

International Union for the Conservation of Nature
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AESA and CCSEF Response to IUCN "Red List" Designation for American Eel

In the 1980's and 90's, scientists noticed steep declines in the number of juvenile eels arriving to the Great Lakes each year, followed by sharp drops in adult populations in Lake Ontario. These trends alarmed many, and some researchers predicted that the decline in eel recruitment could lead to a larger decline in the eel population.

Since 1990, scientists, community organizations and fishermen have worked together on the East River in Chester, Nova Scotia to survey glass eel recruitment in the region -- in essence testing the theory that the Great Lakes decline was foreshadowing a broader population collapse. Up to the present day, the index of glass eel recruitment to the East River has been variable, and recently has significantly increased.

The steep decline of eels stocks in the Great Lakes more than a quarter century ago triggered a variety of management actions in both the U.S. and Canada to better understand and protect this important species. These have included better monitoring of eel stocks, tighter rules in the commercial fisheries and steps to eliminate or mitigate the impact of hydroelectric dams on the upper St. Lawrence River and elsewhere and other physical impediments that interfere with the movement of eels up and down stream.

In 2006 and 2007, the Canadian and U.S. governments produced assessments of the population status of American eel under their respective endangered species legislation.

In Canada, the Ministers of the Departments of Fisheries and Oceans and Environment created a national working group comprised of more than a dozen leading eel scientists from all regions where the American eel is present. Members of this group produced a status report under the Species at Risk Act, finding that American eel stock status was of "special concern," but not endangered.

Meanwhile, in the United States, the Fish and Wildlife Service conducted a multi-year review of eel stocks under the Endangered Species Act, bringing together a wide range of international experts in workshops and other forums to make sure all information and views were considered. The Service ultimately concluded that the American eel is not endangered, stating that,

Taken as a whole, a clear trend cannot be detected in species-wide abundance during recent decades, and while acknowledging that there have been large declines in

abundance from prehistoric and historic times, we have determined the species currently appears stable.

The government relied on many factors in its decision, emphasizing that measurement of glass eel recruitment "best represents the species status range-wide." Citing the East River work and other glass eel surveys, the Fish and Wildlife Service said,

There is no evidence of a sustained downward trend of these glass eel indices; therefore we conclude that the American eel is not undergoing a sustained downward trend at the population level.

In 2014, the East River survey glass eel recruitment reached its highest level ever recorded. The juvenile recruitment to the dams on the upper St. Lawrence River has also increased in recent years although the index is still well below its historic highs. The index of standing stock in the southern Gulf of St. Lawrence has also increased. In the U.S., most Atlantic coast states have been required to measure young-of-the-year eel recruitment every year since 2000. In 2012, five of those states recorded the highest levels of recruitment in the history of their respective surveys.

Clearly, the deterioration of eel stocks in the Great Lakes was not the beginning of a range-wide collapse. This fact, however, has not dissuaded some from continuing to sound subjective alarms.

Recently, a non-government organization, the International Union for the Conservation of Nature (IUCN), placed the American eel on its "red list" of species whose status has been evaluated and categorized it as "threatened." In its report, the volunteer IUCN authors noted several positive trends in eel populations and acknowledged that they were "on the fence" between listing the eels as "threatened" or applying the lesser status of "vulnerable."

It is the strong opinion of the Canadian Committee for a Sustainable Eel Fishery, as well as the American Eel Sustainability Association, that the IUCN report is intended to generate public awareness and increase pressure on government regulators responsible for this species. It is not a fair, balanced or accurate summary of the health of the American eel population. In situations such as this, governments typically enact unnecessarily restrictive regulations for the commercial fishery. By comparison, the requirements imposed on hydro-electric dams and other obstructions to upstream and downstream passage by American eels are typically less stringent due to the economic costs involved, even though these actions would have the greatest impact on rebuilding the eel stock.

The IUCN report makes the misleading claim that American eel recruitment is in widespread decline. They base this assertion largely on the long term trends showing the collapse of *juvenile eel* recruitment to the Great Lakes, assuming with insufficient justification that this is a reflection of continental recruitment or the size of the breeding population, rather than of the natural and man-made impediments to the upstream movement of elvers and juvenile eels from the mouth of the Saint Lawrence River, hundreds of miles away. Evidence from the St. Jean River in the

Gaspe region indicates that the number of elvers arriving to the mouth of the Saint Lawrence River has not declined.

The IUCN authors also rely heavily on one longer-term declining regional glass eel index in the U.S. (the Hudson River survey), while largely ignoring the compelling East River data and underweighting the shorter-term coast-wide young-of-year indices that generally show no trend or increase.

Not surprisingly, prediction is a difficult game. Alarmist past predictions have not materialized, but AESA and CCSEF acknowledge that this is no reason to ignore problems where they exist and to strive to improve the abundance of eels in areas where they have declined. Overreaction, however, is unneeded.

AESA and CCSEF further note that there have only been two eel status assessments (COSEWIC 2006, FWS 2007) conducted in a manner that brought together and incorporated the views of virtually all scientists and stakeholders actively studying this species. Both resulted in findings that candidly acknowledged the decline of adult populations in many areas relative to historic levels as well as the myriad threats to the species across its range, chiefly the loss of freshwater habitat; yet both reports found that the American eel was not in danger of extinction. The most recent Canadian review (DFO 2013) assessed the stock recovery potential of the American eel and, although it did not provide a status threat assessment, presented the most recent data on index trends, a number of which were stable or increasing.