

SBC LTER Lobster Fishing Pressure

Author(s): Shannon Harrer, Clint Nelson

Overview and Background:

The commercial fishery for the California spiny lobster (*Panulirus interruptus*) involves the use of baited wire traps deployed on the bottom in rocky habitats and marked with surface floats (one trap per float). The fishing season lasts from October to March. The majority of fishing occurs in depths < 15 m. Fishing pressure by the commercial trap fishery is estimated at nine mainland areas, eight of which are SBC LTER kelp forest study sites. Two sites, Naples and Isla Vista, became marine protected areas (MPA) in January 2012. Fishing pressure is recorded by counting the number of traps in defined areas of coastline every two to four weeks during the fishing season (October to March). Lobster trap surveys began in October 2012.

Methods:

Field Collection. :

An observer on a boat counts the number of lobster traps present at each site. Each site is divided into a grid of parallel contiguous swaths, approximately 76 m wide (Figure 1). The swaths extend from the shoreline to the 15 m depth isobath (approximately 1 kilometer offshore) and each swath is 0.050 decimal minutes longitude wide. Surveys are conducted bi-weekly at the start of the fishing season in October and November and monthly from December through March.



Figure 1. Satellite image of the SBC LTER kelp forest study site at Arroyo Quemado showing a grid of 22 76 m wide swaths in which lobster traps are counted.

Laboratory Processing.

None required.

Data Processing.

Data are processed according to established SBC LTER lab protocols, eg, per Harrer and O'Brien 2009.

References:

Harrer S. and O'Brien, M. 2008. Processing and quality control of kelp forest community survey data. Proceedings of the Environmental Information Management Conference. doi:10.5060/D2S46PV7