

Carbon storage in coastal reed (*Phragmites australis*) ecosystems

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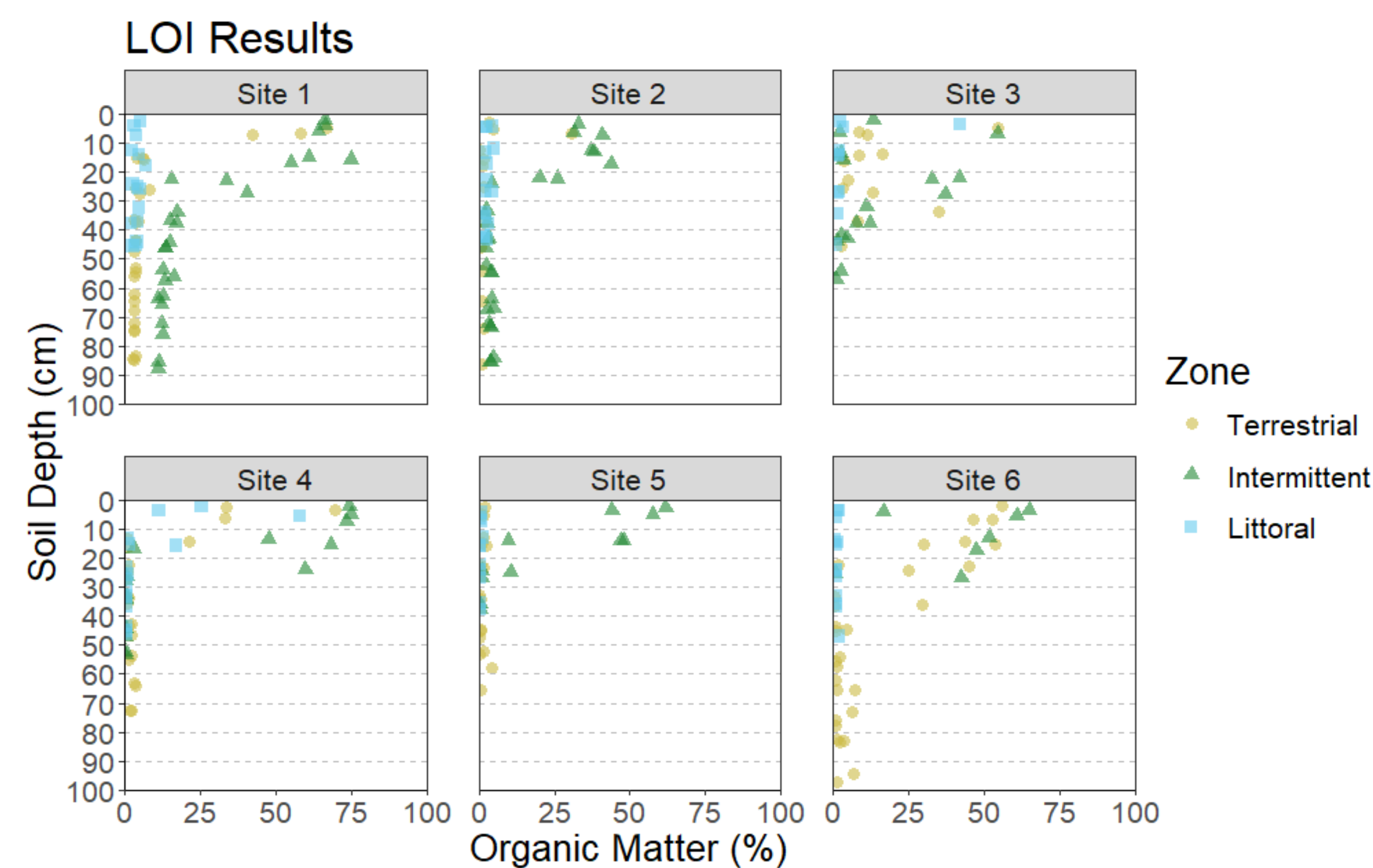
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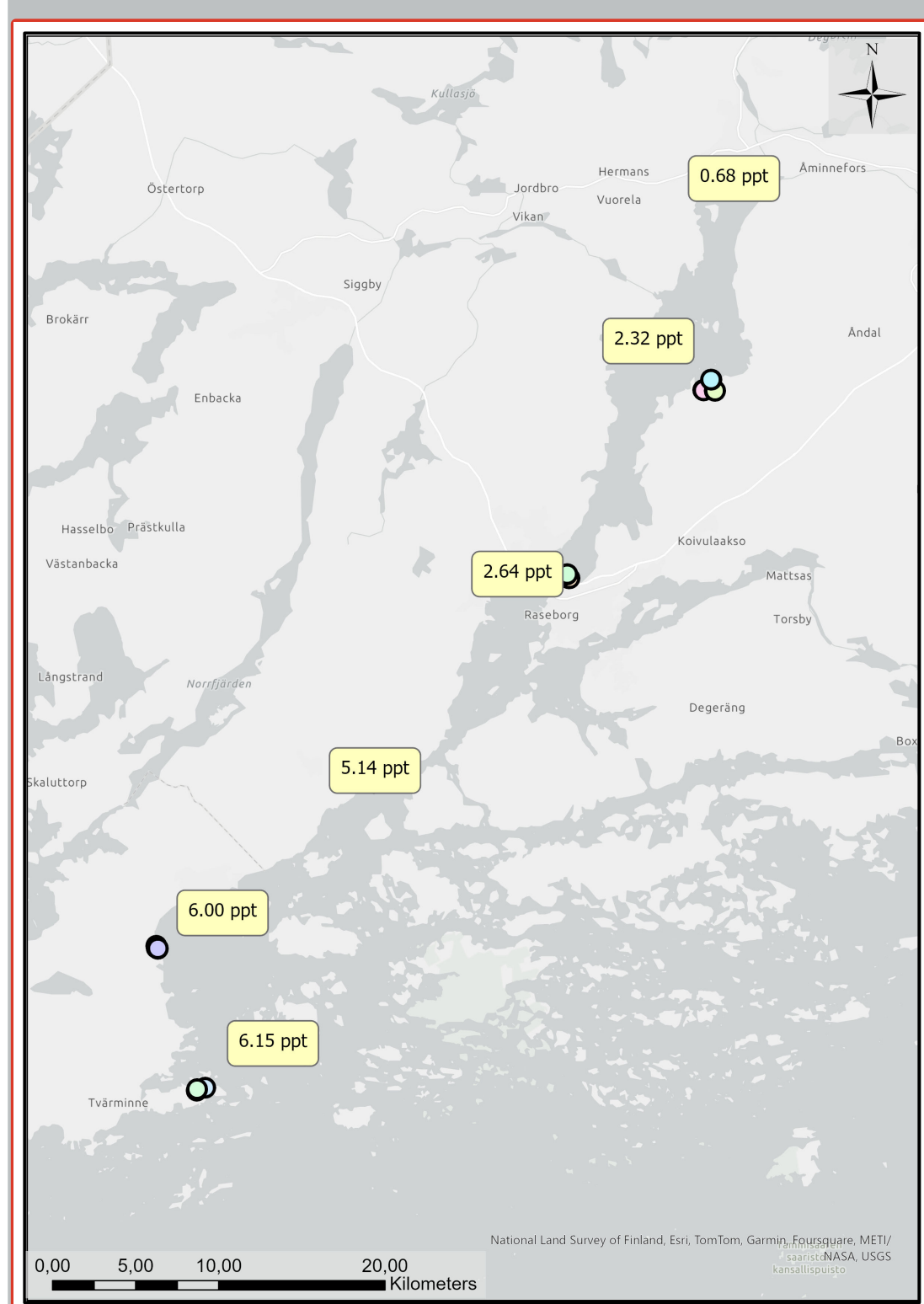
Results + Conclusions

- C content for belowground and aboveground biomass show largest C stocks in belowground biomass.
- LOI (loss on ignition) results from sediment samples show differences between Organic Matter content between zones within each reed bed site and between depths.

