

## AMERICAN EEL (from page 10)

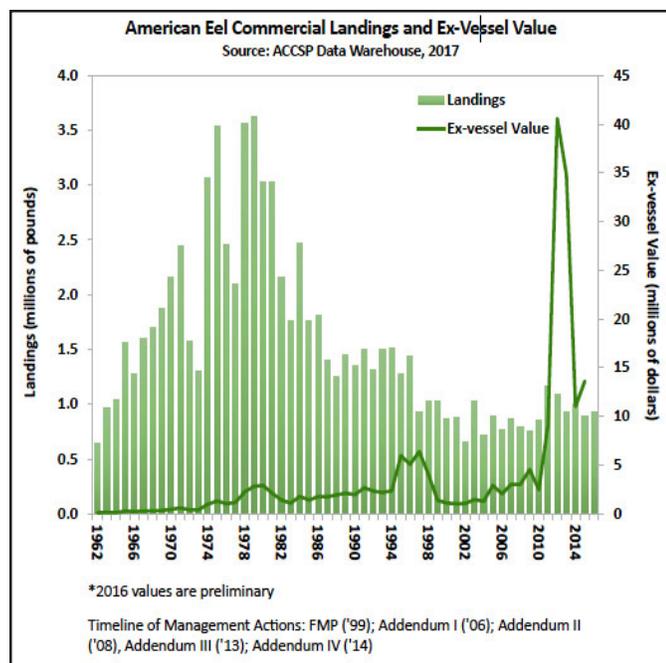
### Commercial & Recreational Fisheries

Eel fishing in North America has been documented as far back as the 17th century largely as a subsistence fishery. In the 20th Century, commercial interest for American eel arose most significantly in the 1960s in response to the European export market. Since then, commercial landings have fluctuated depending on the market price for eel at their various life stages: glass, yellow, and silver.

Historically and currently, the majority of commercial landings come from the yellow eel fishery. After an initial decline in the 1950s, commercial yellow eel landings increased to a peak of 3.67 million pounds in 1979, declined again in the 2000s, and have exceeded one million pounds three times since 2004. In 2016, yellow eel landings totaled 928,358 pounds.

Eel pots are the most typical gear used in the commercial yellow eel fishery; however, weirs, fyke nets, and other fishing methods are also employed.

Although yellow eel were historically harvested for food, today's fishery sells yellow eel primarily as bait for recreational fisheries. At the silver eel stage, eel are completely focused on migrating back to the spawning grounds and typically do not respond to baited traps.



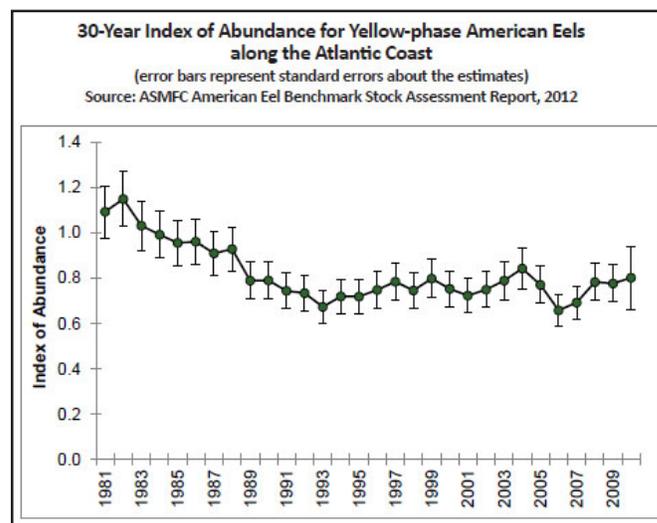
Since the approval of Addendum IV (2014), silver eel fisheries are only permitted on a limited basis in New York's Delaware River.

Glass eel fisheries along the Atlantic coast are prohibited in all states except Maine and South Carolina. Over the last seven years, there has been a significant increase in the demand for glass eel due to concerns over the population levels of European and Japanese eels, as well as tighter restrictions on the exportation of European eels. Glass eel are exported to Asia to serve as seed stock for aquaculture facilities. Little information is available on targeted recreational fisheries for American eel.

Harvest by dip net or fyke net has increased as the market price has risen to over \$1,000 per pound. The highest value reported in Maine in the last five years was \$40.38 million in 2012 for 21,611 pounds. Since the implementation of Addendum IV, Maine's glass eel quota has been set at 9,688 pounds (a 17.5% reduction from the 2014 quota). In 2017, preliminary landings indicate 9,282 pounds of glass eel were sold for a value of \$12.08 million pounds. Because of this high value, poaching of glass eel has become a coastwide issue that impedes and undermines the management, monitoring, and success of this species during a critical life stage.

### Stock Status

The 2012 benchmark stock assessment concluded American eel is depleted in US waters due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, toxins and contaminants, and disease. Despite the large number of surveys and studies available for use in this assessment, the American eel stock is still considered data-poor because very few surveys target eel and collect information on length, age, and sex of the animals caught. Also, given the extremely complex life history of eel it is challenging to assess using traditional stock assessment models. Therefore, two data-poor methods were used to determine the status of the American eel resource:



trend analyses and model analysis.

Trend analyses found evidence of declining or, at least, stable abundance of American eel in the US in recent decades. Regional trend analyses identified decreasing populations in the Hudson River and South Atlantic regions, while no consistent trends were found for the Chesapeake Bay and Delaware Bay/Mid-Atlantic Coastal Bays regions. The coastwide model analysis estimated biomass to be at a reduced level. Significant levels of harvest in the 1970s is considered a major factor contributing to the current low biomass levels, but other factors such as habitat loss, predation, and disease have also played a role. (to page 27)