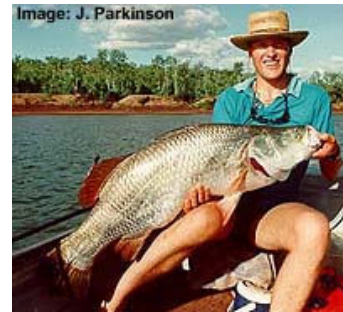


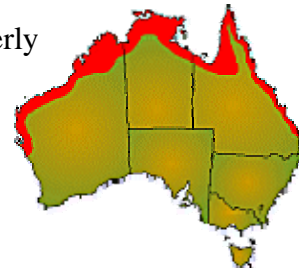
BARRAMUNDI (*Lates calcarifer*) RISK ANALYSIS

Barramundi is a large fish (over 100 lbs.) native to freshwater, marine, and estuarine habitats in the Indo-Pacific region from the Persian Gulf eastward to southern China and Japan and southward to Papua New Guinea and northern Australia. This species is an important commercial freshwater fish and is the premier inland and coastal sport fish in many regions, notably in Australia.



Barramundi Legal Status

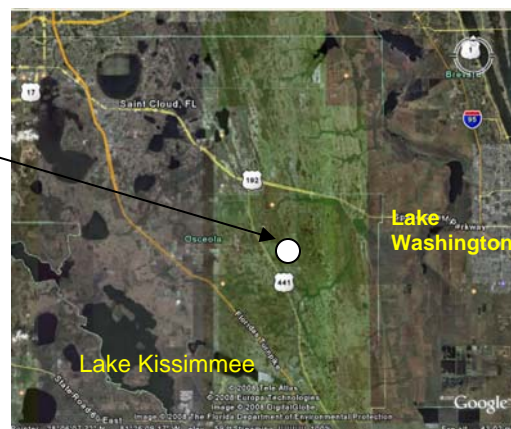
Barramundi are classified as a conditional non-native species (formerly termed 'restricted species'). Conditional species may be possessed only under a permit issued by FWC; or by an Aquaculture (AQ) Certificate of Registration and authorization to possess conditional species, issued by the Florida Department of Agriculture and Consumer Services (DACS). The conditions that must be met for possession of conditional species include



- (1) outdoor water bodies with conditional species must have the lowest point of the top edge of its levee, dike, bank, or tank at an elevation of at least one foot above the 100-year flood elevation
- (2) no water discharge; or with a barrier system designed to prevent escape of adults, juveniles, and eggs in water discharged from the property.
- (3) public visitation at facilities must be supervised by the permittee or his/her designee.
- (4) species held indoors must have no water discharge; or water must be discharged through a closed drain system; or must have some other system designed to prevent discharge of water containing adults, juveniles and eggs from the property.

Barramundi Aquaculture Facility

BRA-ROD, LLC, Osceola County, is in possession of barramundi under a DACS AQ Certificate. Although the farm is close to the Kissimmee Chain of Lakes, the facility is in the St. Johns River basin. The farm is at the end of a ¾ - 1 mile dead-end dirt road, and is completely fenced with locked gate at the entry way. There are nine production ponds, each approximately 5-7 acres. The ponds and perimeter berm are built 6-7 feet above existing grade.



Barramundi at BRA-ROD have been cultured for the food market in an outdoor pond conforming to the requirements above. Since 2006, the farm manager has been bringing anglers to the facility to fish for barramundi for a fee. Patrons must release any fish they catch, or, they may take home only dead fish on ice. Only supervised, guided trips are taken.



Barramundi Risks

Barramundi have been listed as a conditional (restricted) species since the 1980s. FWC did not envision mass, outdoor culture when the list of conditional species was developed. DACS Division of Aquaculture began issuing AQ certificates in 1999, including authorization for culture of conditional non-native species. With the advent of permitted large-scale outdoor barramundi aquaculture, FWC biologists have expressed concern over risks posed by this operation, including the novel practice of fee fishing.

These concerns were brought before the Commission at the April 2007 meeting, and a rule was proposed that would have (1) restricted future barramundi culture to indoor operations only; (2) prohibited harvest of barramundi by rod and reel, or hook and line, (i.e., fee fishing) at all facilities including BRA-ROD. After hearing from the public, including the individual guiding the anglers and his attorney, the Commission agreed to postpone consideration of rules pertaining to fee fishing pending a risk analysis; the portion of the rule restricting future outdoor culture of barramundi was approved.

The current rule pertains to all members of the Nile perch genus:

68-5.002 Conditional Non-native Species.

The following species or hybrids thereof may be possessed only pursuant to permit issued by the Executive Director with restrictions as provided in subsection 68-5.001(2), F.A.C.

(1) Non-native freshwater aquatic species.

(h) Nile perches (Genus *Lates*, all species). For facilities that are operating under permit or a certificate of registration, but which are not cultivating Nile perches as of April 11, 2007, and for facilities which are issued permits or certificates of registration after April 11, 2007, Nile perches:

1. Shall be held only in indoor facilities.
2. Shall not be taken on a fee or for-hire basis using hook and line or rod and reel.

