

We would like to thank the anonymous referee for his/her careful review of the manuscript and for providing these comments and suggestions to which we respond in detail below.

Reviewer's comment	Reply
<p>The aim of the manuscript is to do a review to sediment core dating by using radionuclides. The authors have also uploaded a comprehensive data set to open source platform. I think the work is of interest and is of use to scientific community. The English used in this manuscript is at good level and the narrative proceeds in logical manor. I think is ready for publication after minor revision.</p>	<p>We are grateful to the referee for his general positive comment and for highlighting the interest of this publication for the scientific community.</p>
<p>Generally, try to use past tense in the manuscript instead of present tense</p>	<p>Agree, past tense will be used in the revised manuscript.</p>
<p>The Chinese nuclear weaposn test are referred here as "local releases". I find this term controversial since the Chinese tests were detected in aerosols in the other side of the world and Cs-137 originating from the Chinese test have been detected in Scandinavia which is practically on the other side of the globe.</p>	<p>We agree with the referee. The term "local release" is probably inappropriate for atmospheric tests. We propose to distinguish these tests with a regional scope from more local sources such as releases from nuclear power plants. In the revised manuscript we will added a definition of these different terms (Global, Regional/Local).</p>
<p>The authors used one database and two search words in their data aquisition. I am bit doubtful that this provided the best result although the result consisted of 573 articles, Especially some studies utilizing Pb-210 as the main nuclide may have been missed.</p>	<p>The main idea of this manuscript was to synthesize the studies using ^{137}Cs and to report the other radionuclides associated with ^{137}Cs in these publications. We agree with the referee's comment, some studies using Pb-210 as the main nuclide may have been missed with our Web of Science search, nevertheless it was not the objective of this article. To avoid confusion, this point will be clarified on line 82.</p>
<p>Section 3.3. I am bit concerned if this section actually deals with excess or unsupported fraction of the Pb-210 ? It is not clearly mentioned how the supported and unsupported fractions were distinquished ? In section 3.4. the isotopes needed to determine the supported fraction. namely Ra-226 and it's daughters, are observed in very rare cases.</p>	<p>Throughout the manuscript we use only the ^{210}Pb in excess. Data for supported ^{210}Pb were rarely given in the publications that we have synthesized. The way to determine the supported fraction was not always detailed which explains the fact that the use of ^{226}Ra was only rarely mentioned in the publications. Another way to estimate the supported ^{210}Pb is to analyses sediment in the deeper part of the core where $^{210}\text{Pb}_{\text{xs}}$ have been disappear.</p>
<p>Section 4.1. what is menat by post-accidental fallout ? Isn't all the fallout post-accidental ie, deposited after the accident</p>	<p>All ^{137}Cs fallout are not associated with an accident. Like mentioned above, some of them may be associated with atmospheric bomb tests. We use the term "post-accidental" in section 4.1 for the fallout associated with the Fukushima and Chernobyl accidents. To avoid ambiguity, the term "post-accidental" will be deleted to homogenize the manuscript with other accidents</p>

line 364: which isotopic evidences you are referring to ?	In this part we were thinking about plutonium isotopes. This information will be added in the updated version.
line 369: A similar findings was made...	This correction will be made.
line 400: reusable format ? what does this mean ?	Reusable format means that the data are easily available, as for example in a table or in a detailed figure. This point is detailed between L. 400 and 403 This is part of the FAIR initiative developed in Wilkinson et al., 2016 (cited in the manuscript) which will allow the reuse of these data for other applications, inter-comparisons.
line 413: "complementary tracers" what tracers are you referring to ? Please provide and example.	We were thinking about the use of plutonium, americium or again strontium to distinguish fallout sources. Example will be added in the updated version