

# Are eels endangered because of chemical contamination?

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Eel populations (*Anguilla sp.*) have undergone dramatic and unsustainable declines worldwide, since the 1980s. Many reasons for these declines have been investigated, but chief among them is reduction in the health of spawning eels, particularly for females. Halogenated persistent organic pollutants (POPs) can affect spawner quality by 1) reducing the fitness of migrating eels, e.g. polybrominated diphenyl ethers (PBDEs) may lower lipid content, and 2) maternally-derived POPs can reduce the viability of offspring, e.g. polychlorinated dioxin-like compounds (DLCs) may cause early-life stage mortality. Our group is interested in the role that legacy POPs such as DLCs may have played in the past, resulting in the decline of eel recruitment to Lake Ontario. We are also examining the role that recently-banned and emerging POPs such as PBDEs and emerging flame retardant chemicals are currently playing, which may explain the lack of eel recruitment recovery. To test these hypotheses, we collected eels from seven locations in eastern Canada, one location in New York, USA, and one site in Belgium, used as a control. Additionally, archived eels collected in Lake Ontario in 1988 and 1998 were selected. The spatio-temporal trends for several classes of POPs in these eels are examined with respect to potential impacts on eel recruitment.

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