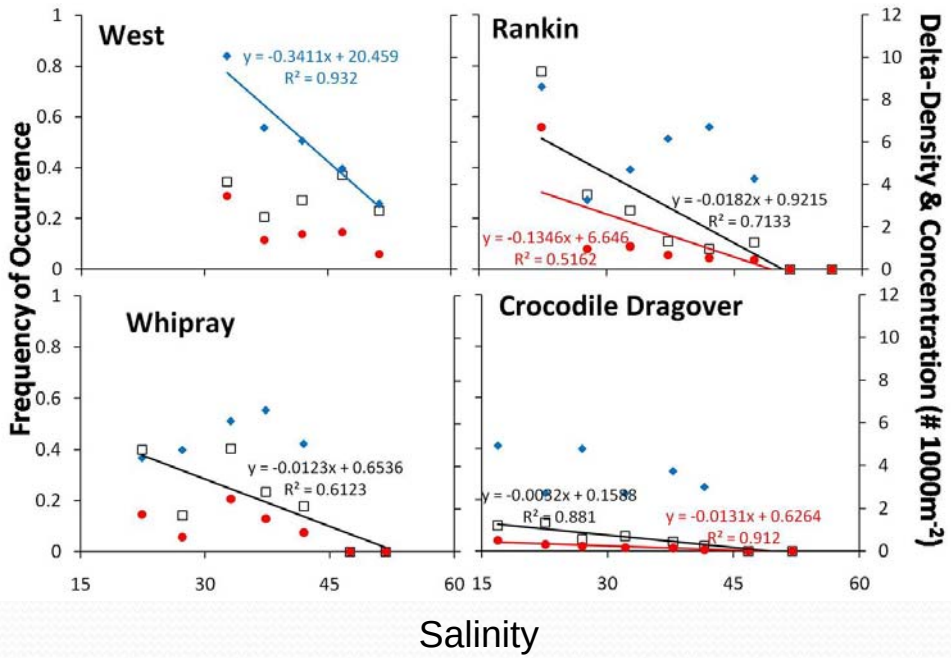
	Years after Population Change				
	1	2	3	4	5
West	47%	33%	27%	23%	21%
Rankin	53%	37%	30%	26%	23%
Whipray	47%	33%	27%	23%	21%
Crocodile Dragover	124%	84%	68%	57%	52%

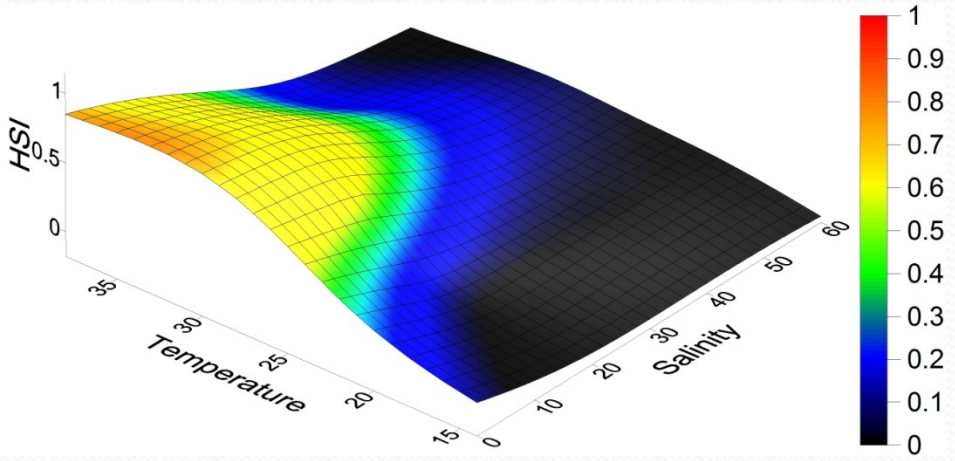
Spotted Seatrout, *Cynoscion nebulosus,* density and frequency of occurrence vary interannually and geographically

