



American Eels – Challenges and Opportunities for Conservation

Next Steps to Strengthen Stewardship of the Sargasso Sea
Commission

Bermuda, March 2019



Outline of Presentation

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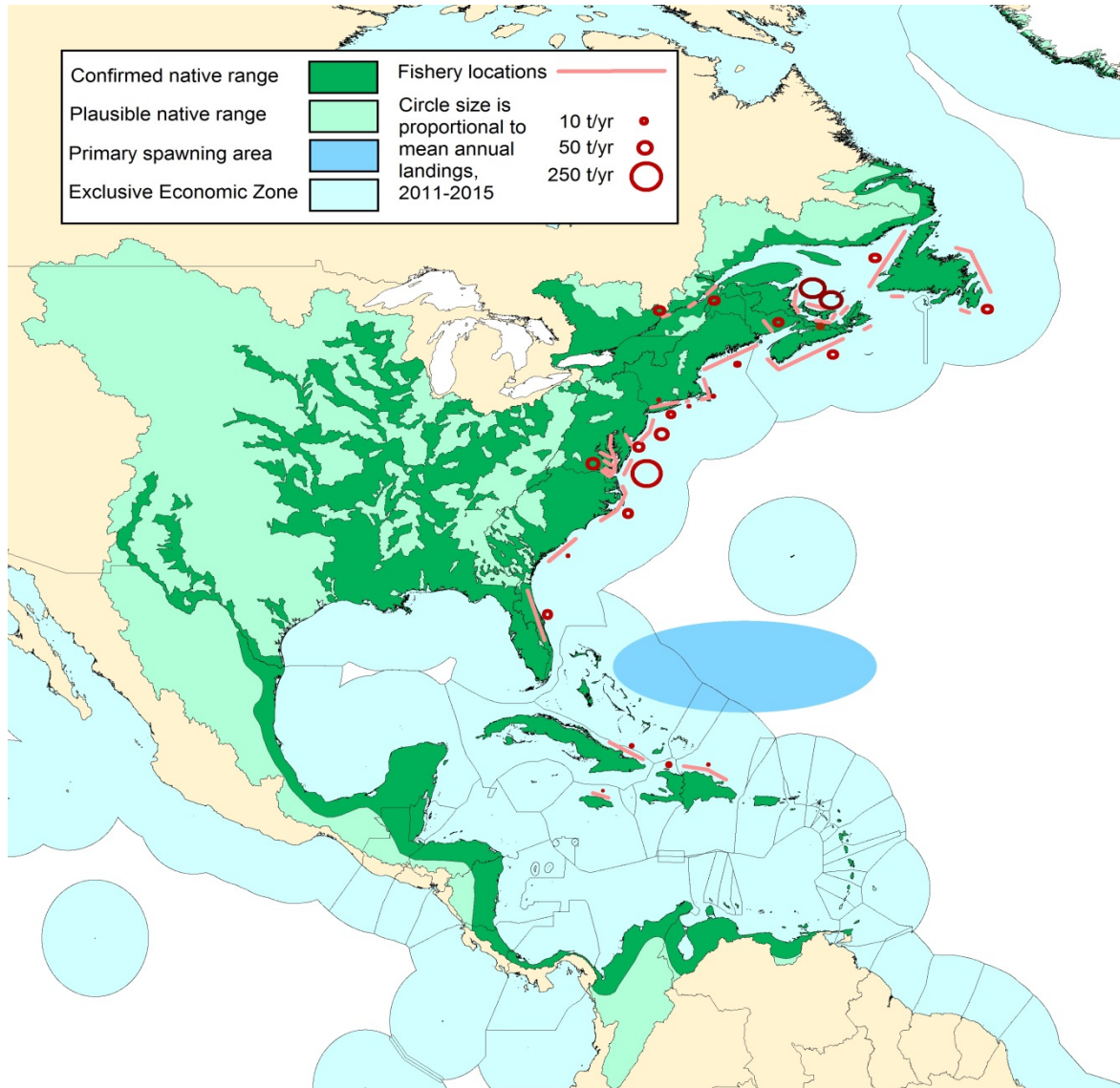


General

- Greatest range of any fish species in North America
- The entire population spawns together in the Sargasso Sea
- Larvae (leptocephali) drift in the Gulf Stream for up to one year before reaching coastal waters
- Metamorphose into a different life stage - glass eels
- Enter sheltered salt-water bays, brackish estuaries or freshwater rivers and lakes taking on colour as elvers
- Once settled in rearing habitats, fully pigmented elvers become yellow eels where they remain for years (ca. 5-15 years)
- Preparing for the spawning migration, they metamorphose into silver eels



American Eel Range





Challenges

Biological

- Single population extensive range
- One spawning area – southwestern Sargasso Sea
- Larvae drift in Gulf Stream up to one year
- Late age of spawning in some waters (5-10 years for male and 15+ female)
- Migrations to spawning area
- Single spawning event; die following spawning
- Swim bladder parasites



Challenges

Distribution

- Continental range Greenland to northern South America
- Recruitment and distribution varies by year and dependant on larval drift
- Multiple jurisdictions varying levels of protections (environmental/fisheries)
- Availability for harvest in multiple river and estuaries for extended periods
- Interception/bycatch in other fisheries
- Spawn and live a portion in life in international waters



Challenges

Habitat

- Human impacts on Sargasso sea increasing/habitat degradation
- Changes to ocean conditions/climate change influences
- Contaminants and other pollution (at sea, in river) impacting survival
- Habitat alterations (dams and turbines)
- Habitat fragmentation (urbanisation, roads, culverts)



Challenges

Assessment and Management

- Science and management is geographically fragmented
- No assessment that includes entire species range
- Limited to no science knowledge in some range states
- Fishery harvest in multiple jurisdictions
- Supports commercial, recreational, Indigenous fisheries
- Harvested at all stages of life (elvers, yellow & silver eels)
- Limited/no management mechanisms in some range states
- Other mortality (turbines, predation in freshwater and at sea)



Challenges

Importance, cultural and economic

- Important to fisheries in multiple jurisdictions, some unregulated
- Cultural significance for Indigenous harvesters
- Economic significance of elver/glass eels
- International market demand
- Import/export statistics are limited/not reliable



Opportunities

Domestic

- Stakeholder cooperation
- Introduction of fishery management processes
- Undertake or enhance stock assessments
 - Canada-wide assessment in 2019
- Orderly management of the fishery (measures/limits)
- Monitoring removals of various life stages (eels and elvers)
- Evaluate all mortalities (fishery and other)
- Introduce/enhance habitat assessment and protections
- Protection for large/silver eels to enhance spawning
- Import/export monitoring and controls



Opportunities

International

- Support multi-jurisdictional assessment (range states)
- Sharing of catch information
- International management approach (existing RFMO or other)
- Sharing of import/export data to monitor global harvests
- Cooperation to avoid CITES listing (as per European eel)
- Habitat protections for Sargasso Sea (for both American and European eels)



Questions ?