




Correction

Correction: Lindner, J.P., et. al. Valuing Biodiversity in Life Cycle Impact Assessment. *Sustainability* 2019, 11, 5628

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The authors would like to make the following corrections about the published paper [1]. The changes are as follows:

- (1) Removing the fourth author from the original version:

Mascha Bischoff

- (2) To clearly indicate “With this addition we acknowledge another article [18] that presents a similar methodology. The other article by Maier et al. (2019) was published in February in the same special issue of Sustainability”, the authors wish to add an explanation along with a reference in “Section 2.2. State of the Art in Biodiversity LCIA on page 3”.

Replacing the original version:

The latter approach is usually based on a set of quantifiable conditions, e.g., deadwood availability in forest ecosystems [17].

with

The latter approach is usually based on a set of quantifiable conditions, e.g., deadwood availability in forest ecosystems [17] or various sets of parameters relevant to each land use type [18].

Adding a reference in the citation list:

18. Maier, S.D.; Lindner, J.P.; Francisco, J. Conceptual Framework for Biodiversity Assessments in Global Value Chains. *Sustainability* 2019, 11, 1841.
- (3) To clearly indicate “With this addition we acknowledge earlier methods that we reference several times in our article”, the authors wish to add an explanation along with a reference in Section 2.4. Research Gaps on page 6.

Replacing the original version:

Additionally, methods distinguish between forestry, pasture and crops [27]

with

Additionally, methods distinguish between forestry, pasture and crops [18,28,29].

Adding a reference in the citation list:

29. Perennes, M. Using local ecosystem indicators to determine land use impacts on biodiversity: A case study in Baden-Wuerttemberg. Master's Thesis, Bayreuth University, Bayreuth, Germany, 2017.
- (4) To clearly indicate "This paragraph contains the most relevant change. We add Maier et al. (2019) [18] as one of the methods on which we build. The earlier version of our article did not mention [18]—which is the main mistake we want to correct." and "With this addition we add one more influential reference [32] to the earlier methods on which our method is based.", the authors wish to add an explanation along with a reference in Section 3 Proposal for a Biodiversity Impact Assessment Method on page 6.

Replacing the original version:

The authors propose a biodiversity impact assessment method that combines the fuzzy framework from Lindner et al. [28,29] and the hemeroby approach by Fehrenbach et al. [30].

with

The authors propose a biodiversity impact assessment method that combines the fuzzy framework from Lindner [20] and Lindner et al. [30–32] with the hemeroby approach by Fehrenbach et al. [33] in a framework previously proposed by Maier et al. [18].

Adding a reference in the citation list:

32. Lindner, J.P.; Perennes, M.; Bos, U.; Koellner, T. Quantification of land use impacts on biodiversity with local ecosystem indicators: A case study in southwestern Germany. In Proceedings of the LCA Food 2018, Bangkok, Thailand, 16–20 October 2018; Mungkung, R., Gheewala, S.H., Eds.; Kasetsart University: Bangkok, Thailand, 2018; pp. 106–108.
- (5) Replacing the sentence in "Section 3 Proposal for a Biodiversity Impact Assessment Method on page 6":

Lindner et al. [28,29] posit a relatively fine-grained calculation structure for biodiversity value, but stop short of making a strong case for what that value should be.

with

Lindner [20] and Lindner et al. [30–32] posit a relatively fine-grained calculation structure for biodiversity value, but stop short of making a strong case for what that value should be.

- (6) Replacing the sentence in "Section 3 Proposal for a Biodiversity Impact Assessment Method on page 6":

It was developed to address the above mentioned requirements for different stakeholders and to fill research gaps in this field.

with

Maier et al. [18] use a regional weighting factor, fixed intervals per land use type, and a set of management parameters per land use type. Different combinations of two of these elements have been proposed before [20,29], but all three are combined into one framework by Maier et al. The

method presented here was developed to address the above mentioned requirements for different stakeholders and to fill research gaps in this field.

- (7) Replacing the sentence in “Section 5.1. Strengths of the Method on page 16”:

All these actions influence the biodiversity impact of the pizza, and they all can be answered with the same consistent method.

with

All these actions influence the biodiversity impact of the pizza, and they all can be answered with the same consistent method. This is also possible with the approach of Maier et al. [18] even though the specific definitions of the methodological elements differ.

