How the 2011 Japanese Earthquake and Tsunami Prompted a Marine Debris Monitoring Program in North Central California

Kate Bimrose, Greater Farallones National Marine Sanctuary
Jan Roletto, Greater Farallones National Marine Sanctuary
Kirsten Lindquist, Greater Farallones Association

6IMDC, March 14, 2018
March 11, 2011
Japanese Earthquake and Tsunami

22 Thousand
309 Billion
50 Million
5 Million tons
1.5 Million tons
June 5\textsuperscript{th} 2012
Agate Beach, Oregon
Marine Debris Monitoring and Assessment Project (MDMAP)

NOAA MDP executed a national shoreline monitoring program in 2012, in order to compile a rigorous marine debris dataset and establish standardized protocol.

Citizen science effort to track abundance, types, and concentration of debris on beaches.

Globally, 341 shoreline sites surveyed.

Over 4,000 surveys uploaded to NOAAs online database.
July, 2012 to February, 2018

- 6 permanent beach survey sites
- 324 surveys conducted
- 126 volunteers
- Over 30,000 items recorded
Record counts of man-made items larger than 2.5 cm (1 inch) within seven different categories
1) Plastic
2) Metal
3) Lumber
4) Rubber
5) Glass
6) Fabric/cloth
7) Unclassified
Standing Stock Mean Seasonal Debris Concentration

# of debris items/m²

- south beach
- north point
- drakes east
- limantour

- relaxation
- storm
- upwelling

NORTH POINT ANNUAL MEAN CONCENTRATION

# of items/m²

- July '12 - June '13
- July '13 - June '14
- July '14 - June '15
- July '15 - June '16
- July '16 - June '17

- hard plastic
- plastic foam
- plastic film
- other plastic