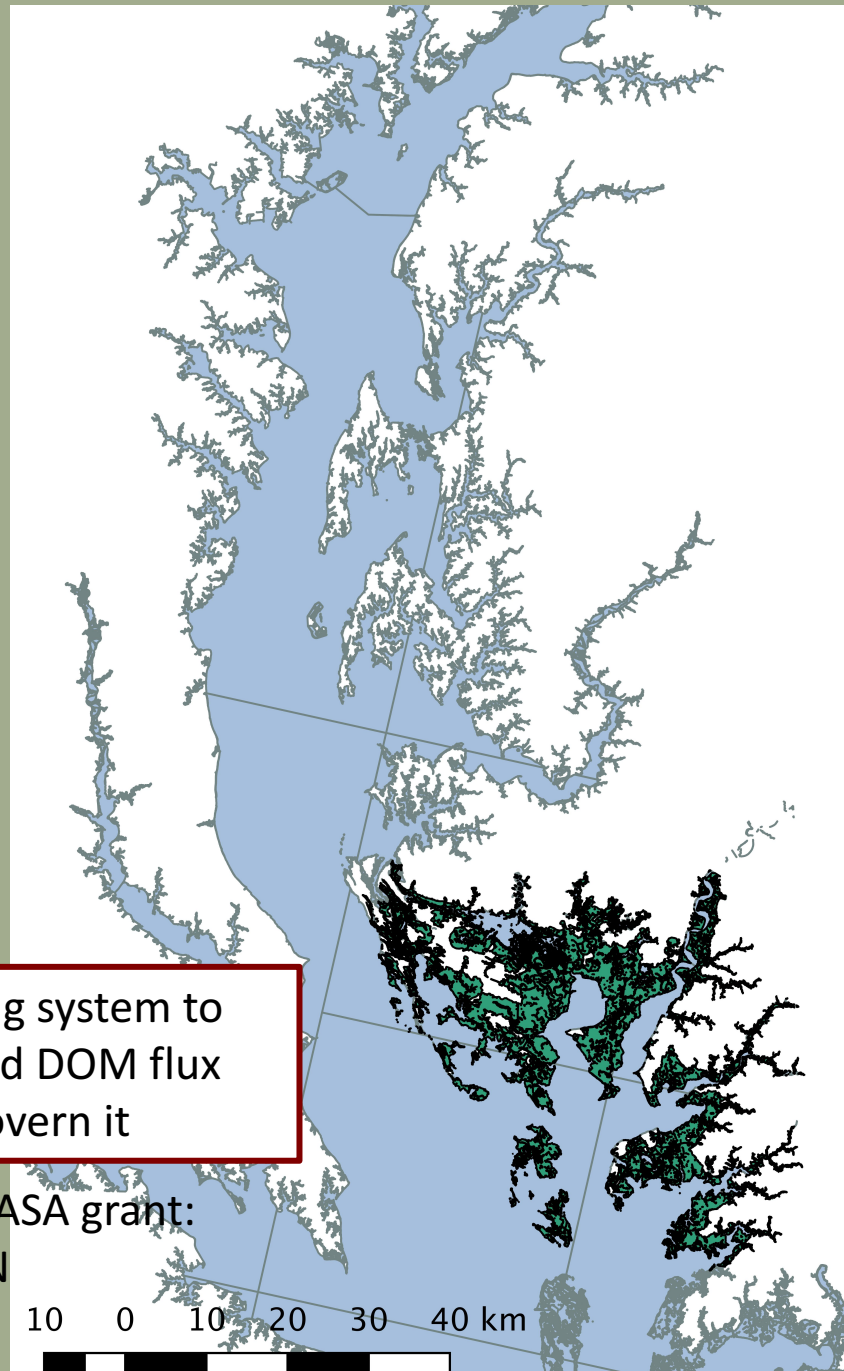


Progress and challenges in up-scaling carbon modeling to a regionally significant wetland-estuary system

GOAL: Develop a modeling system to explicitly estimate wetland DOM flux and the processes that govern it

