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## SUPPLEMENTARY MATERIAL

### **Environmental and community constraints on *Elodea nuttallii*: implications for early season control in an urban stretch of the Po River (NW Italy)**

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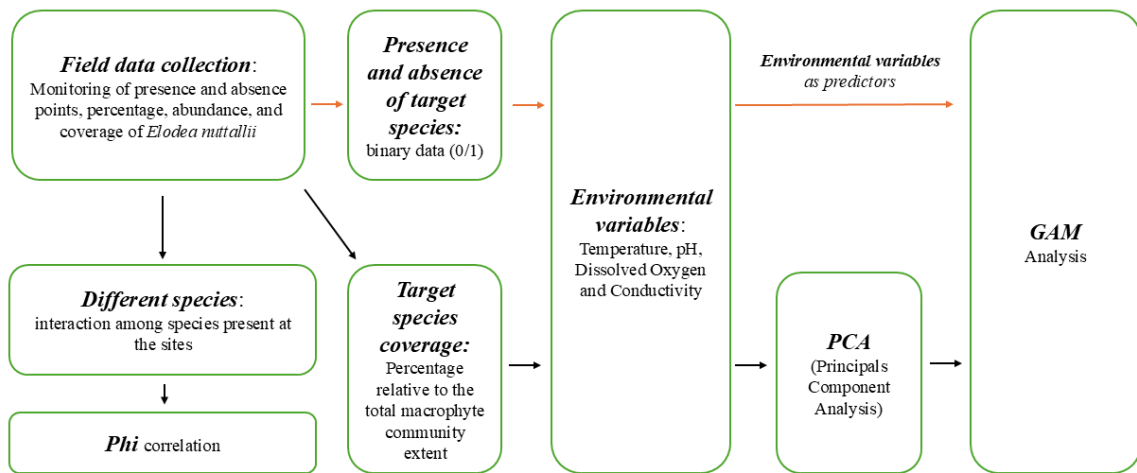
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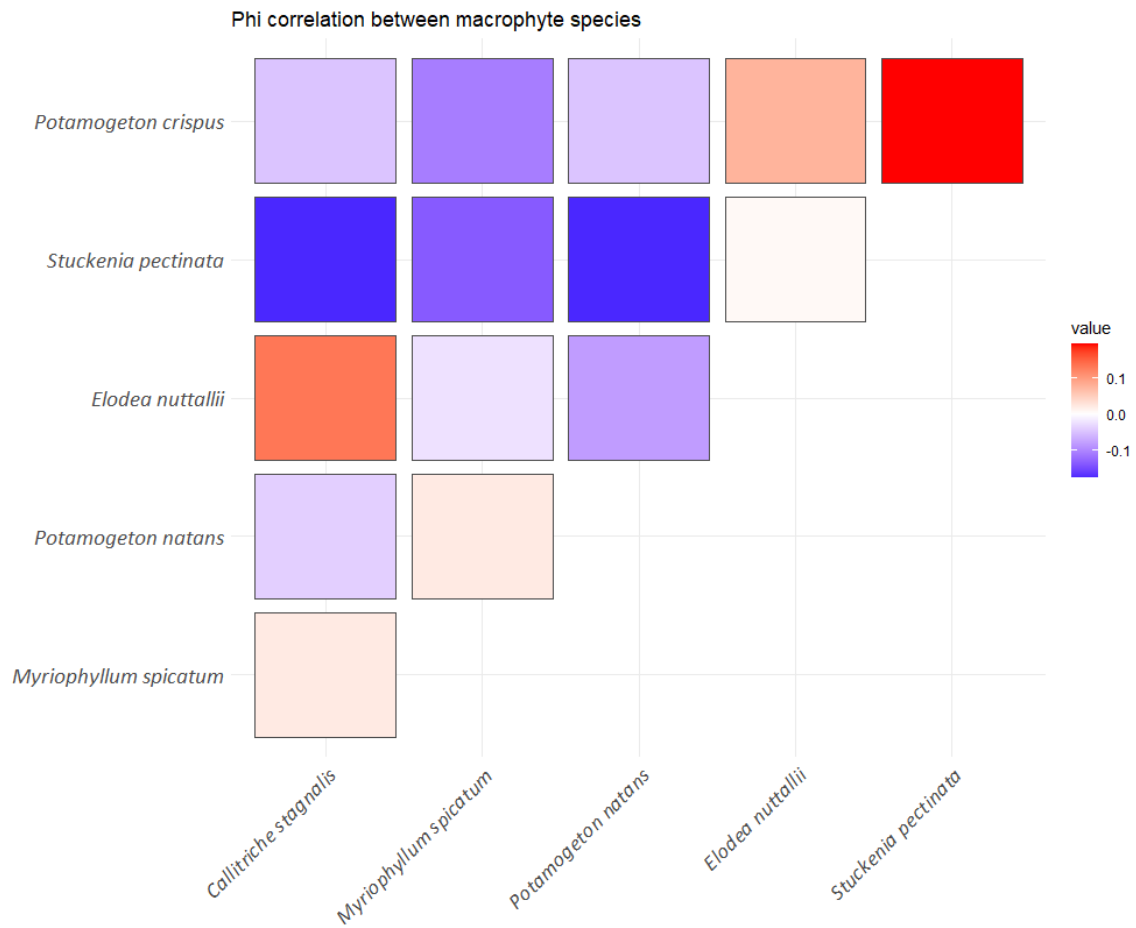
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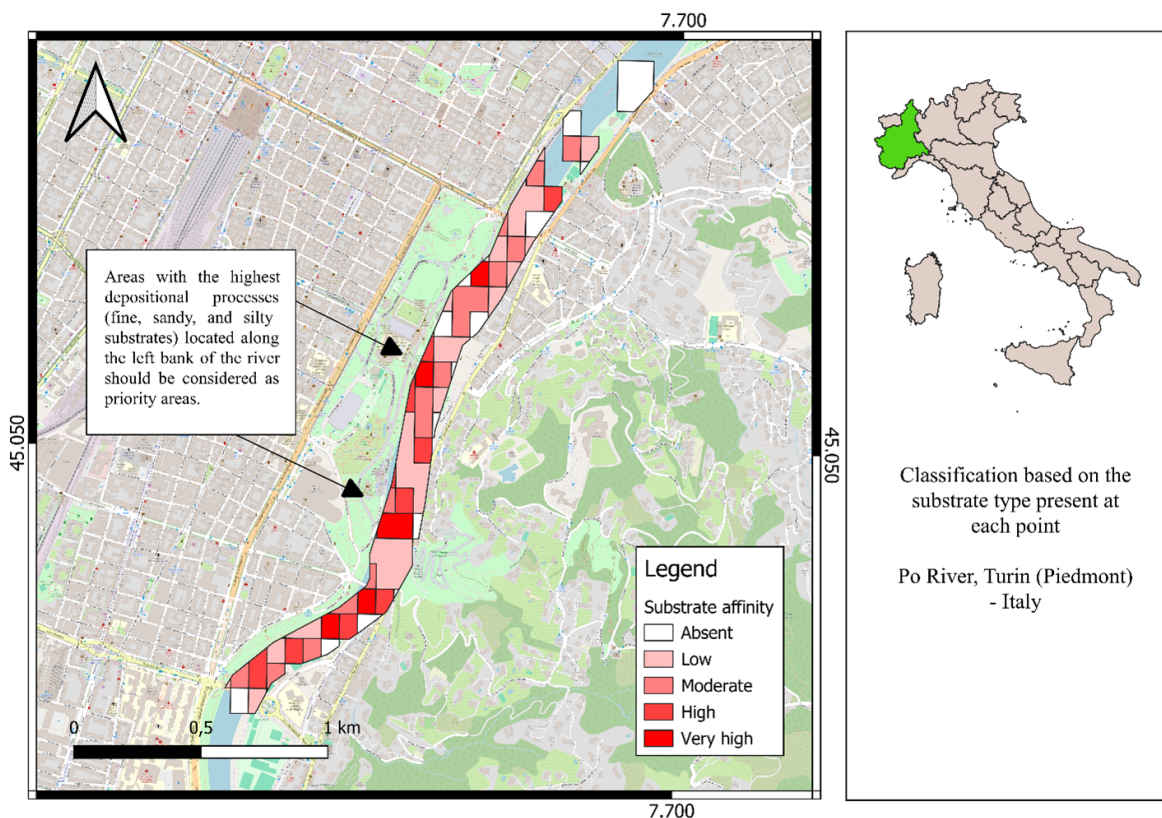
**Key words:** Invasive alien species; waterweed management; biotic interactions; physical and chemical variables; lotic regulated ecosystem.



