ASMFC perspectives on ecosystem and climate science

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Atlantic States Marine Fisheries Commission

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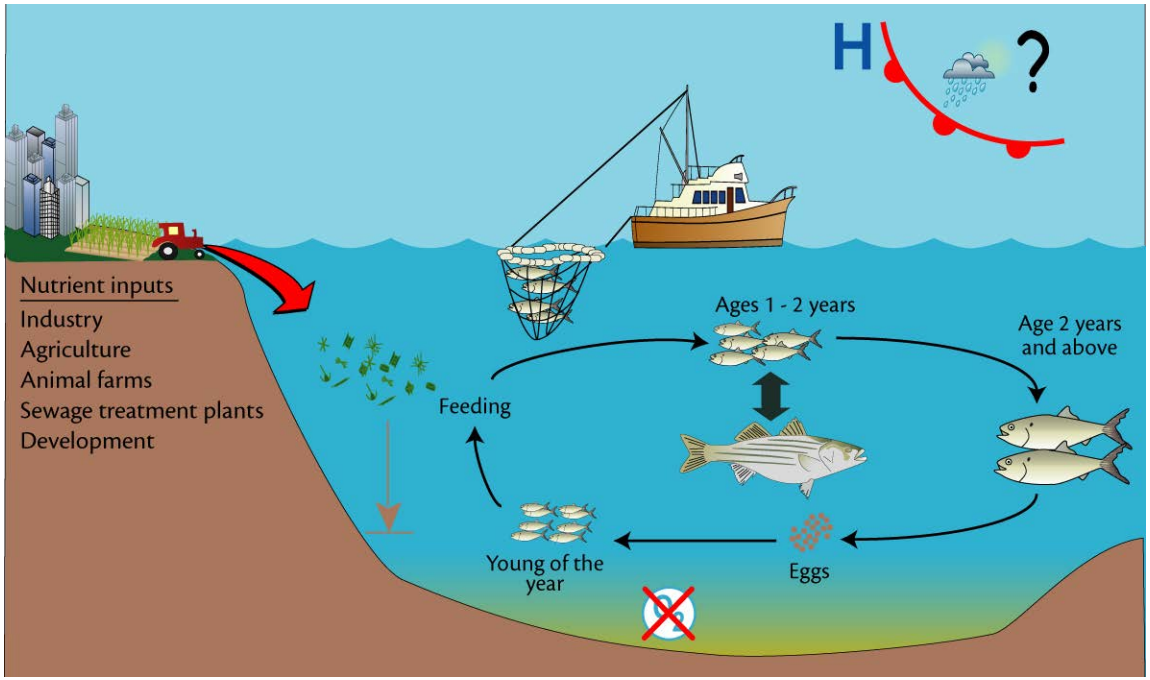
Current Ecosystem Science Projects

- Multispecies models → M inputs to menhaden single species assessments (2005-current)
- Ecological Reference Points (ERPs) for menhaden (2013-current)
  - Developing models to estimate predatory demand on menhaden → informs mgmt. decisions to allocate to ecosystem, fishery



