



Federal Agency for
Cartography and Geodesy

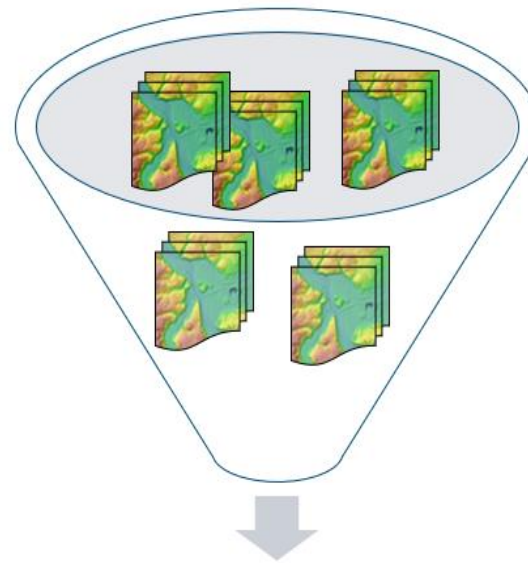


Harmonising digital terrain data

Peter Barthel, M.S.



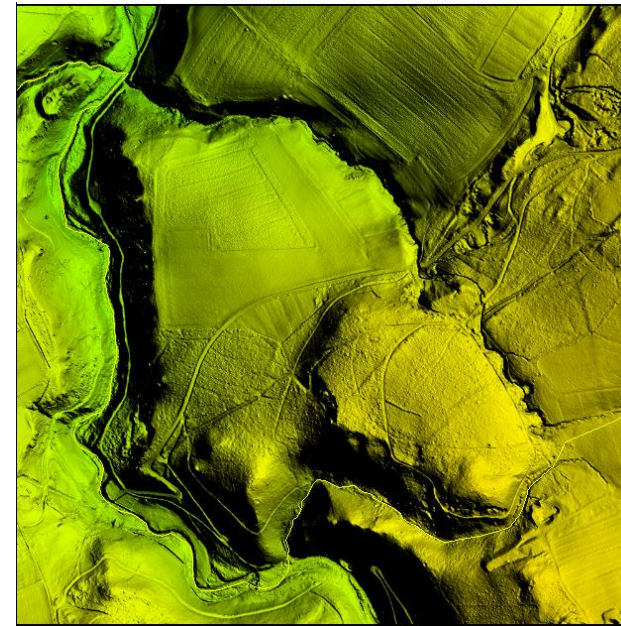
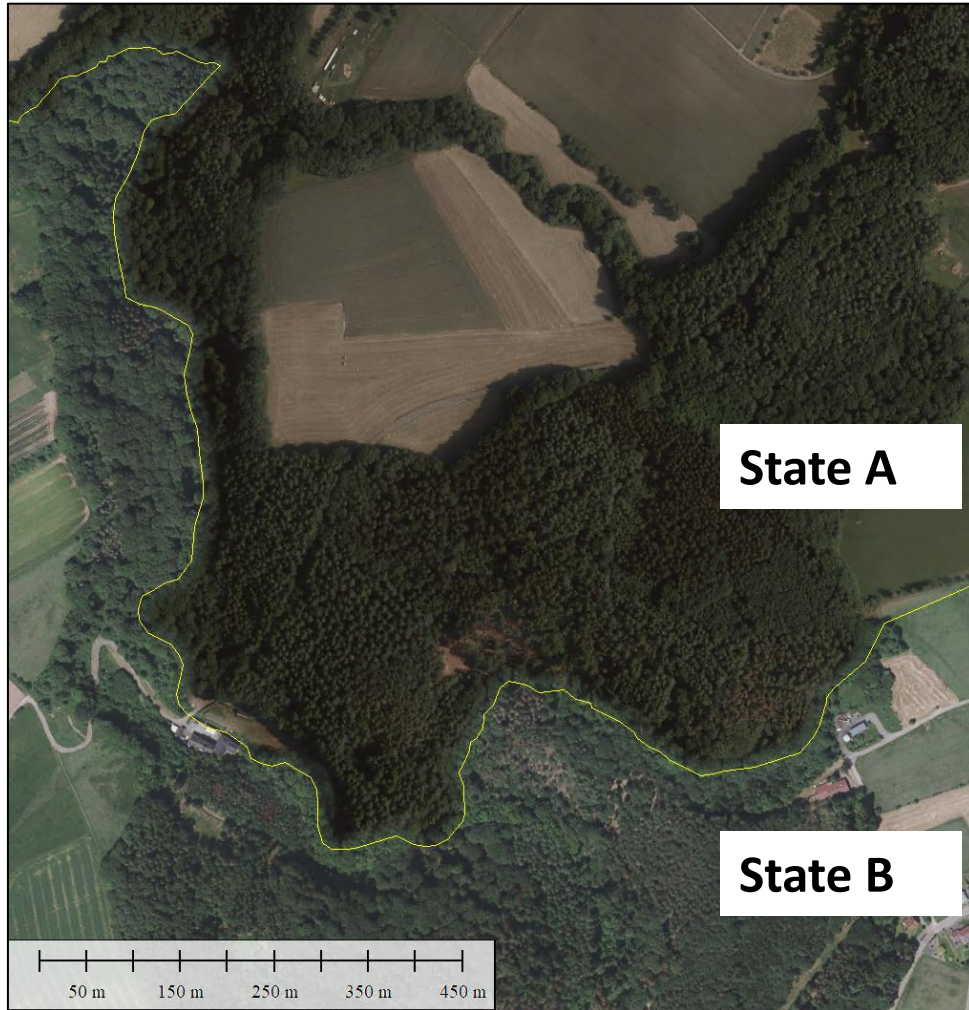
Federal state borders in Germany



