Movement matrix variance

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Example using Western tagged bluefin >185cm

Confidence intervals were constructed for simulations by reducing the number of tracks simulated in a single run and increasing the number of runs to a statistically significant amount.

For each month, 84 fish were released at locaitons proportional to where they were observed that month in the tagging data (n = 1008/run). This was replicated 1000 times for a total of 1,008,000 simulated fish.

For each run, a movement probability matirx was constructed, for a total of 1000 matrices. For each cell in each matrix position, the mean, median, standard deviation and 95% confidence interval were derived. Confidence intervals were defined as the 2.5% - 97.5% range of the 1000 runs.

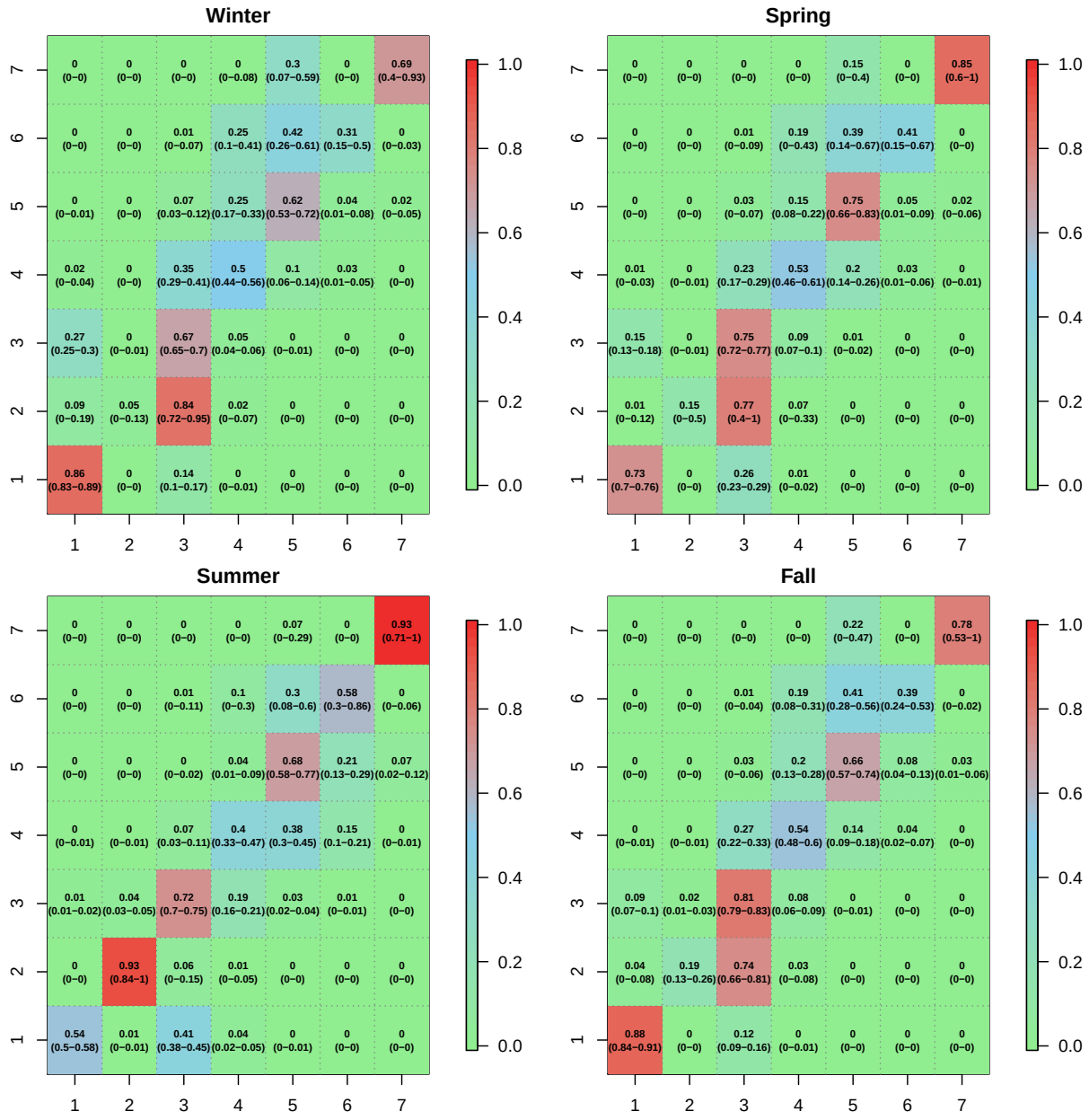

Figure 1: Mean (colorbar) and 95% CI (second line of each cell) for seasonal movement probabilities using the 7-box structure (see Figure 3)