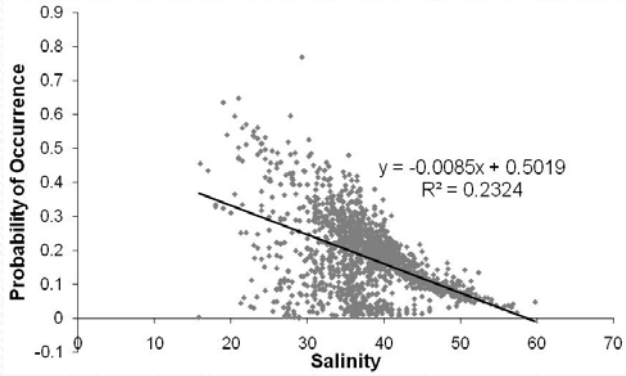


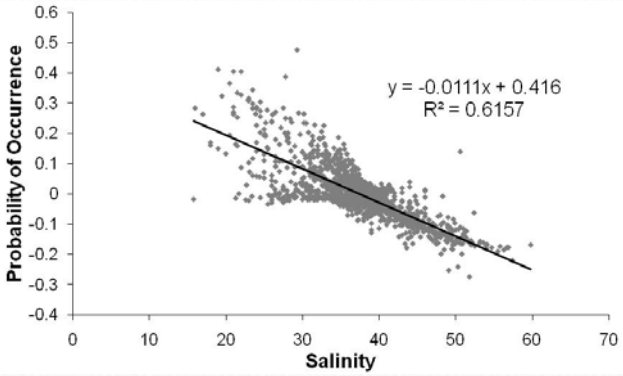


Spotted Seatrout juveniles prefer lower salinities with more moderate temperatures