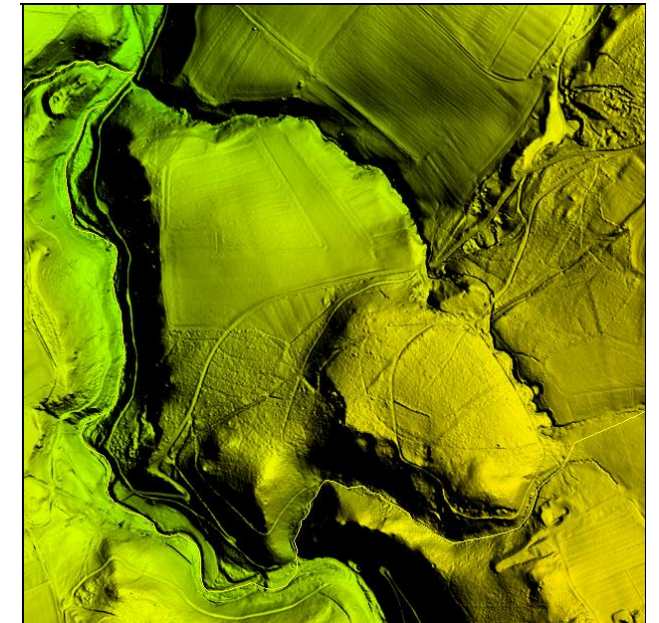
- 16 states
- Every federal state border is harmonised
- Buffer zone: ~100m – 250m

