

Marine Debris

NOAA Marine Debris Program | Office of Response and Restoration | NOAA National Ocean Service



**Japan Tsunami
Marine Debris:
Regional Action**

OCNMS Advisory Council
February 10, 2012
Port Angeles, WA

Nir Barnea
West Coast Coordinator
NOAA Marine Debris Program

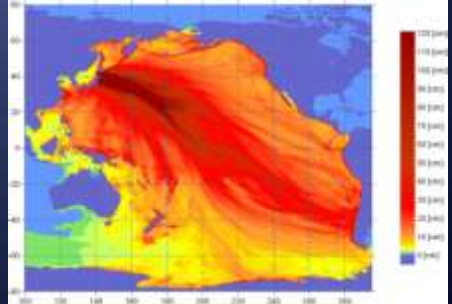
Tsunami debris off the coast of Yamada, Japan.
US Navy Pacific fleet

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Earthquake and Tsunami

- 9.0 magnitude earthquake
- Tsunami wave max height: 130 ft
- 217 square miles inundation
- 15,844 people confirmed dead, 3,451 missing



NOAA's ocean energy distribution forecast map of the 2011 Japan tsunami

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Early Debris



Debris on March 13 off the Sendai coast

- Patches and fields
- Wood, construction materials abundant
- The debris dispersed, some sunk



Photos: US Navy Pacific Fleet

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At-sea Sightings: Japan, Oct., Nov. 2011



Fishing boat



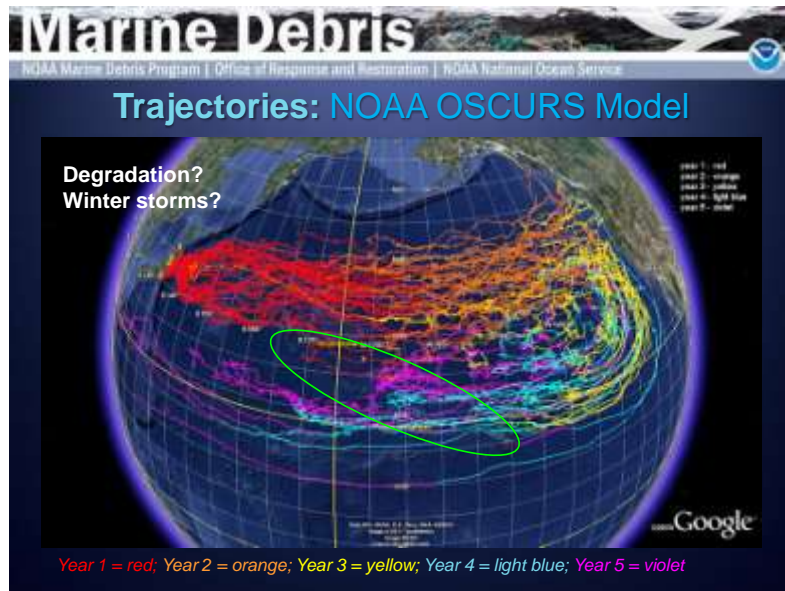
Capsized boat



Gas cylinder



Fishing gear



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Summary of what we know

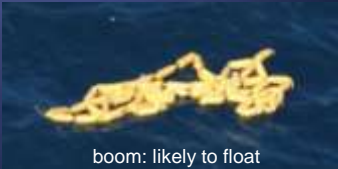
- Debris is dispersed and not in large concentrations or fields
- Confirmed sightings: Two so far
- Computer models' predictions (all rough estimates)
 - Northwestern Hawaiian Islands: winter 2012
 - West Coast: 2013
 - Circle back to main Hawaiian Islands: 2014 to 2016
 - Models don't predict fate and effect
- Radioactive? Not likely.
 - Debris generated over hundreds of miles, while radioactive water leaked from one place
 - Debris washed out to sea before the leak occurred
 - Monitoring results of vessels and debris (Palada)

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Summary of what we don't Know

- How much debris is still out there/still afloat?
 - 5-20 million tons floating debris is unsubstantiated
- Exact timeline and location
- Fate and effect



boom: likely to float



shipping container: likely to sink


Photos: Japan Air Force

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Action so far

- **Collaboration with partners!**
- Maritime advisory and sightings
- Satellite detection
- Additional modeling
- Information and outreach
- Shoreline survey: OCNMS



MDP website FAQs



Report debris sightings to:
disasterdebris@noaa.gov

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Washington Coast JTMD

- Floats and presentation
- State team
- Public meetings
- NMS role



Joint Team Presentation

Ian Miller and the float

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Washington Coast Assets

- OCNMS and MD Survey
- Coast Savers cleanup
- NP, Tribes, USCG, NGO,



Olympic Coast Cleanup, April 22, 2006



Coast Savers Cleanup Day



<http://www.coastsavers.org/history.html>

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What's next

Japan Tsunami Marine Debris Assessment and Response Framework

- For all US regions of potential impact
- Subject Matter Expert groups – national and regional
- Information & knowledge

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Response plans



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Thank you

Get info: <http://marinedebris.noaa.gov/info/japanfaq.html>

Report sightings: disasterdebris@noaa.gov

Nir Barnea
NOAA Marine Debris Program
7600 Sand Point Way NE
Seattle, WA 98115
Nir.barnea@noaa.gov