I’ve also been thinking about building temporally dynamic habitat suitability models for each size class within the study area (we got conditional effects curves out of the model and I did something similar in my dissertation, so it shouldn’t be that hard) and testing how well seasonal cod distributions match the distribution of high-suitability patches. This could directly extend into the quantification of high-suitability habitat area reduction. I’m interested in identifying persistent high-density patches (with something more robust than the eyeballing I’ve done in this paper) and then figuring out what the environmental characteristics of those patches are and what they could tell us about the plasticity of the stocks to changing conditions.

Steps:

1. Static habitat suitability
2. Dynamic habitat suitability
3. Total dynamic habitat suitability
4. Identify hotspots
5. Extract piecewise and total habitat suitability for hot spots, average dynamic pieces over seasonality (Mar-Aug, Sep-Feb)
6. Extract piecewise and total habitat suitability for stock areas, average dynamic pieces over seasonality (Mar-Aug, Sep-Feb)
7. Use GAM to model HSIs over time