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**ESURF-2021-102: Using repeat UAV based laser scanning and multispectral imagery to explore eco-geomorphic feedbacks along a river corridor. (Formerly: Exploring the 4D scales of eco-geomorphic interactions along a river corridor using repeat UAV Laser Scanning (UAV-LS), multispectral imagery, and a functional traits framework).**

### **Response to Comments from the Associate Editor**

Dear Lina,

We thank the Earth Surface Dynamics editors for their constructive and helpful comments on our submitted manuscript. Below we outline how we have addressed the comments from yourself. For clarity, we summarise the review comments in ***bold and italics*** and list our response below each one, we also provide a list of other changes below:

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#### **Section 4.2 of Results**

**Names of trees should not be capitalized, e.g., 'alder', 'willow', etc...**

Names of vegetation have been changed to remove capitals.

**Also, be sure to provide latin names of species studies (e.g., *Alnus incana*?) at their first mention**

Latin names for species identified and used for traits comparisons included in the text.

#### **Section 4.2.4:**

**If channels are commonly re-activated during winter, I wouldn't call them paleochannels, but perhaps side channels.**

We agree with this new terminology and have changed accordingly.

**“over classification” should be one word or separated with a hyphen (similar to overestimate used elsewhere in text)**

Changed to overclassification inline with the format used for overestimate, both in main body text and figure captions.

## **Section 5.2**

**Change to ‘this presents a limitation for some research.’**

Changed.

## **Section 6**

**Change to ‘an how these representations change temporally’**

Changed sentence structure accordingly.

**Next line; change to : a plant’s life**

Changed.

**Change to: ‘their complexity due to the sensors’ limits of detection’**

Changed.

**Here, and throughout text: make sure that ‘ground-based’ has a hyphen if used as an adjective**

Changed in all instances.

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### **Other Changes made by the Authors:**

Removal of hyphen in reach-scale from first instance in abstract to be consistent with remainder of manuscript.

Missing punctuation at the end of line 53 corrected.

Lines 191 to 195 altered, correcting some changes in tense and including the period of time used for the river depth statistics.

Caption for Figure 1 changed, indicating source material for the country outlines background mapping in inset A (EUROSTAT, 2020) and inset B (UK Office for National Statistics, 2019), as requested by file validation process.

Line 210 added in UAV-RGB to sentence when specifying GSD or imagery.

Line 391, clarification that 300 forests were used in the random forest model.

Sections 4.2.X renamed to 4.1.X after error in number formatting.

Section 4.1.3. and 4.1.4., inclusion of vertical prior to 'skew' and 'skewness' to make clear this is vertical variation.

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We hope that the editors and reviewers are happy that we have fully addressed all comments and are happy to clarify any responses and changes as required. Thank you for considering our manuscript for publication in Earth Surface Dynamics.



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