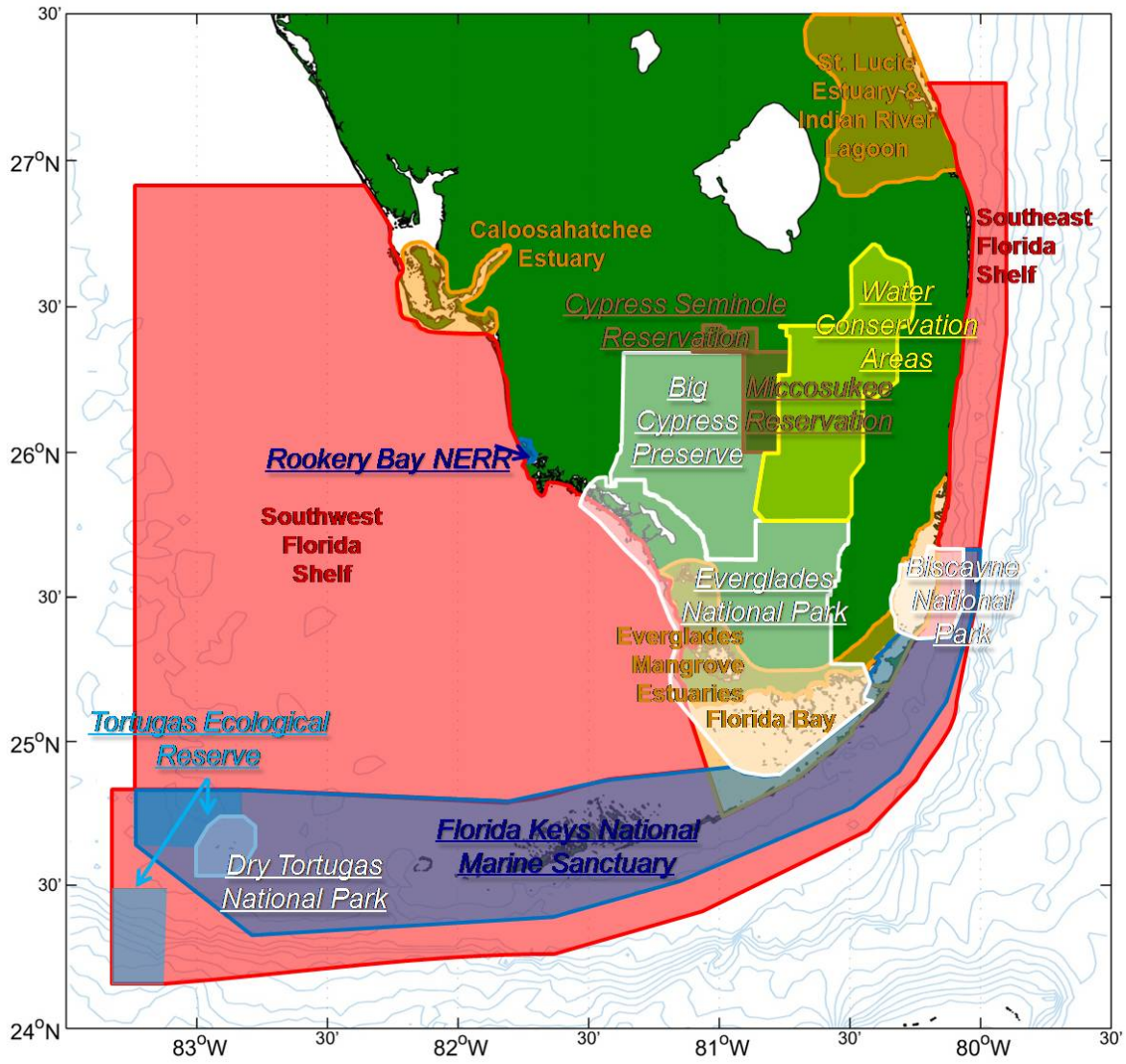








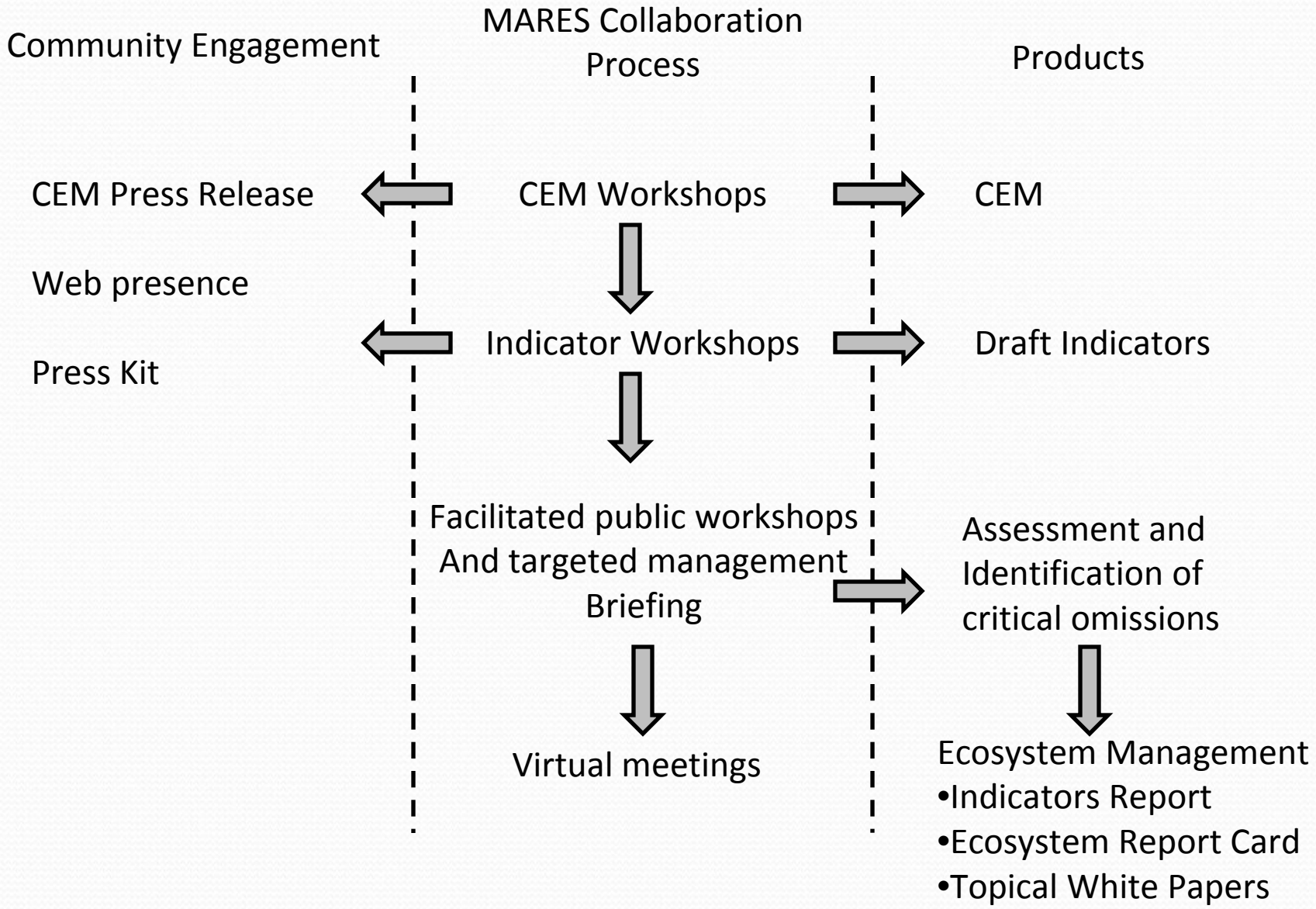
MARES (coming very soon)



