



LUND UNIVERSITY

MORPHOLOGICAL EVOLUTION OF A SMALL-SCALE BEACH NOURISHMENT IN A NON-TIDAL AREA

Adell, Anna

2023

Document Version:

Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for published version (APA):

Adell, A. (2023). MORPHOLOGICAL EVOLUTION OF A SMALL-SCALE BEACH NOURISHMENT IN A NON-TIDAL AREA.

Total number of authors:

1

General rights

Unless other specific re-use rights are stated the following general rights apply:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00



LUND
UNIVERSITY

MORPHOLOGICAL EVOLUTION OF A SMALL-SCALE BEACH NOURISHMENT IN A NON-TIDAL AREA

ANNA ADELL^{1,2}, AART KROON², BJÖRN ALMSTRÖM¹, MAGNUS LARSON¹, CAROLINE HALLIN^{1,3}

¹ Department of Water Resources Engineering, Lund University, Sweden

² Department of Geosciences and Natural Resource Management, University of Copenhagen, Denmark

³ Department of Hydraulic Engineering, Delft University of Technology, The Netherlands



UNIVERSITY OF
COPENHAGEN

Objective with the nourishment

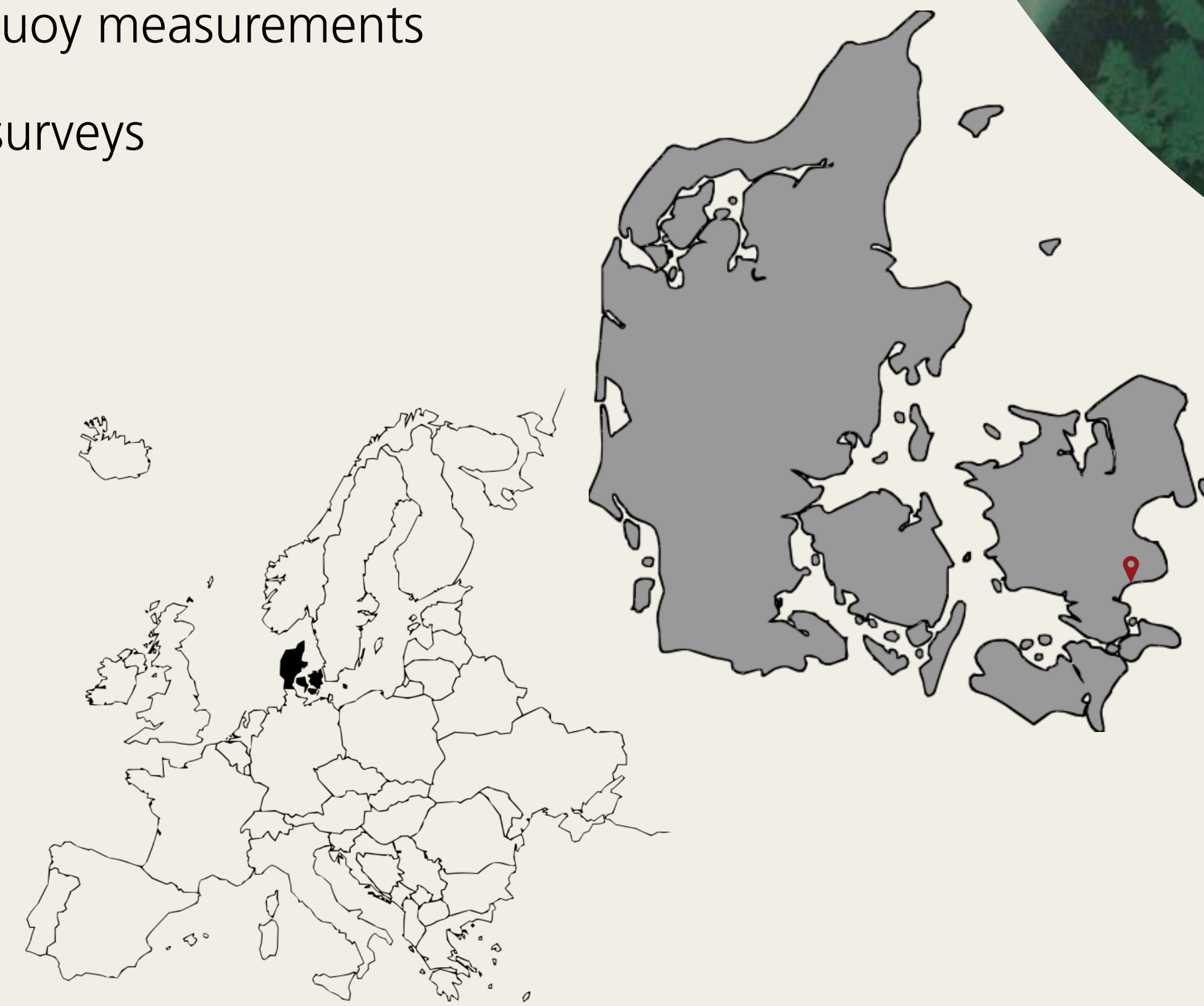
- Reduce wave overtopping onto adjacent road
- Combine hard and soft coastal protection
- Re-establish beach for recreation

