# Monitoring our Radioactive Ocean



Ken Buesseler Senior Scientist, Marine Chemistry and Geochemistry

#### **CURRENT RESEARCH**

## Measuring radioactivity reaching US shores from the 2011 Tsunami in Japan

In the aftermath of the 2011 tsunami off the coast of Japan, the Fukushima Dai-ichi nuclear power plant released cesium-134 and -137 and several other radioactive elements into the ocean at unprecedented levels. To this day, more than 50,000 people in Japan cannot return to their homes due to the radioactive contamination level on land. Although Fukushima is 5000 miles from the west coast of North America, ocean currents are still able to carry the containments towards the US some three years later. Shockingly however, no US federal agency is currently supporting the monitoring of ocean radioactivity in coastal waters that is causing high public concern. Dr. Ken Buesseler, of the Woods Hole Oceanographic Institution, is a marine scientist who increases scientific and public understanding of the sources, fates, and consequences of natural and human-made radioactive elements in the environment like the contaminants coming from Fukushima. Dr. Buesseler and his team are able to measure how contaminated the ocean is and measure the levels in the fish that inhabit them but also, they are trying to answer when fish will be safe to eat and how quickly contaminants either mix and move offshore with ocean currents or are buried near the coast. His efforts included leading an international rapid response cruise off Japan shortly after the disaster and continued studies to track ongoing radioactivity leaks from the nuclear power plant site. Since January 2014, more than 250 seawater samples have been collected from San Diego to Alaska and Hawaii shores by citizen-scientists and crowd-funding has been used to analyze them (http://OurRadioactiveOcean

## **AFFILIATION**



Woods Hole Oceanographic Institution

#### **EDUCATION**

- Ph.D. in Marine Chemistry, 1986 MIT/WHOI Joint Program
- B.A. (cum laude) in Biochemistry and Cell Biology, 1981 University of California, San Diego

#### **AWARDS**

- Fellow, American Geophysical Union, 2009
- Times Higher Education top cited scientist in Oceanography, 2000 2010
- Foreign member of the Royal Netherlands Academy of Arts and Sciences, 2013
- Japan Society for the Promotion of Science, 2013
- Paul M. Fye Chair, WHOI, 2008

#### **RESEARCH AREAS**

Environment, Oceanic, Natural Disasters / Emergency, Clean Energy

### **FUNDING REQUEST**

Your contributions will support the continued research of Dr. Ken Buesseler, of the Woods Hole Oceanographic Institution, as he studies the ocean's radioactivity. Donations will support the \$1M required per year for personnel, students, sampling cruises and devices that will measure radioactivity. No U.S. federal agency is responsible for the studies of ocean radioactivity, and private funding is invaluable! In addition, such funding will improve the safety and well-being of the global community.

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