Risk Analysis Process

The risk analysis procedure employed by FWC is:

- (1) preparation of a bio-profile following the FWC template
- (2) internal review of the bio-profile for biological accuracy and completeness
- (3) stakeholder review to assess risks and recommend mitigation measures if appropriate

- (4) FWC staff consideration of stakeholder review, and development of rule proposals, if appropriate

A bio-profile was prepared by Dr. Jeff Hill, University of Florida, Tropical Aquaculture Laboratory, and reviewed by FWC fisheries biologists. This information and a description of the BRA-ROD was provided to a group of stakeholders, selected to represent the spectrum of interests potentially affected by regulation.

Stakeholders represent regulatory agencies, industry, conservation organizations, sportsmen, academic or scientific institutions, and local interests:

Regulatory/Government

Kal Knickerbocker, FL Dept. of Agriculture and Consumer Services
Jay Troxel, U.S. Fish and Wildlife Service

Local Government

Sherry Burroughs, Osceola County Lakes Management Specialist

Scientific Experts

Leo Nico, USGS Florida Integrated Science Center
Cortney Ohs, UF/IFAS Indian River Research and Education Center
Roland Griffin, retired, Northern Territory Dept. of Primary Industry and Fisheries (Australia)

Angling Interests

Jason Schratwieser, International Game Fish Association

Industry

Marty Tanner, Aquatica Tropicals, Inc.
Greg Waldo, Suncoast Aquaculture, LLC

Stakeholders were asked to evaluate several risks associated with barramundi aquaculture, with particular reference to the BRA-ROD facility. Risk categories were Very Low (<5%), Low (5-15%), Moderate (15-30%), High (30-50%), or Very High (>50%).

Specifically, stakeholders were asked to judge

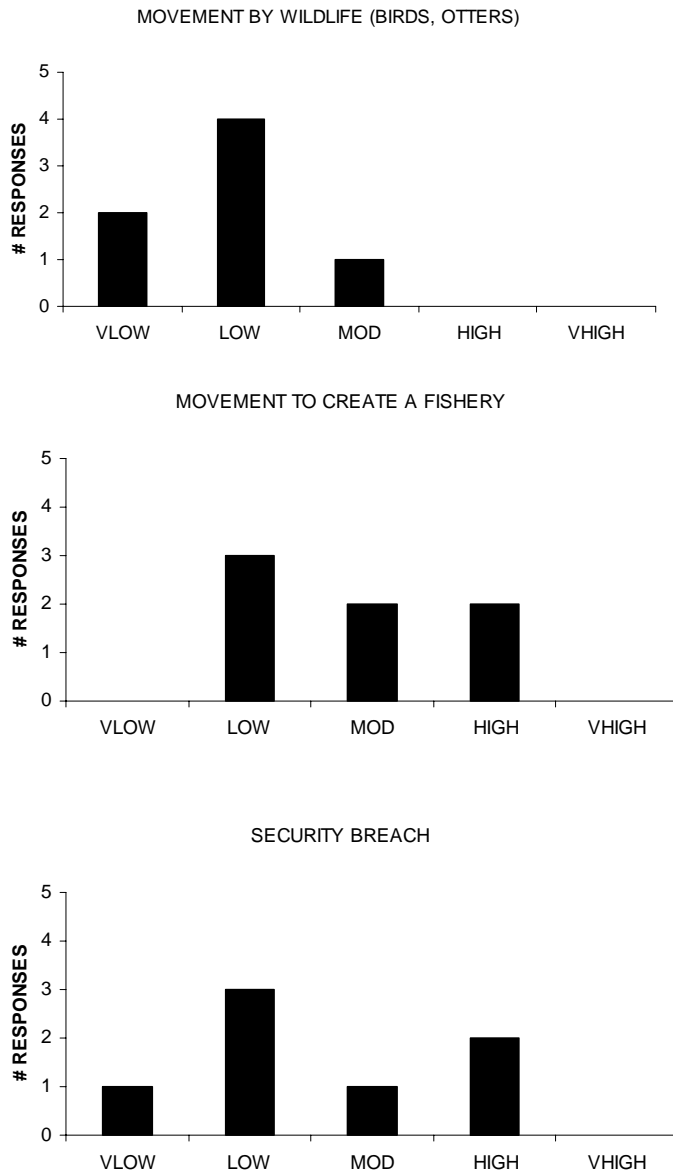
- (1) the likelihood of barramundi escaping or being intentionally introduced
- (2) the likelihood that barramundi would become established in Florida
- (3) the consequences of barramundi establishment (e.g., impact to listed species, impact to game fishes, economic consequences).

Stakeholders will attempt to agree on the level of acceptable risk. If risks are deemed unacceptable, stakeholders will be asked to recommend mitigation measures to reduce risk to an acceptable level. Mitigation may include additional management practices or changes to the existing regulation. For example, the requirement that outdoor water

bodies be above the 100-year flood plain is a regulatory mitigation measure to reduce risk of escape of conditional species.

Risk Assessment Status

Stakeholders had differing perceptions of risks in their initial assessment. For example,



A meeting will be held in mid-March to resolve these issues through group discussion. FWC staff will consider stakeholder input and provide recommendations to the Commission in June 2008.