

# Study shows Asian carp could establish in Lake Erie with little effect to fishery

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According to a study published in the journal *Conservation Biology* by a group of scientists from the University of Notre Dame, Resources for the Future, U.S. Forest Service, University of Michigan and the NOAA Great Lakes Environmental Laboratory, if bighead and silver carp were to establish in Lake Erie, local fish biomass is not likely to change beyond observations recorded in the last 3 decades.

"Bighead and silver carp will continue to have access to the Great Lakes— it is important understand what the consequences could be if they were to establish" Marion Wittmann, the paper's lead author and University of Notre Dame scientist, said. Since 1995 at least three [bighead carp](#) have been recovered from Lake Erie. There is no evidence to date whether bighead or silver carp are established in the [lake](#).

The Notre Dame study used expert elicitation, a process of formalizing and quantifying experts' judgments to estimate Asian carp impact to Lake Erie fishery [biomass](#), a method designed by co-author Roger Cooke, senior fellow with Resources for the Future. Federal agencies such as the U.S. EPA, NASA, U.S. Army Corps of Engineers and the U.S. Department of Transportation have successfully used similar expert elicitation in support of risk analysis and decision-making on issues ranging from food safety to radio-active waste management.

Eleven experts estimated that if the carp become established in Lake Erie, bighead and silver carp biomass in Lake Erie could range from close to zero but up to over 25 metric-tons/km<sup>2</sup> which is greater than the

sum of walleye and yellow perch biomass in Lake Erie.

Experts estimated that Yellow perch biomass would not decrease as a result of bighead and silver carp, and could possibly increase by 15 to 50% of recently recorded biomass for this fish in Lake Erie. Experts estimated that walleye biomass would most likely experience a small decrease of about 10% in Lake Erie. However, experts were uncertain about this value and estimated it is possible that walleye could decrease by as much as 40%, but could also increase by over 60% of its recently measured biomass.

The authors emphasize the importance of decision-makers considering uncertainty.

"The range of possibilities concerning walleye biomass shows that the potential effect to this species is highly uncertain," Cooke said.

"This study uses the knowledge of the foremost Great Lakes and Asian carp experts in the field to help us understand what the impact to Lake Erie fisheries biomass may be" David Lodge, director of the University of Notre Dame's Environmental Change Initiative and co-author, said. "But it does not estimate all the other damages potentially caused by bighead and silver carp such as those that may occur in tributaries of Lake Erie, effects to recreational activities as a result of silver carp jumping behavior."

Provided by University of Notre Dame

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