

## 7.2.4 Aquaculture

[Proposed by Debbie Harrison]

Aquaculture is a rapidly developing industry in Florida. Climate change will have an impact on the aquaculture industry as well as wild fisheries since fish are highly affected by ambient temperatures and any changes in habitat temperatures can influence growth rates, productivity, reproduction, and susceptibility to diseases. ~~As the state's fisheries become depleted, either through over-harvest or threatened through climate change impacts,~~ Particular attention must be given to effects of warming ocean temperatures, shifts in salinity and increases in acidity as it pertains to aquaculture. ~~cultured seafood products will increase in importance.~~ Florida producers sold \$74.9 million of aquaculture products in 2005, ranking Florida seventh in the nation in terms of aquaculture sales. Over 900 Florida aquaculturists produce the greatest variety of aquatic species of any state in the nation. Tropical fish dominate the Florida aquaculture industry as the number one statewide commodity with \$33.0 million in sales in 2005, also making the state the number one producer nationwide. The state is also a leading U.S. producer of farm - raised aquatic plants and an important producer of hard clams.

The industry could be threatened by warmer water temperatures, which may make current breeding grounds unsuitable in the future by exceeding thermal tolerances, reduce dissolved oxygen levels, and allow for introduction of pests and disease. SLR can threaten inundation of facilities, turn freshwaters brackish, and inundate coastal wetlands. Increased intensity of hurricanes and other storms can damage or destroy fisheries and facilities. Drought can reduce freshwater flows and degrade water quality.

### Goals and Strategies

**Goal 1:** ~~Assess the impacts of climate change on~~ ~~Develop~~ plans for increasing seafood product aquaculture. ~~to supplement declining ocean stocks.~~

**Goal 2:** ~~Encourage expanded and increased leases on~~ Study climate change impacts of submerged state lands ~~for~~ aquaculture facilities and determine impacts and feasibility of other facilities without compromising the adaptation capacity and connectivity of other natural systems.

**Goal 3:** ~~Analyze the effect of projected climate change impacts on~~ ~~Review~~ existing out ~~—of~~ ~~—state marketing programs~~ ~~with an eye to increasing those sales~~ of Florida aquaculture products with particular attention to the tropical fish industry, Florida's dominant aquaculture species.

**Goal 4:** Determine the impact aquaculture will have in a climate changed marine environment in Florida on the adaptation and migratory needs of wild fish stocks before expanding current aquaculture activities.-

**Goal 54:** Identify and institute management practices to ensure healthy ~~growth~~ of this industry.

**Goal 65:** Identify innovative and federal funding sources for mitigation and adaptive strategies.