Research supported by NASA grant:
NNH13ZDA001N-CARBON



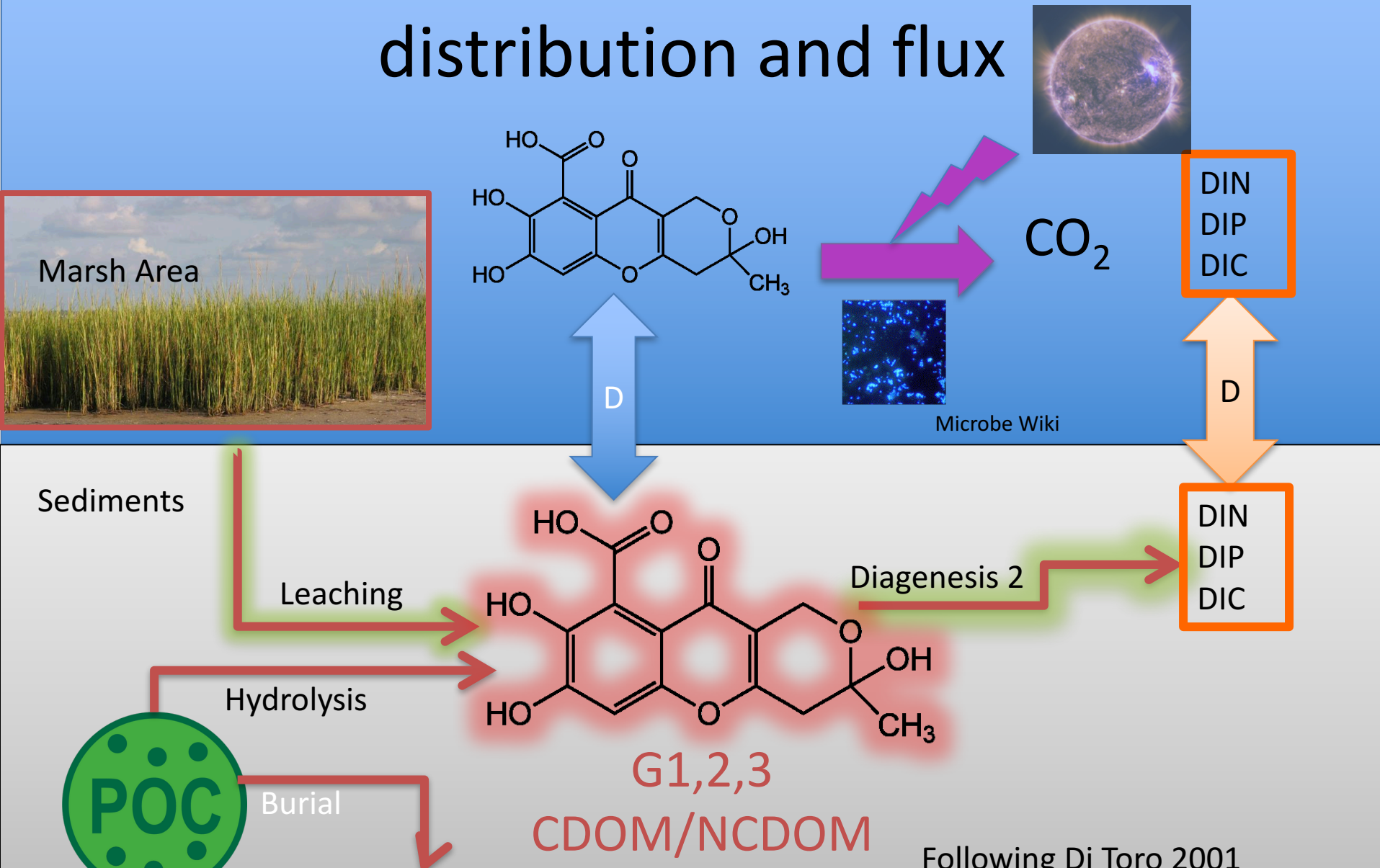
Blake Clark

Ocean Carbon and
Biogeochemistry
Workshop

Woods Hole, MA
June 26th-29th, 2005