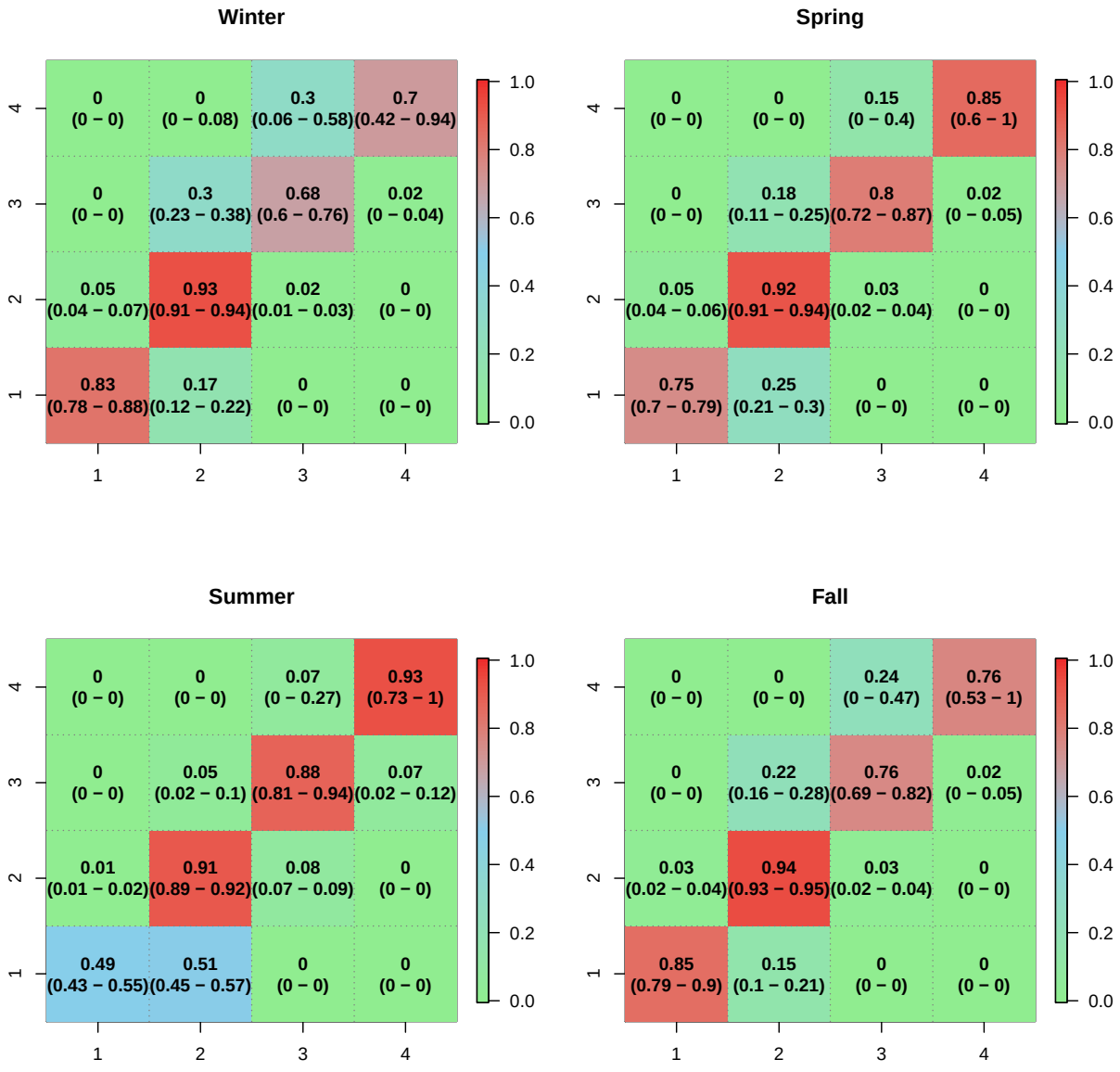

Figure 2: Mean and 95% CI for seasonal movement probabilities using the 4-box structure (see Figure 4)

