



NATIONAL *fish, wildlife & plants*
CLIMATE ADAPTATION STRATEGY

Project Title: Alternative Futures Under Climate Change for the Florida Key's Benthic and Coral Systems (KeysMAP)

Headline Title (2-5 words): Alternative Futures for Florida Keys

Brief Summary (Abstract): The Fish and Wildlife Research Institute's Bob Glazer is leading a State Wildlife Grant-funded project that is determining potential impacts of climate change on habitats and species in the coastal and marine zones of south Florida. The project is based upon input from managers and scientists and includes identifying a set of "alternative future scenarios." The scenarios are constructed using aspects of climate change (sea level rise and increased sea surface temperature), as well as conservation (protected areas) and socio-economic factors (commercial fishing, recreational fishing and diving). In the first phase, each scenario was examined against three critical habitats (mangroves, coral reefs, and beaches) to examine how each scenario impacts each habitat. The experts then examined the effects on three species of greatest conservation need (SGCN) from the Action Plan (spiny lobster, Goliath grouper, loggerhead turtles) based on the anticipated changes to the habitats. In the final step, managers reengaged to determine what adaptation strategies are possible, what "trigger points" will activate a management response, and how to develop monitoring plans to know when a trigger point has been reached. Phase 2 scales this process up by examining suites of important commercial and recreational species, coupling terrestrial inputs to marine and coastal resources, and broadening the spatial scale. A number of SMART adaptation responses will be developed.

Project Location: south Florida

Partners: Florida Fish and Wildlife Conservation Commission, GeoAdaptive, Inc., and the National Oceanic and Atmospheric Administration

Background: This project builds upon projects funded by USFWS, USGS, and FWC focusing on the terrestrial environment of peninsular Florida. That project examined the highly uncertain future of the Florida landscape by considering climate as well as demographic, planning, and economic dimensions within a suite of scenarios. This approach was then applied to the marine environment.

Project Goals: To provide managers with scenario-specific actionable strategies for managing marine and coastal resources.

1. Upscale the results from Phase 1 to a more regional scope
2. Increase species examined using the concept of suites of species with similar habitat requirements and life-history attributes that share common vulnerabilities. With potential NOAA support, this includes commercially important pelagics.
3. Integrate hydrological model outputs of the Greater Everglades ecosystem that have upland terrestrial linkages.
4. Identify a suite of adaptation strategies relevant for the species and habitats under examination
5. Identify a discrete set of triggerpoints (min 8) that, when reached, will actuate specific adaptation strategies



NATIONAL *fish, wildlife & plants*
CLIMATE ADAPTATION STRATEGY

6. Develop/recommend monitoring programs associated with each triggerpoint to inform when trigger are reached
7. Provide electronic access to spatial scenarios for use in both joint and specialized adaptation planning applications

Strategy Goals Implemented: Goal 2 (Manage species and habitats), Goal 3 (Enhance Capacity), Goal 4 (Support Adaptive Management), Goal 5 (Increase knowledge and information on impacts and responses)

Climate Impacts Addressed: sea level rise and increased sea surface temperature

Status of Project Implementation (Timeline, Milestones, Next Steps): Phase 1 complete; Phase 2 May 2014 – April 2015.

Project Outcomes: SMART Adaptation Strategies

Funding Sources: State Wildlife Grants

Photos/Attachments:

Photo/Figure Credits (do we have permission to print):

Suggested Photo Caption:

All the maps in the powerpoint file are from the KeysMAP study so they should be credited to FWC (Florida Fish and Wildlife Conservation Commission) and you have permission to use them all. I took the habitat pictures outside of work so you can credit me, Bob Glazer, for those. The species pictures I previously sent to you were off our server and I really don't know to whom they should be credited. So, I am attaching a few additional pictures here that can be credited to FWC. You have permission to use them all.