**Can human wellbeing at a port affect how fishermen impact a marine ecosystem?**

Management motivation: Fisheries management often makes use of catch data standardized by effort (CPUE). Use of CPUE requires the assumption that effort can reasonably be standardized. Due to technological improvements in fishing gear and vessels, previous work has focused on developing metrics to better reflect effort. Differences in searching strategies (debatably “skill”) may also confound measures of CPUE however data on such fine scale foraging has been historically lacking. I propose to make use of new high resolution fishing data to quantify variation in foraging strategy and relate that to fishing efficacy.

1. Quantify variation in sociability of shrimp vessels across the US west coast measured as proportion of time spent fishing alone versus in the presence of another vessel. Interviews with west coast fishermen suggest that it should vary latitudinally with more social vessels further north. Further these interviews suggest that sociability may correlate with poverty, more affluent ports appeared to be more social than those with poorer ones.
2. Correlate sociability to catch efficacy: proxy measure calculated based on duration of trip, distance, pounds and revenue.
3. Correlate sociability with census data on poverty levels of each port