



Letter to the Editor

Comments on Yang and Meng (2020) “The evolution and research framework of carbon footprint: Based on the perspective of knowledge mapping” [Ecol. Indic., 112, 106125]


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ABSTRACT

Yang and Meng (2020) used sub-optimal search keywords and methods to publish a bibliometric paper in *Ecological Indicators*. There are two questionable parts to the original paper: a filter could be used to retrieve a more accurate set of data and the use of sub-optimal search keywords. There is a big difference between the two results that were searched using search keywords (“carbon footprint”, “carbon footprints”, and “carbon footprinting”) which we suggested and (“carbon footprint”) which authors used. Finally, an appropriate method and search keywords were presented.

Yang and Meng (2020) recently published a paper in *Ecological Indicators* entitled “The evolution and research framework of carbon footprint: Based on the perspective of knowledge mapping”. Yang and Meng mentioned in section 2.3. Data collection that ‘Second, the “Web of Science Core Collection” that includes the Science Citation Index Expanded, the Social Sciences Citation Index, Conference Proceedings Citation Index-Science, Current Chemical Reactions and Index Chemicus was selected in the “Select a Database” tab on the left-hand side of the webpage.’ and ‘Table 1 summarises the acquired search results.’

Authors searched documents from 2008 to 2018 on January 3, 2019 as mentioned in Table 1 in the original paper (Yang and Meng, 2020). It is not possible to know number of publications in 2018 from the Web of Science Core Collection on January 3, 2019. There are ten different levels of databases in the Web of Science Core Collection, but that does not mean it is suitable to utilize them all (Ho, 2019a; Ho, 2019b). Conference Proceedings Citation Index - Science (CPCI-S), Conference Proceedings Citation Index – Social Science & Humanities (CPCI-SSH), Current Chemical Reactions (CCR-EXPANDED), and Index Chemicus (IC) are redundant for “The evolution and research framework of carbon footprint: Based on the perspective of knowledge mapping” (Yang and Meng, 2020).

In the same section, Yang and Meng (2020) noticed that “in the “Basic Search” tab, “carbon footprint” was entered in the “Topic” section and “2008–2018” was entered in the “Years Published” section. Then, by clicking the “Search” button, 7204 search results were obtained from 2008 to 2018. Subsequently, the search results were refined using the “Refine Results” feature of the WoS Database by selecting “Article”, “Review”, and “Proceedings Paper” in the “Document Types” tab. Overall, 7021 effective records were obtained.’ Using the same method as mentioned in the original paper with search keywords “carbon footprint” (with double quotes) in Topic, it resulted in 5016 documents including 3437 articles, 1425 proceedings papers, and 273 reviews (Data last updated: December 24, 2020). The results show 2005 out of 7021 documents from the results in the original paper (Yang and Meng, 2020). Authors used searching strategy by search keywords carbon footprint that means carbon and footprint (Ho, 2019a; Ho, 2019b).

An accuracy method is presented as follows. Based on the search keywords from the original paper (Yang and Meng, 2020), an improved set of search keywords: “carbon footprint”, “carbon footprints”, and “carbon footprinting” was used. These search keywords were searched in terms of Topic with the same time period, 2008–2018, as stated in the original paper (Yang and Meng, 2020). This method resulted in 5436 documents including 3725 articles, 1541 proceedings papers, and 297 reviews using SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH, CCR-EXPANDED, and IC databases and 4021 documents including 3724 articles, 297 reviews, and 126 proceedings papers in SCI-EXPANDED and SSCI databases.

It has been pointed out that SCI-EXPANDED and SSCI are designed mainly for researchers to find published literature works instead of bibliometric studies (Ho, 2018; Ho, 2019b). Thus, it is always necessary to use an accurate bibliometric method when using the SCI-EXPANDED and SSCI (Ho, 2019b). It was reported that the articles, which can only be searched by *KeyWords Plus*, were irrelevant to searching topics (Fu and Ho, 2015). Ho’s group was the first to propose ‘front page’ as a filter to improve the bibliometric method (Fu et al., 2012; Fu and Ho, 2014). Only articles with search keywords in their ‘front page,’ including the article title, the abstract, and the author keywords, were considered. As a result, 3248 articles (87% of the 3724 articles) had search keywords in their ‘front page,’ whereas 476 articles (13% of the 3724 articles) did not include “carbon footprint”, “carbon footprints”, or “carbon footprinting” in their ‘front page.’ In recent years, the same problem in the environmental field has also been pointed out in *International Journal of Environmental Research and Public Health* (Ho, 2019c; Ho, 2019d) and *Environmental Science and Pollution Research* (Ho, 2020a; Ho, 2020b).

It was reported that research is the way to the truth, so innovations are important to find something new or a new understanding to approach the truth (Ho, 2019d). It is not helpful for researchers to duplicate the same questionable parts to their original papers without improving their ways of researching (Ho, 2019e). In my view, Yang and Meng used sub-optimal search keywords and method to publish bibliometric paper in *Ecological Indicators*, this may lead to a less refined result and therefore misleading the journal readers (Ho, 2019b; Ho,

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2020c). The authors could have provided a more promising set of results and information about their data if they understood more about the Web of Science beforehand.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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