

Interactive comment on “Cesium, iodine and tritium in NW Pacific waters – a comparison of the Fukushima impact with global fallout” by P. P. Povinec et al.

Anonymous Referee #1

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The manuscript reports the contamination status of ^3H , ^{129}I , ^{137}Cs in June 2011, 3 months after the failure of Fukushima nuclear reactors in the NW Pacific Ocean and compares Fukushima total input to the ocean with other earlier releases from atmospheric nuclear weapon tests, Chernobyl, and European nuclear fuel reprocessing plants.

The manuscript provides a global and historical perspective on the contamination with anthropogenic radionuclides from various sources. I have not found any major issues for the authors to address further. The manuscript is well written.

I have a few minor following points for the authors to consider for their final submission.

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(1) Table 1 may be expanded to include the amount of radionuclides released from Tokai reprocessing facility and other radionuclides such as ^{14}C , ^{134}Cs and ^{90}Sr , if possible.

(2) Station numbers mentioned in the text and figures are difficult to follow for the wider audience, therefore, a map showing those stations mentioned in the text may be added.

(3) A few references on ^{129}I in the Pacific may be useful to the authors. Shima et al. 2006. Distribution of anthropogenic radionuclides in the water column off Rokkasho, Japan. *Radioactivity in the Environment* 8, 83-95. Toyama et al. 2102. Variations of ^{129}I in the atmospheric fallout of Tokyo, Japan: 1963-2003. *Journal of Environmental Radioactivity* 113, 116-122. He et al. 2013. A summary of global ^{129}I in marine waters. *Nuclear Instruments and Methods in Physics Research B*. 294, 537-541.

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