Harmonised nationwide
data set

Area DOP

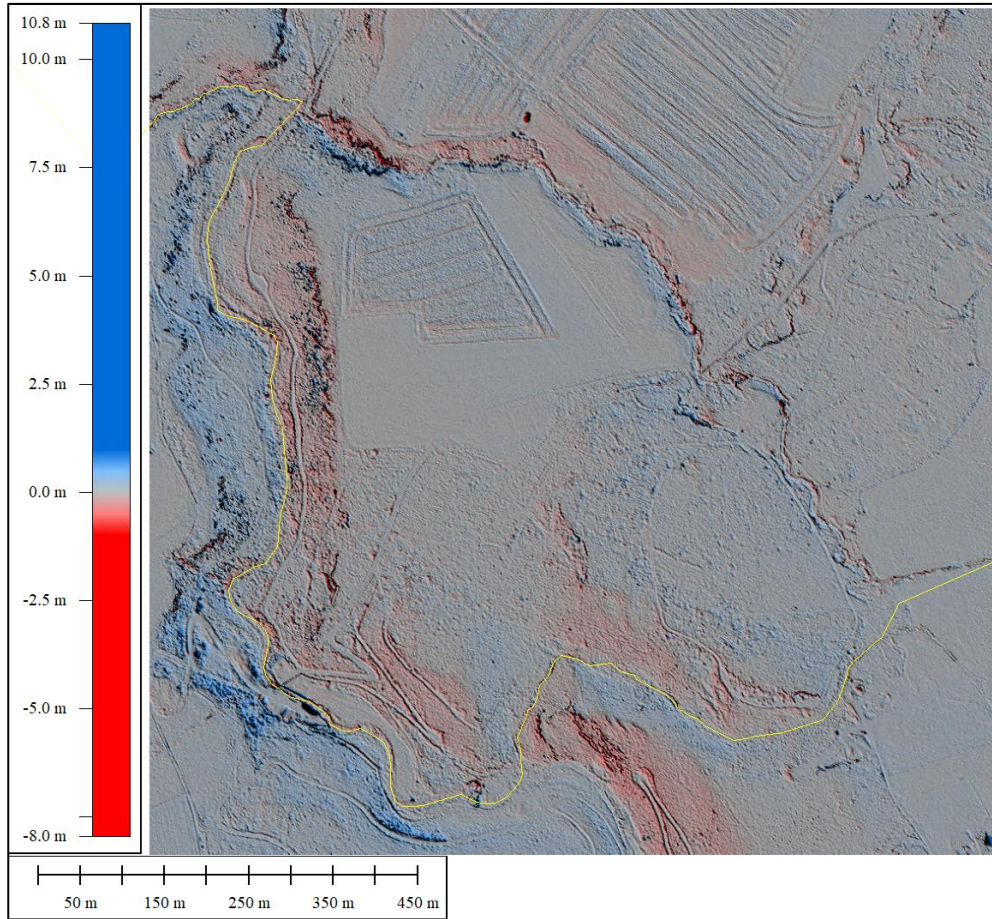


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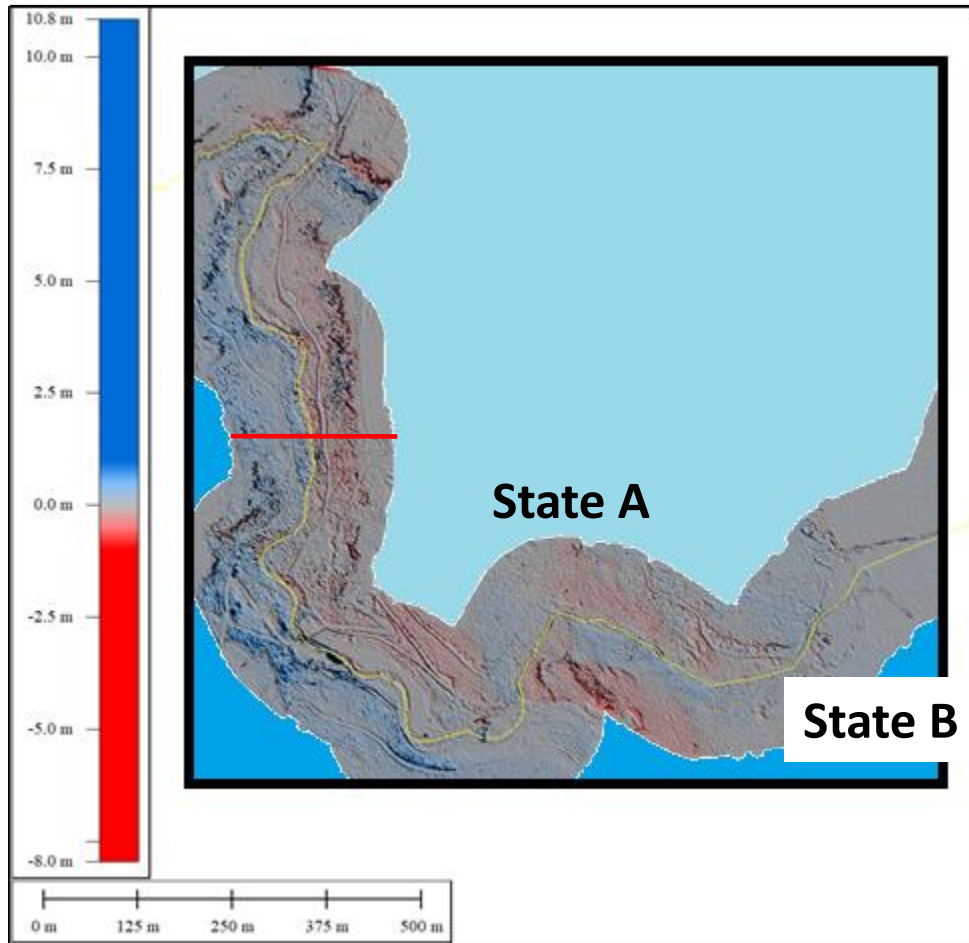
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Calculation of differences