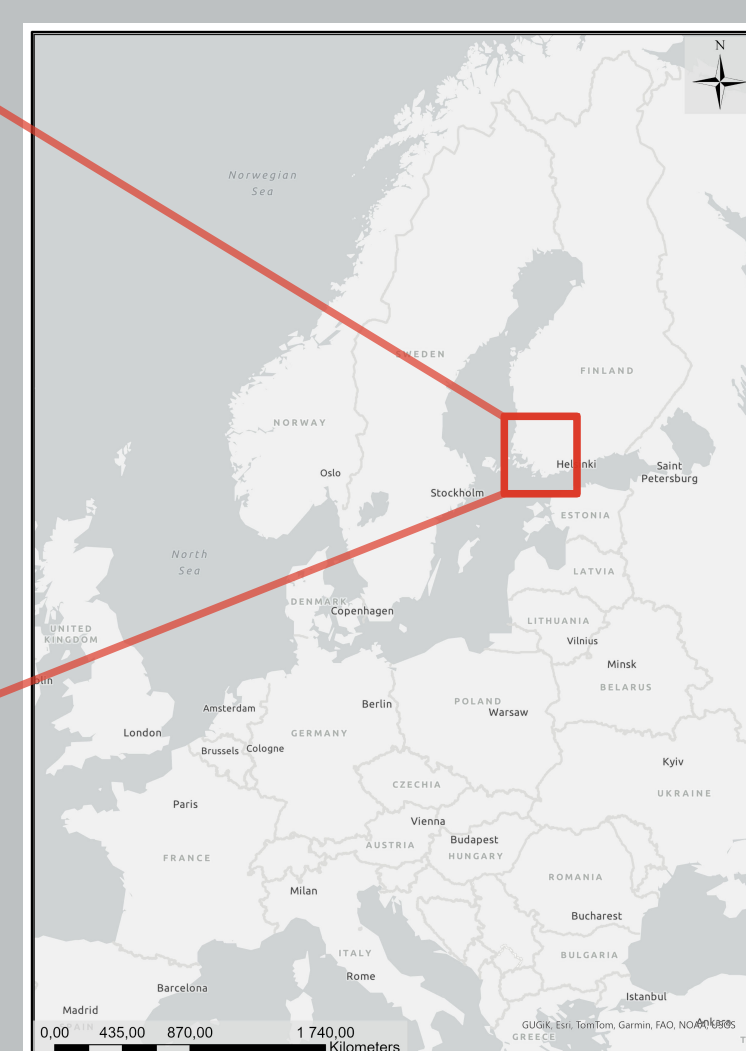


Methods

- We selected 6 reed beds to sample along Pojo Bay covering a range of salinities and wave exposure from the northern-most part of the Bay to the southern-most part opening into the Baltic Sea.



- Within each reed bed, samples were taken from randomly selected sites within each of the 3 reed bed zones (terrestrial, intermittent, and littoral) and replicate samples were taken within each zone along a transect.