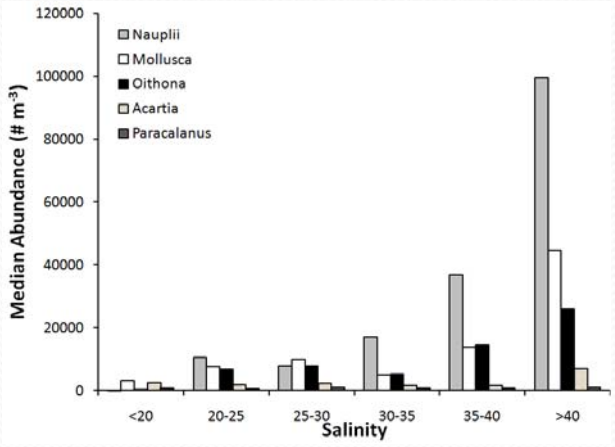
A bridge between government managers, coastal scientists and public stakeholders

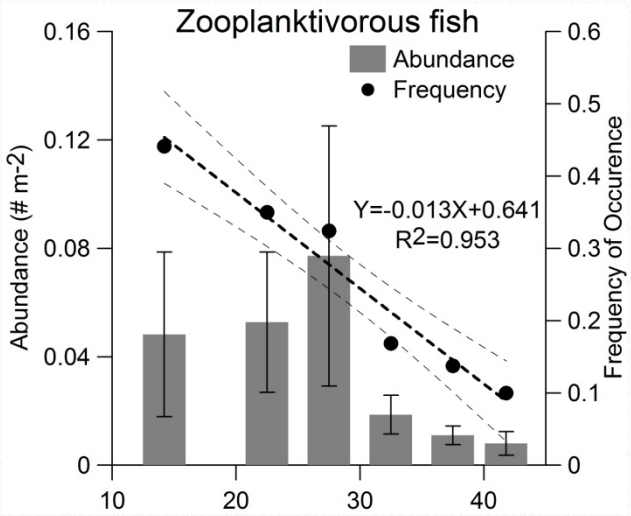
End-product:
Ecosystem Targets for the entire south Florida coastal ecosystem

The MARES Process

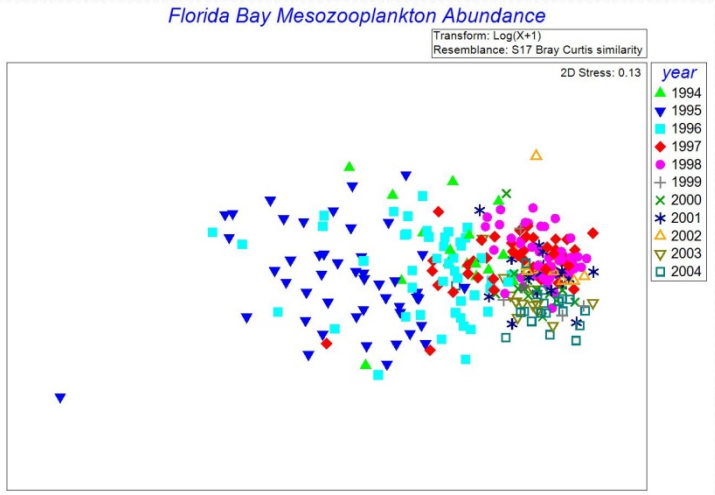


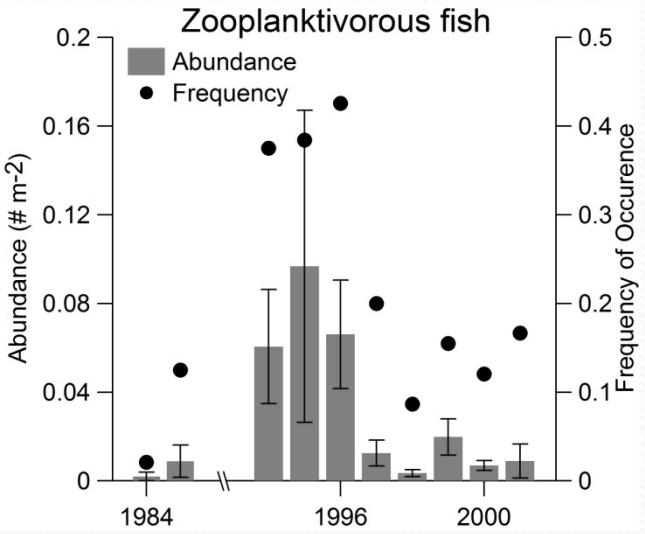
Trophodynamics: Another linkage





Correlations to salinity with mesozooplankton and zooplanktivorous fish, as well as interannual differences, suggest a tight trophic coupling in Florida Bay





Future Collaborations

- Continued collaboration in the areas presented
- More inter-project scientific investigations to quantify trophic interactions and relationship to physical environment
- MARES: setting ecosystem goals
- More fully develop the ability to examine the impact of multiple stressors on this system (SFER, climate change, land-use changes, etc.)
- Many, many more