

Interactive comment on “Spatiotemporal distributions of Fukushima-derived radionuclides in surface sediments in the waters off Miyagi, Fukushima, and Ibaraki Prefectures, Japan” by M. Kusakabe et al.

C.-A. Huh (Referee)

huh@earth.sinica.edu.tw

Received and published: 18 March 2013

The article constitutes an important documentation of the distribution of Fukushima-derived fission nuclides (FDFNs) in marine surface sediments off three prefectures near the FDNPP. The manuscript is well-written and has described/explained the observed distribution reasonably and clearly, despite many uncertainties involved in the amounts, pathways and timing of the discharge of FDFNs from FDNPP. I favor the publication of the manuscript after a minor revision and some technical corrections suggested/listed below.

C362

The title seems a little too long. I would suggest a shorter title like: "Spatiotemporal distributions of Fukushima-derived fission nuclides in nearby marine surface sediments". For readers to get a better sense/feeling about the detection limits of the measurements, it may be helpful to describe the make, model, and specs (esp. counting efficiency) of the Ge detector used in this work. Also, it would be good to briefly describe how the detector was calibrated and what reference materials were used. Fig. 1: The time (x) axis ends at 1 January 1984, the same as the beginning point. It must be wrong, since there are more than 20 years in the time series. Please correct. Line 11: Insert "marine" before "surface sediments off ...". Line 16: delete the right parenthesis. Lines 27-29: The sentence does not read well. A change is suggested below: Activity ratios of these nuclides to ¹³⁷Cs suggest these nuclides were not homogenized before they were removed from seawater to the sediment. Line 45: The word "form" is a typo of "from". Line 46: Insert "an" before "additional pathway". Line 48: delete the first comma sign. Line 67: Change "were save used for ..." to "were saved and used for ...". Line 91: Use an exact unit to replace the word "volumes". Line 122: Change "were influenced the least by ..." to "were least influenced by ...". Lines 223-224: Change the phrase "concluding that ...would be premature" to "it would be premature to conclude that ...". Line 225: delete "in fact". Line 226: Add "due" before "to". Line 281: Delete the word "directly".

Interactive comment on Biogeosciences Discuss., 10, 4819, 2013.

C363