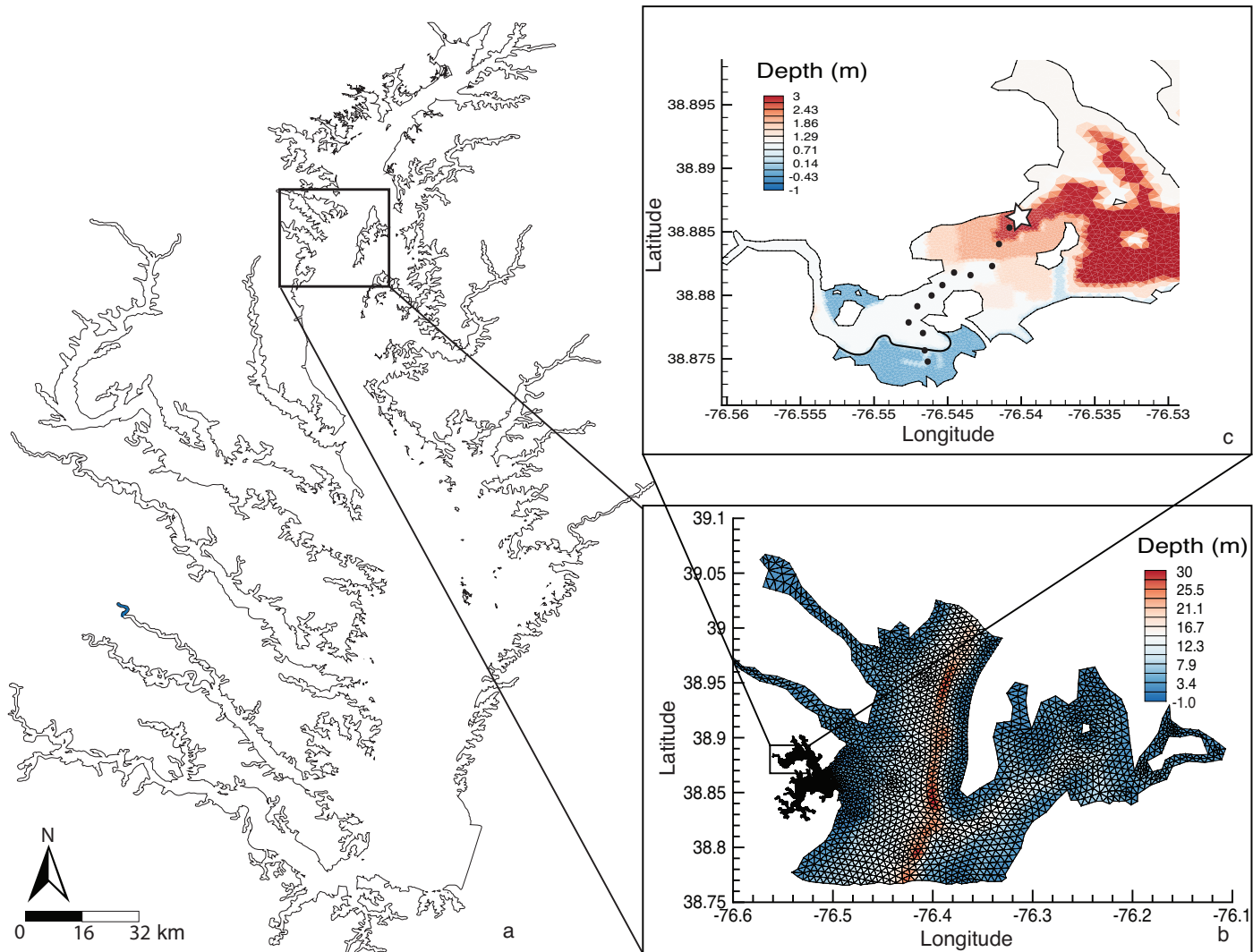
National Wetlands
Inventory database

Wetlands and Estuaries have distinct processes that contribute to the DOM distribution and flux