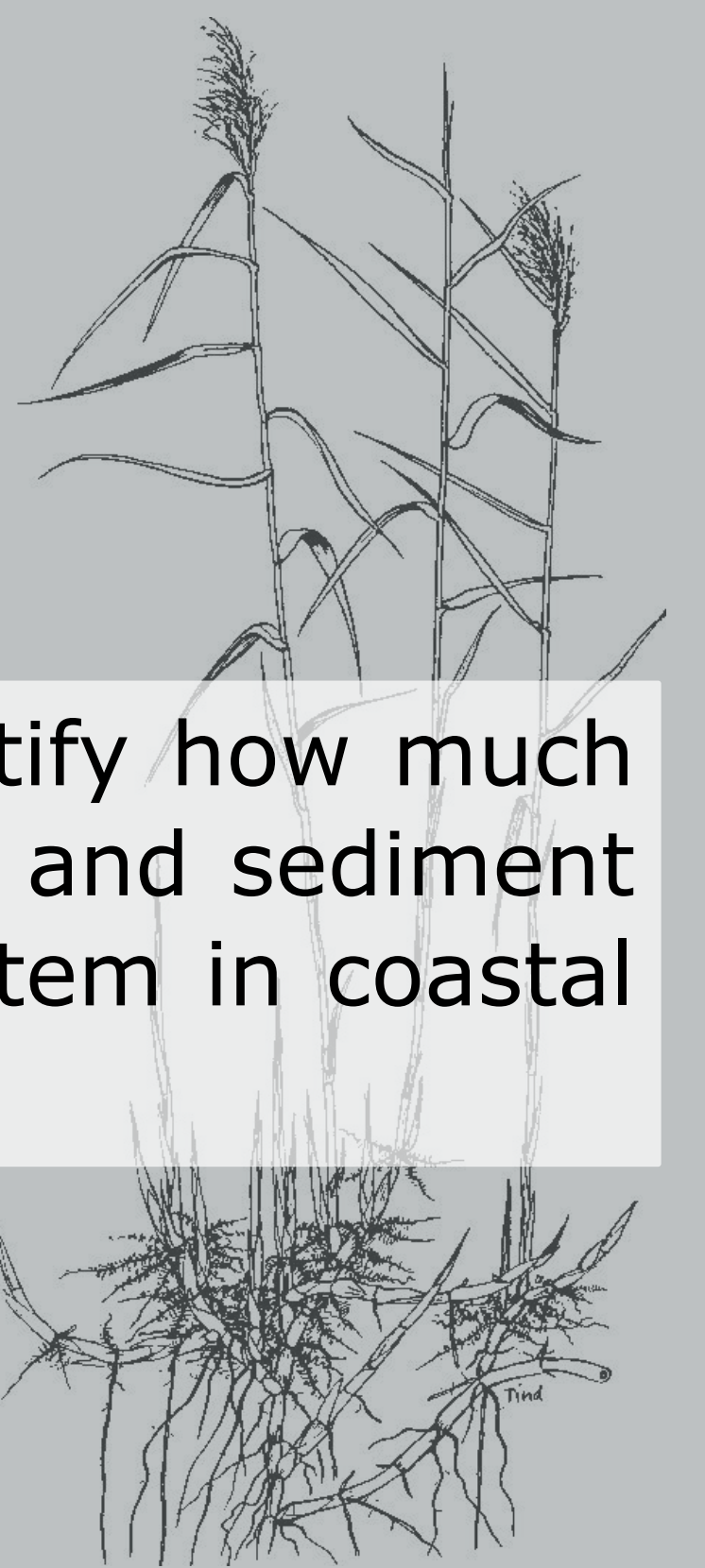


- Plant and sediment samples were collected and taken back to the lab to run for C content.

