

SOIL Discuss., author comment AC1  
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## Reply on CC1

Collin J. Weber et al.

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Author comment on "Meso- and microplastic distribution and spatial connections to metal contaminations in highly cultivated and urbanised floodplain soilscares – a case study from the Nidda River (Germany)" by Collin J. Weber et al., SOIL Discuss., <https://doi.org/10.5194/soil-2022-1-AC1>, 2022

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Dear Zacharias,

thank you for using the interactive review option and thanks for your very helpful comments! We would be happy to include your comments in a future revision. A few comments in response here:

### Title

Thanks for your suggestion about the term "metals of interest". It is true that the term "heavy metal" is too unspecific, although it is still used so often. We will use the new term in place of the old one in our revision, including title and main text.

### Introduction

It is true that the introduction is too wordy in some places. We will shorten this and adjust more directly in the revision.

Regarding your questions:

The findings reported in L83-87 were performed purely visual without density separation (Weber and Opp, 2020) and in NaCl (Weber et al. 2021).

We had general ecosystems services like provisioning (e.g., food production), regulating (e.g., water purification and flood control) and cultural (e.g., non-material benefits like archive functions) services in mind.

With regard to bullet 3 (3th issue) we had an hypothesis in mind from our previous research. Maybe we change the wording to "Spatial relationships ... proving the hypothesis of spatially distinct contamination patterns due to different contamination periods"

### Methods

Thanks for your suggestions. We will shorten the section and make it more precise. With

regard to the sampling site naming or numbering, we think that's a subjective point, as you already mentioned. We will keep the original here.

- 198 We used corn starch bioplastic bags instead of paper bags since in our experience they are more durable with moist samples.
- 215 The term "fine-earth" is common within the soil description according to FAO guidelines. I don't know which one is more correct, but I have always referred to the FAO guidelines.
- 238 Yes, there was a specific protocol and thanks for this reminder! Sample material with a size (sieved) between >2 mm and <5 mm was inspected via stereomicroscope, whereas sample material <5mm was inspected without. We will add these criteria in our revision.
- 242 Yes, the rim jars were made of glass. We will add "glass rim jars".

Thanks for your comments on the correct Cowger citation as well as the consistent use of  $r^2$ . We will adjust these errors.

Special thanks for your statistics suggestions! We have done some graphic analysis of the residuals as well. We will check residuen again. Thanks also for the hint to share the R code. With regard to the non-parametric tests, we made sure that the variances of the comparison groups did not differ significantly, because we could not perform a Welch test due to the lack of normality.

## **Results and Discussion**

**Thanks for the commendation and glad you enjoyed reading it! We will consider your comment on the length of some sentences and shorten where possible.**

## **References**

Thanks again for this remark. Your idea of favouring some specific review papers and exemplary studies sounds fine. We will include this in the revision.

Really, big thank for your support. All the best,

Collin (on behalf of all co-authors)