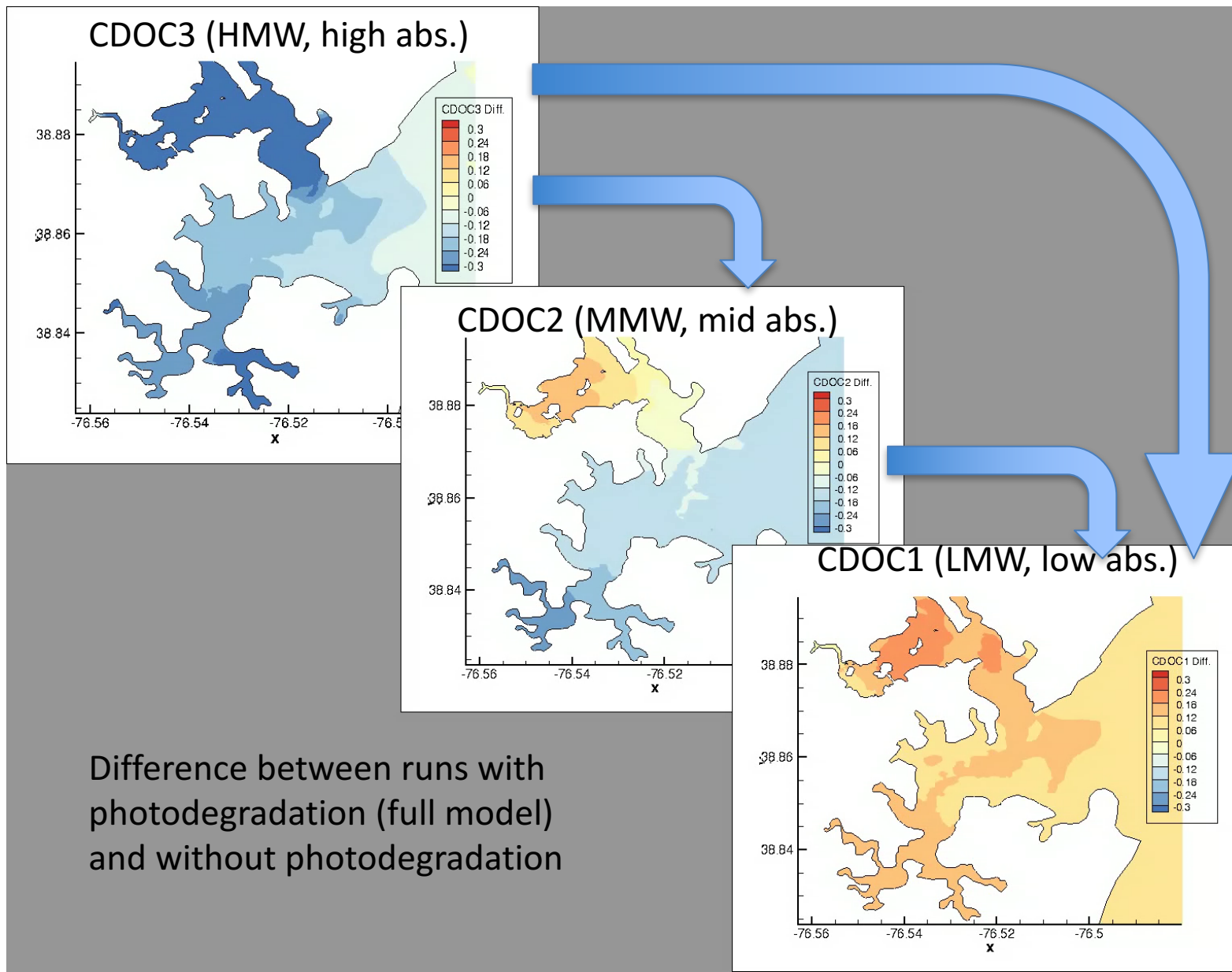


RhodeFVCOM-ICM

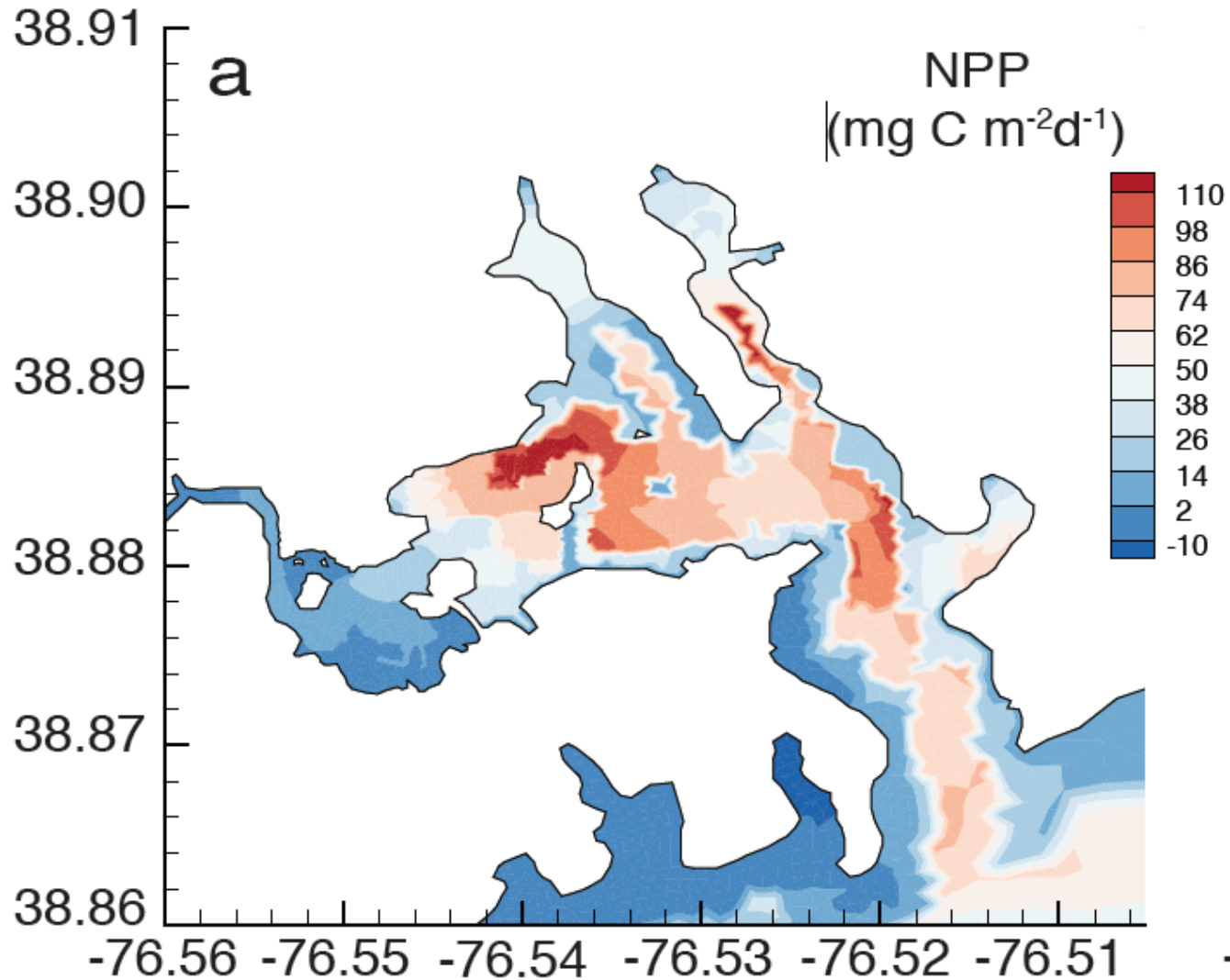
Small-scale, well constrained system to develop and parameterize new model components



