

## SUPPLEMENTARY INFORMATION

### **Measuring the role of seagrasses in regulating sediment surface elevation.**

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*Sediment surface elevation rates at the study sites, and those compiled from the literature and this study.*

*Sediment elevation rates in mm per year (apart from the values in bold) at the study sites.* The seagrass plots in Kenya and the control plots in Tanzania, Saudi Arabia showed a non-linear trend over the length of the study, and thus rates are originally reported in the text as such. However, they are given here under the table in mm per year for direct comparisons in future studies.

	Sediment elevation rates	
	Seagrass Mean (SE)	Unvegetated Mean (SE)
Scotland	9.01 (2.17)	0
Kenya	<b>33.7 (7.08)<sup>1</sup></b>	34.7 (7.26)
Tanzania	0	<b>44.7 (12.6)<sup>2</sup></b>
Saudi Arabia	7.84 (1.48)	<b>30.9 (4.52)<sup>3</sup></b>

<sup>1</sup> 24.6 (SE = 5.29) mm per year

<sup>2</sup> 43.9 (SE= 12.4) mm per year

<sup>3</sup> 33.1 (SE= 4.84) mm per year

*Sediment elevation rates compiled from the published literature and the results of this study.*

	Sediment elevation rates (mm/y)		
	Mean	SE	N
Seagrass meadows where unvegetated plots were reported	9.9	2.85	8
Unvegetated plots	-21.3	7.33	8
All seagrass sites	5.3	2.69	14
Difference derived from seagrass and unvegetated plots, when both are reported at the same study	31.2	9.57	8