ASMFC-NEFSC collaborative investigation

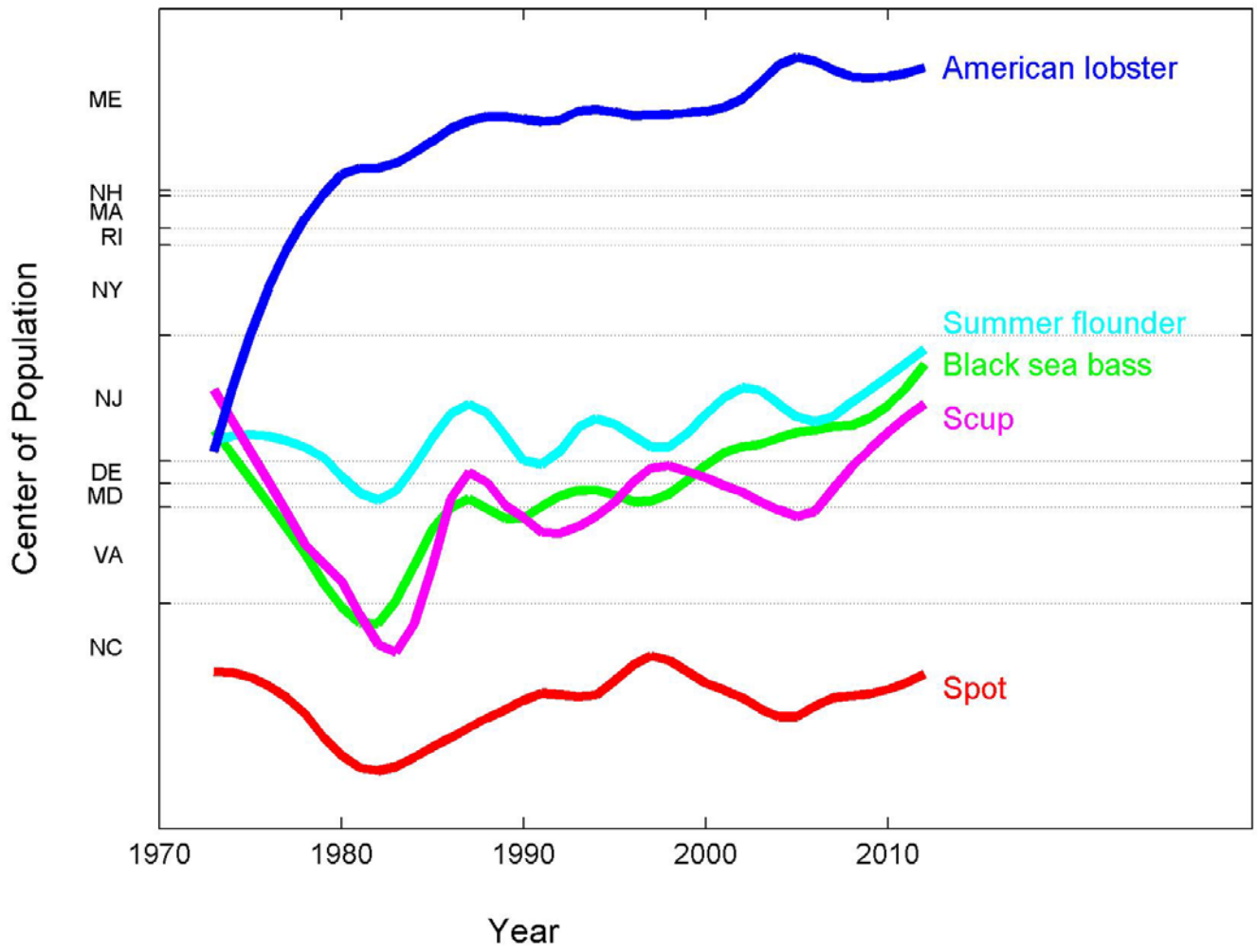
Analyzed climate and stock distribution shifts

Focal stocks: sea bass, fluke, scup, winter flounder

Distribution shift patterns? Factors driving shifts?

Hare, Richardson, Bell (NEFSC) & Griffis, Morrison (NOAA) with ASMFC Management and Science Committee

Stock shifts by Atlantic state borders



Current Ecosystem Science Projects

Multispecies Surveys

close collaboration among survey programs like NEAMAP, including NEFSC support

- Catch Processing and Data Collection Workshops
- Vessel crew exchanges: NEFSC, VIMS, state surveys

Future Ecosystem Science Needs

- Further implementation of new climate and predator/prey TORs in single-species assessments
  - bluefish, sea bass, lobster, shrimp
- Develop new multispecies/ecosystem models estimating predation on sea herring, winter flounder
- Socioeconomic analyses of fishing community vulnerability to climate change
  - Using Colburn et al. study to inform management decisions
- Continued NEFSC support on climate and stock vulnerability/distribution/productivity analyses
  - including Southeast species moving into the neighborhood
- Balance NEFSC resources to enhance ecosystem science while supporting single species assessments