

Expanding the blue catfish fishery: influence of ecological factors on fish contaminant burdens



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Sustainable Fisheries Goal Implementation Team Meeting

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- *Partners*

- Fish collections – leveraging existing programs

- ✦ VIMS (Rob Latour)
 - ✦ VDGIF (Bob Greenlee)
 - ✦ VCU (Greg Garman)
 - ✦ MD DNR (Mary Groves)



Virginia's only all-tackle
freshwater world record?

- *End-users*

- VA DEQ & Department of Health
 - MD DNR & Department of Health
 - The Public

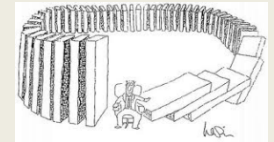


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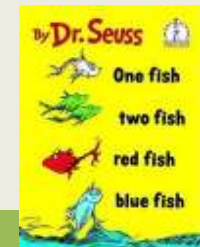


- **Rationale:**

- Blue catfish population impacting native species?
 - ✦ Could fishing pressure curb population expansion?
- But fish consumption may pose human health threat?
 - ✦ Inadequate data regarding contaminant burdens
 - ✦ Ecological factors & local conditions control burdens?
 - Blue catfish undergo dietary preference changes with size
 - Persistent pollutants buildup with age



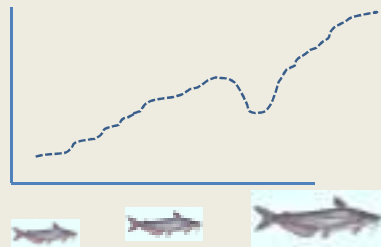
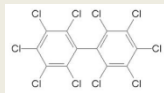
- **Objective:** Evaluate contaminants in blue catfish of the Chesapeake watershed & develop model describing the influence of fish size, gender & diet on pollutant burdens



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- **Approach:**
- Collect range of catfish sizes from Bay tributaries
 - James, Rappahannock & Potomac Rivers
 - ✦ Reduce costs: Use existing collection programs
 - Develop descriptive model of relationship between fish gender, size, location & persistent pollutants
 - ✦ Legacy: mercury, PCBs, chlorinated pesticides
 - ✦ Emerging: brominated flame retardants (PBDEs)



Location
Exposure duration
Dietary shifts
Egg dumping



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- ***Potential relevance/impacts***
 - Promoting fishing of introduced species
 - ✦ Good for economy & environment
 - Managers face questions regarding health risks
 - ✦ Contaminant data critical
 - Especially in wake of shrinking contaminants monitoring budgets
 - ✦ Descriptive model will assist managers & reassure the public



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