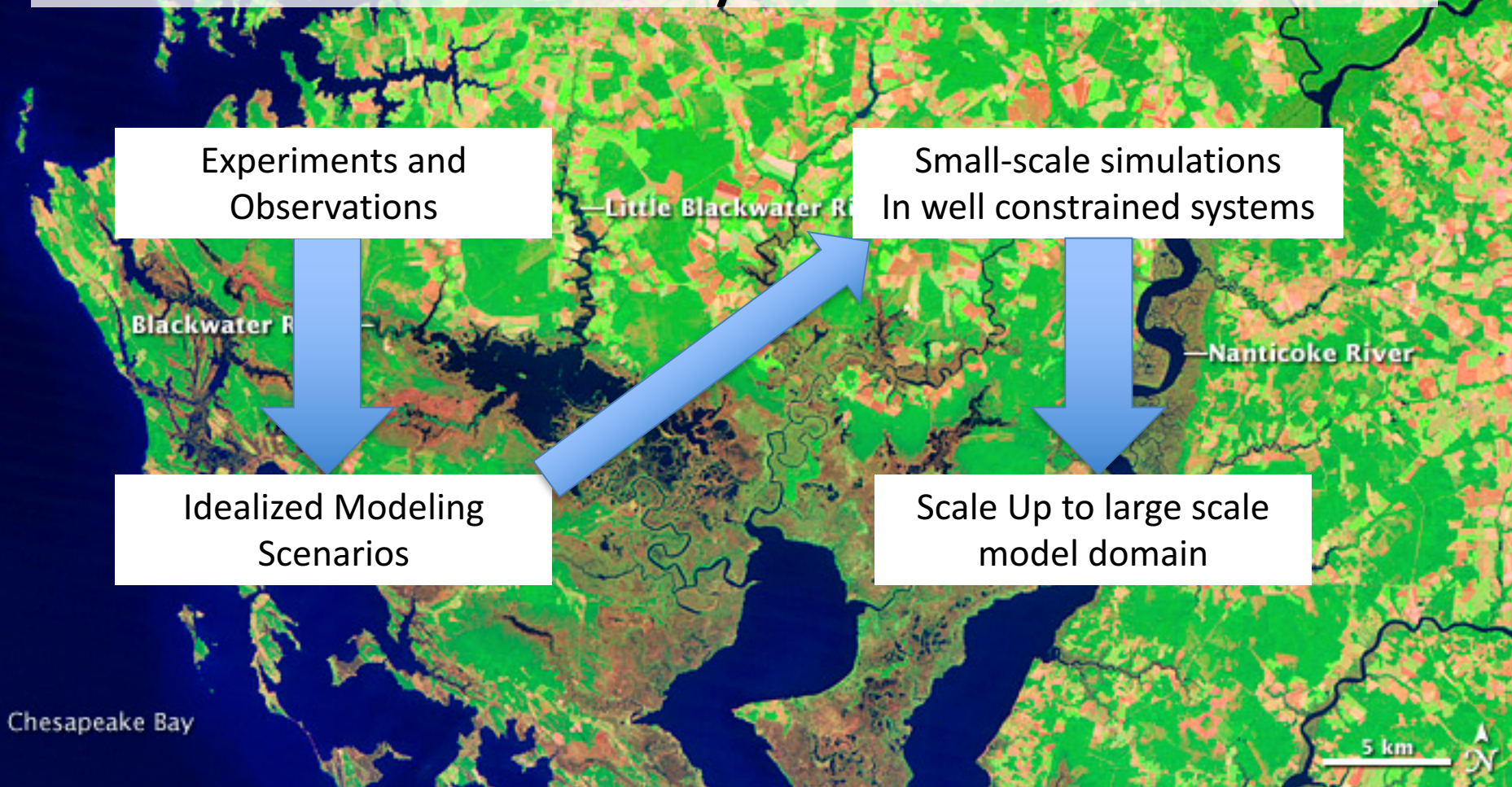
Results: RhodeFVCOM-ICM



Results: RhodeFVCOM-ICM



Next Step: Scaling up to the Blackwater and Nanticoke River Ecosystem



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- Can we represent DOM reactivity well enough?
 - Why is DOM reactivity different and can a single coefficient for each pool capture that?
 - DOM Composition, redox conditions, microbial community, metabolism
- Plant community composition within the wetland can be important: limit complexity but still successfully capture redox/ biogeochemical conditions

Chesapeake Bay

5 km