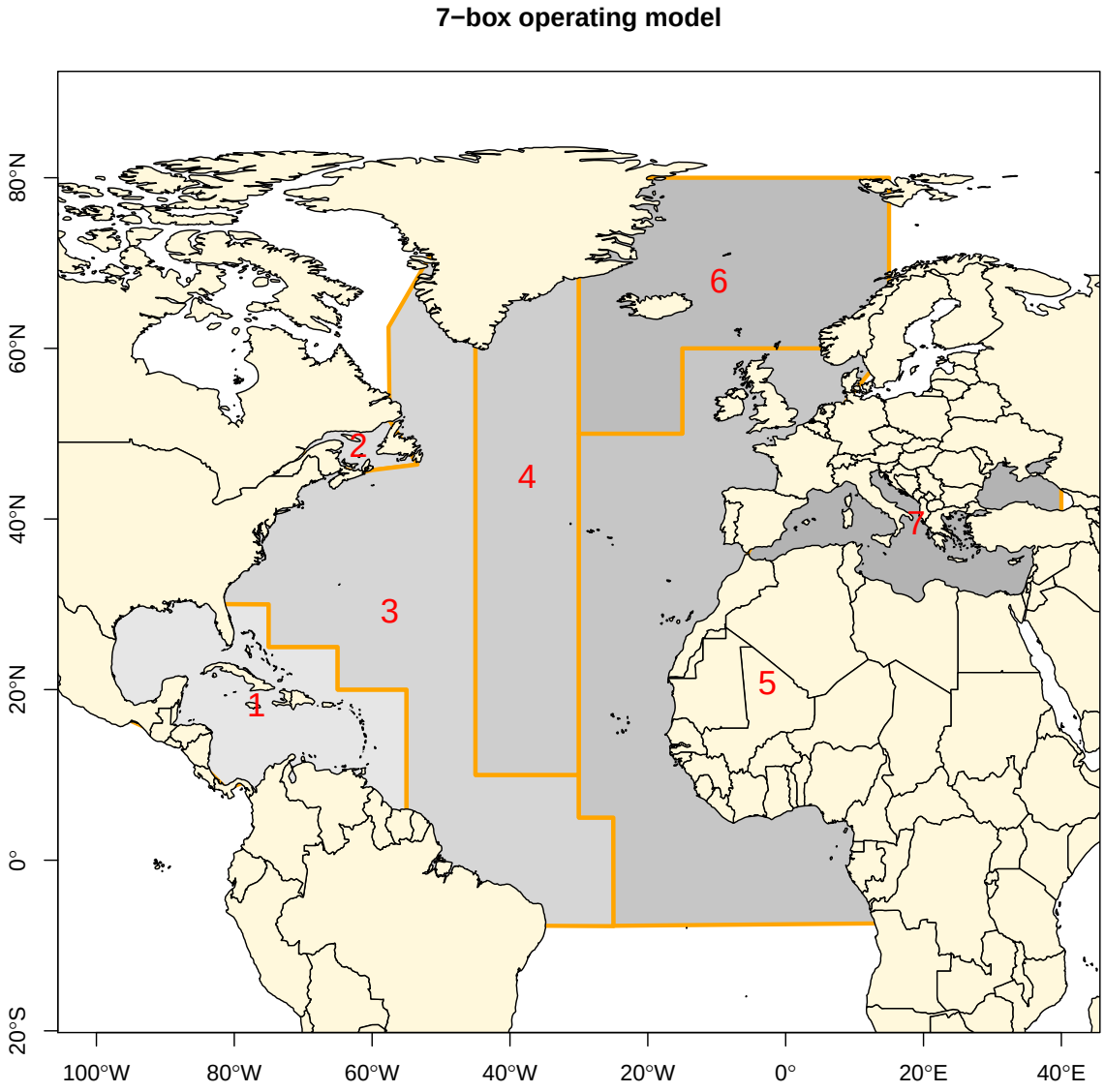

Figure 3: 7-box operating model used in Kerr et al. (2012-2016)