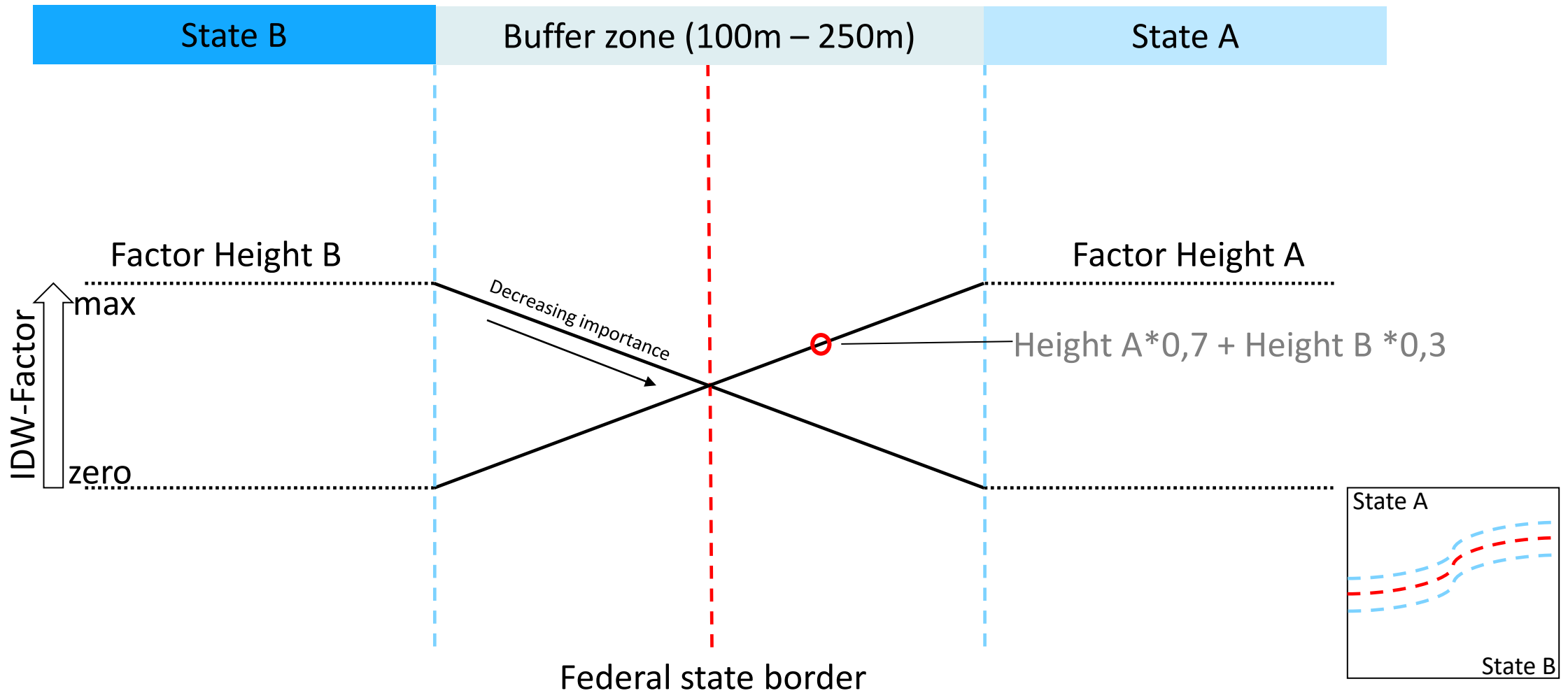
- Data acquisition time varies between federal states
- Reasons for height differences:
 - Vegetation states
 - Construction sites
 - Erosion
 - Workflows for data production can differ between federal states
 - ...