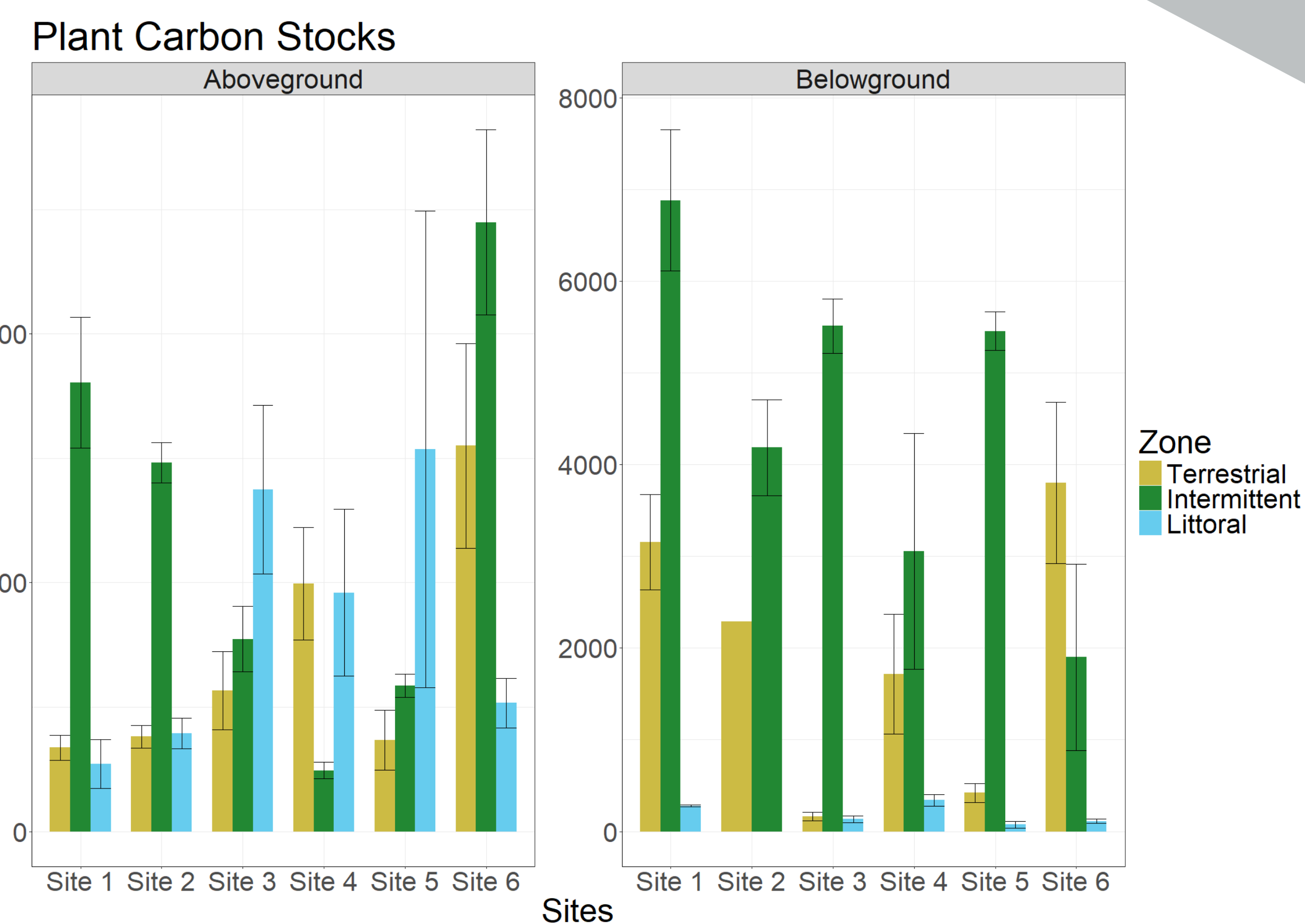
Introduction and Aim

- Distribution of the common reed (*Phragmites australis*) has increased in coastal ecosystems across the globe.

- There is a gap in knowledge about carbon (C) cycling and sequestration in reed beds though preliminary findings indicate these systems are unique, show great potential for C storage, and, therefore, should be taken into consideration while developing blue carbon (BC) budgets.



The aim of my study is to quantify how much C is stored in reed bed biomass and sediment along the brackish Pojo Bay system in coastal Finland.



- Our results indicate that reed beds along the Pojo Bay system in coastal Finland are efficient systems for C storage.
- Further research into how C storage in these reed beds varies seasonally is underway and future research into methane emissions from these reed beds is planned for 2024-2025.