Nourishment details

- 600 m long stretch
- Initial nourishment October 2018
Volume 70.000 m³
- Maintenance nourishment July 2021
Volume 20.000 m³

Monitoring techniques

- Profile surveys with RTK-GPS, single beam
- Wave buoy measurements
- Drone surveys

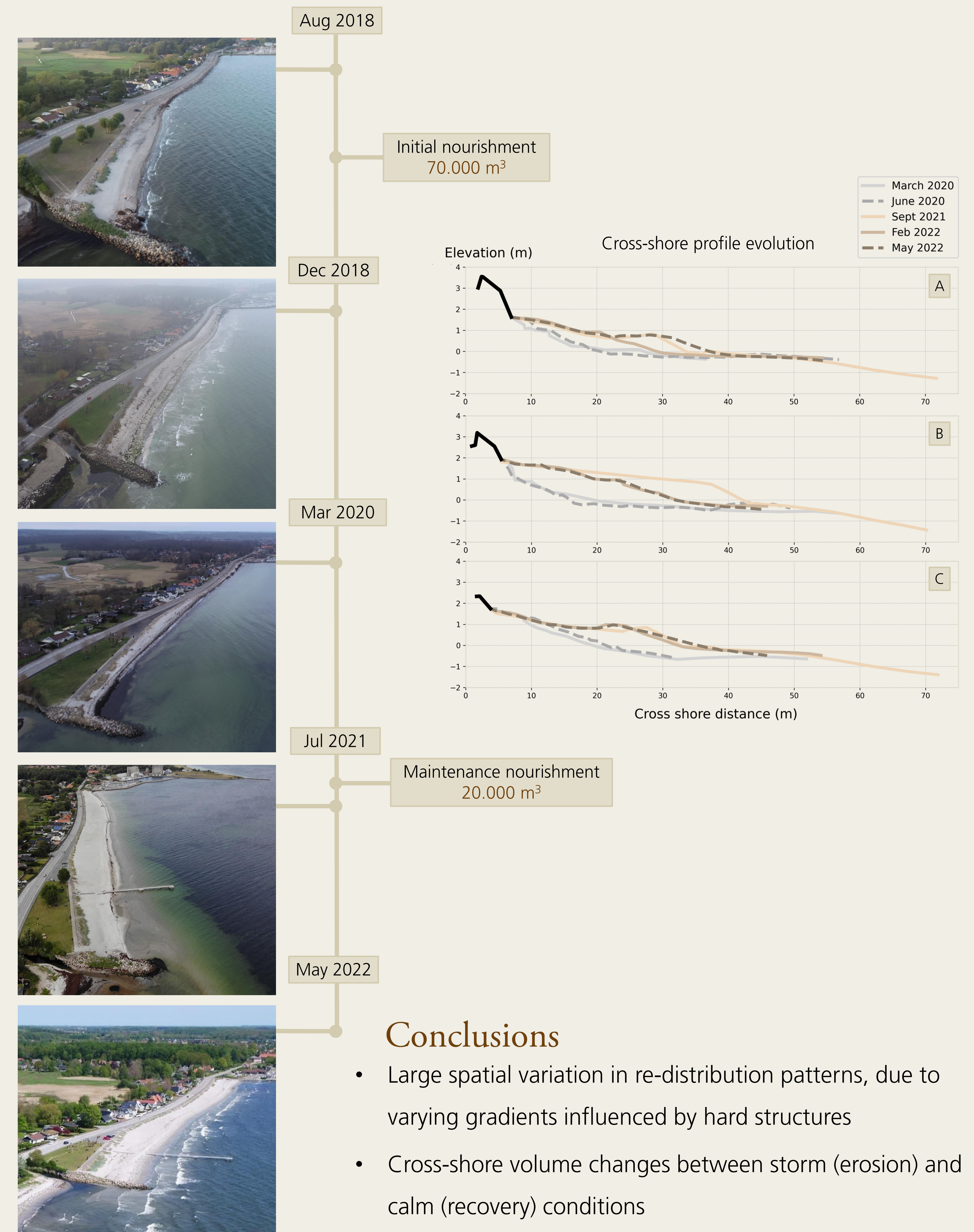
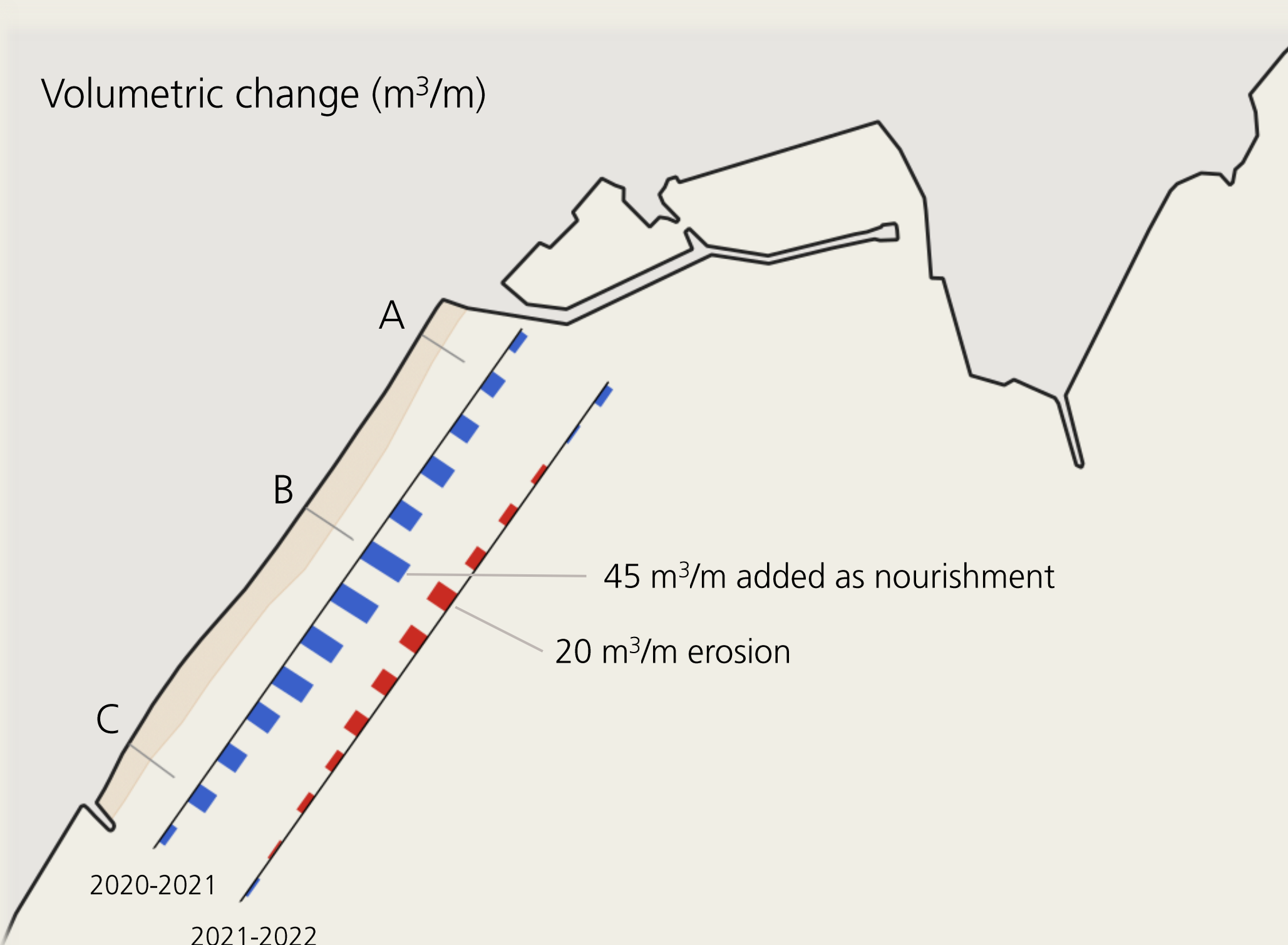


Contact



Let's connect
on LinkedIn!

Anna Adell, PhD student
Water Resources Engineering
Lund University, Sweden
anna.adell@tvrl.lth.se



Conclusions

- Large spatial variation in re-distribution patterns, due to varying gradients influenced by hard structures
- Cross-shore volume changes between storm (erosion) and calm (recovery) conditions
- Re-occurring maintenance nourishment required to maintain critical beach width