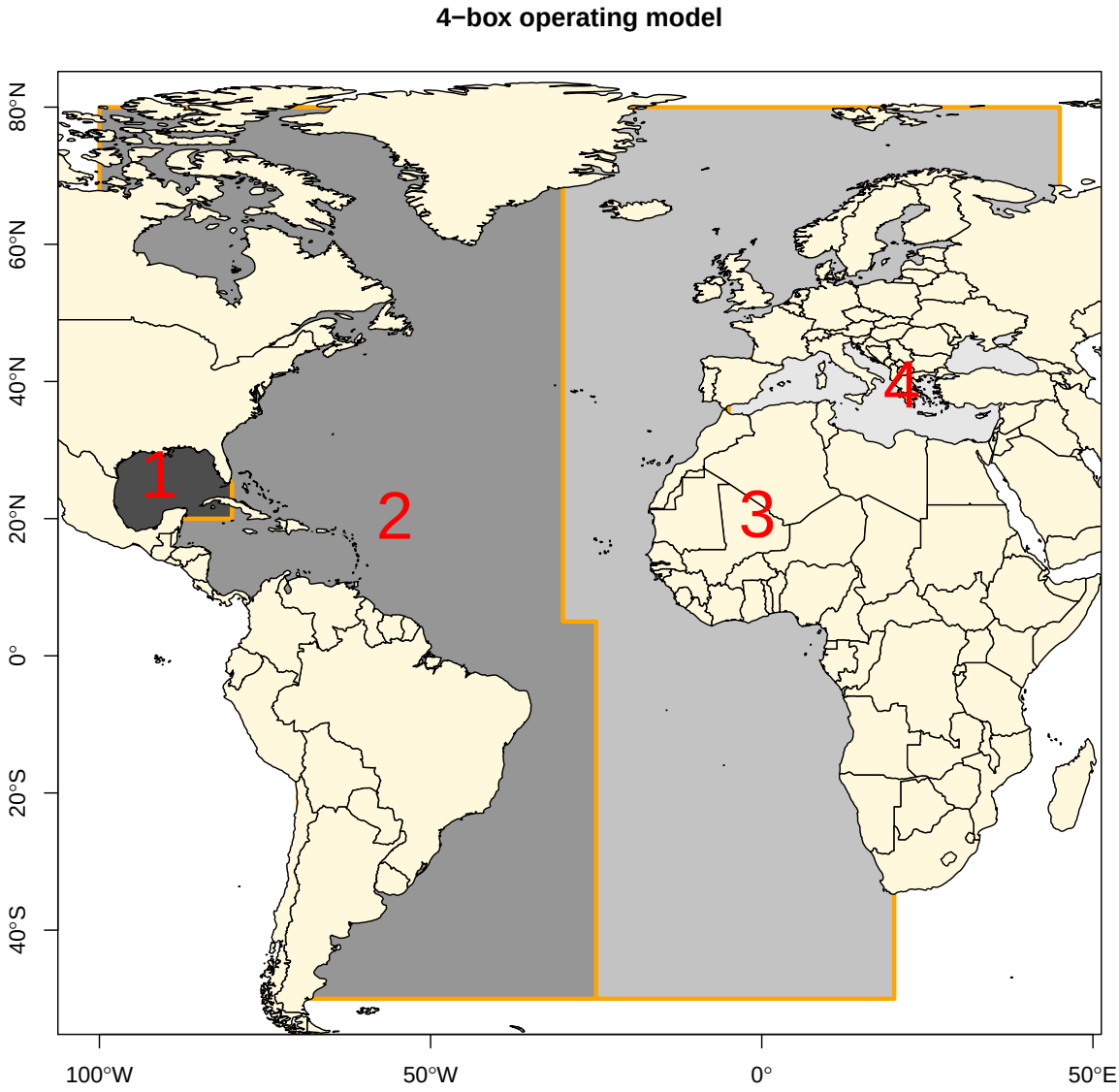

Figure 4: 4-box model sugegsted by Matt Lauretta (SEFSC)