Buffer zone 100m; out-of-buffer zones

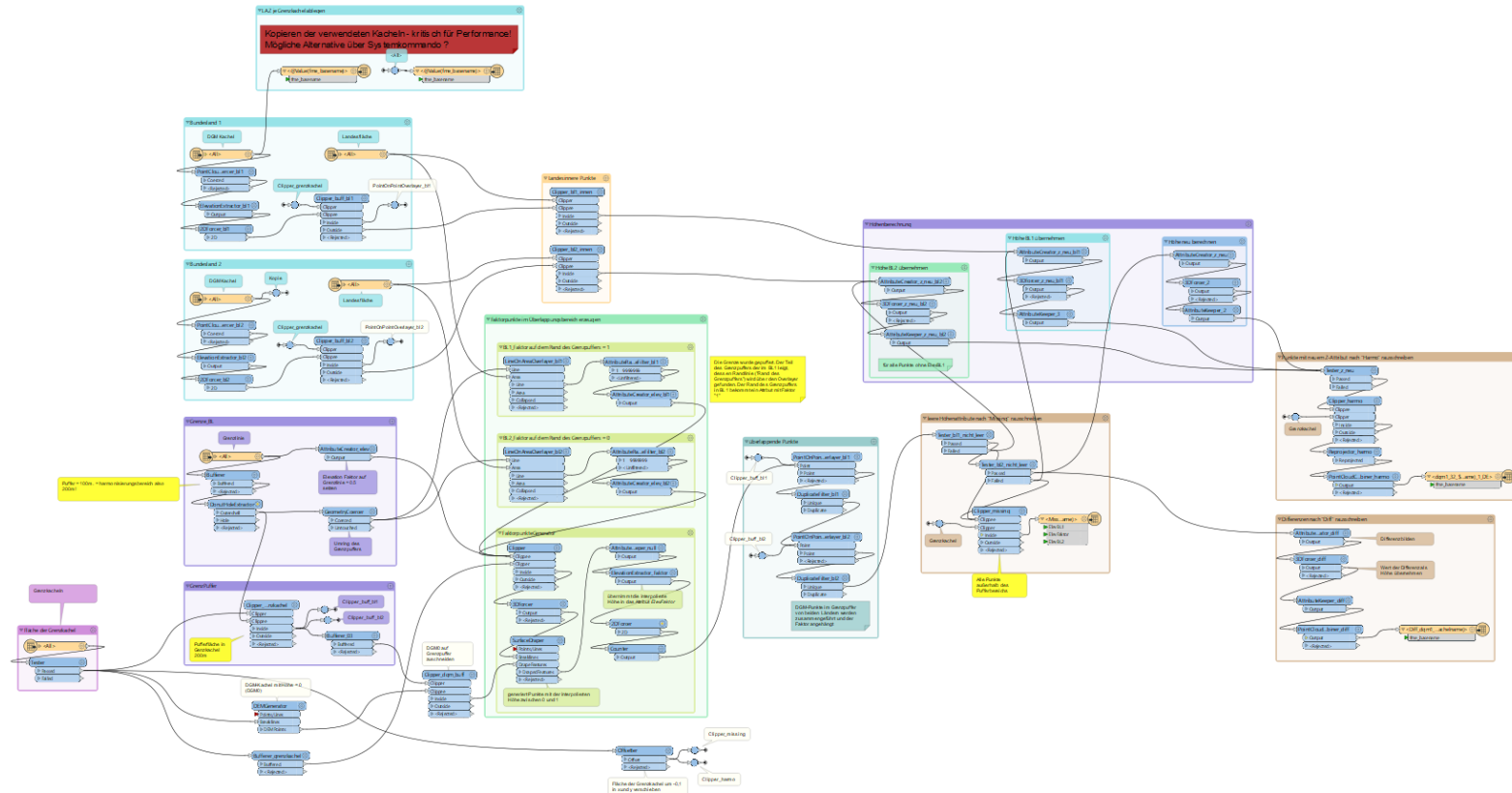


- Buffer zone of 100 – 250m is used for harmonising the data
- The heights inside the buffer zone are calculated via inverse distance weighting (IDW)
- The final tile will consist of the harmonised buffer zone and two unaltered out-of-buffer-zones, one from state A and one from state B

IDW Logic: Height calculation inside the harmonisation-buffer



FME Workflow: building the harmonised file



FME Logic:

1. Select tile pairs for harmonisation
2. Find buffer zone and extract heights in it
3. Calculate harmonised heights within buffer using IDW
4. Create harmonised tile with 2 out-of-buffer zones and the harmonised border buffer

Considerations

- Is there a reliable way to filter for construction sites and/or classification errors (bridges, etc)
- Would it be better for data users to get the more up to date tile of the two, instead of a harmonised one?



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Thank you for your kind attention!

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