- (8) Replacing the sentence in “Section 5.1. Strengths of the Method on page 17”:

Modularity is another strength: various elements of the method can be altered without invalidating other elements.

with

Modularity is another strength: various elements of the method can be altered without invalidating other elements – a property shared with earlier, similarly modular approaches [18,20,29].

- (9) To clearly indicate “With this addition we state that elements of our method and the method from [18] are modularly interchangeable, and that the definition of the elements in [18] offers different advantages.” the authors wish to add an explanation along with a reference in Section 6 Outlook on page 19.

Replacing the original version:

Making the method publicly available also opens up the possibility for other researchers around the world to develop their own derivatives and spin-off methods.

with

Making the method publicly available also opens up the possibility for other researchers around the world to develop their own derivatives and spin-off methods. For example, Maier et al. [18] refer to the PREDICTS database [61] and the Land Use Intensity index [62], which relies on more testable biodiversity metrics.

Adding two references in the citation list:

61. Newbold, T.; Hudson, L.N.; Hill, S.L.L.; Contu, S.; Lysenko, I.; Senior, R.A.; Borger, L.; Bennet, D.J.; Choimes, A.; Collen, B.; et al. Global effects of land use on local terrestrial biodiversity. *Nature* 2015, 520, 45–50.
62. Blüthgen, N.; Dormann, C.F.; Prati, D.; Klaus, V.H.; Kleinebecker, T.; Hölzel, N.; Alt, F.; Boch, S.; Gockel, S.; Hemp, A.; et al. A quantitative index of land-use intensity in grasslands: Integrating mowing, grazing and fertilization. *Basic Appl. Ecol.* 2012, 13, 207–220.

- (10) Replacing the sentence in “Section 6 Outlook on page 19”:

A possible replacement could be sourced from the GlobCover data [60], the ESA Climate Change Initiative products [61], USGS Global Land Cover [62], as well as the data from Forest Watch [63].

with

A possible replacement could be sourced from the GlobCover data [65], the ESA Climate Change Initiative products [66], USGS Global Land Cover [67], as well as the data from Forest Watch [68].

Another option would be to use the regional weighting factor from Maier et al. [18], which is a combination of vulnerability and irreplaceability scores.

(11) Replacing the sentence in “Author Contributions on page 20”:

Conceptualization, J.P.L.; methodology, J.P.L., H.F. and L.W.; writing—original draft preparation, J.P.L., H.F., L.W., M.B., J.B. and E.K.; writing—review and editing, J.P.L., H.F., L.W., M.B., J.B. and E.K.; funding acquisition, J.P.L., H.F. and L.W.

with

Conceptualization, J.P.L.; methodology, J.P.L., H.F. and L.W.; writing—original draft preparation, J.P.L., H.F., L.W., J.B. and E.K.; writing—review and editing, J.P.L., H.F., L.W., J.B. and E.K.; funding acquisition, J.P.L., H.F. and L.W.

(12) Replacing the reference:

29. Lindner, J.P. A consistent variable-scale biodiversity impact assessment structure. In Proceedings of the LCA Food 2018, Bangkok, Thailand, 16–20 October 2018; Mungkung, R., Gheewala, S.H., Eds.; Kasetsart University: Bangkok, Thailand, 2018; pp. 87–90.

with

31. Lindner, J.P.; Fehrenbach, H.; Winter, L.; Bischoff, M.; Bloemer, J. A consistent variable-scale biodiversity impact assessment structure. In Proceedings of the LCA Food 2018, Bangkok, Thailand, 16–20 October 2018; Mungkung, R., Gheewala, S.H., Eds.; Kasetsart University: Bangkok, Thailand, 2018; pp. 87–90.

The authors and the Editorial Office would like to apologize for any inconvenience caused to the readers by these changes. The change does not affect the scientific results. The manuscript will be updated and the original will remain online on the article webpage.

Reference

1. Lindner, J.P.; Fehrenbach, H.; Winter, L.; Bischoff, M.; Bloemer, J.; Knuepffer, E. Valuing Biodiversity in Life Cycle Impact Assessment. *Sustainability* **2019**, *11*, 5628. [[CrossRef](#)]



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