Estimating encounter rates

- Distribution of debris stabilizes quickly
- Coastal zones always high (sources)
- Major gyres high within 16 years



Estimating encounter rates

- Use species range to find relevant areas
- Estimate plastic density within the area







• 188 seabird species, global scale

Combined with seabird distribution

Two models for distribution

- Density is even across breeding and nonbreeding regions
- Density is proportional to the distance from the edge of the distribution







Encounter rates across species

Birds range widely in expected encounter rates
– Six orders of magnitude difference across species





South Polar Skua mean: 0.000005 items/areaNorthern Fulmar mean: 0.36 items/area