**Fig. S1.** Workflow of the statistical analyses for the presence/absence and coverage data of *Elodea nuttallii* (for details, see the section METHODS in the main text).



**Fig. S2.** Graphical representation of the heatmap of the Phi correlation between macrophyte species including *Elodea nuttallii* (presence/absence values). Colours indicate the strength and direction of the correlation (red = positive; blue = negative).



**Fig. S3.** Graphical representation of the heatmap showing the priority areas for the management of *Elodea nuttallii*. We used the substrate type to ensure a proper representation of the species distribution, highlighting the importance of managing the species along the left bank of the river, characterized by depositional sediment and strong afternoon sunlight (for details see the CONCLUSIONS in the main text; QGIS 3.40.13).

**Tab. S1.** Summary table of mean values ( $\pm$  SD) of conductivity (EC), pH, dissolved oxygen (DO), and water temperature (TEMP.) for each sampling date.

Date	EC ( $\mu\text{S cm}^{-1}$ )	pH	DO (% - $\text{mg L}^{-1}$ )	TEMP. ( $^{\circ}\text{C}$ )
2025 06 10	334 ( $\pm 41.2$ )	8.36 ( $\pm 0.51$ )	87.39 ( $\pm 5.46$ ) 7.84 ( $\pm 0.71$ )	20.40 ( $\pm 0.96$ )
2025 07 10	544 ( $\pm 28$ )	8.15 ( $\pm 0.31$ )	74.28 ( $\pm 8.19$ ) 6.36 ( $\pm 1.03$ )	23.80 ( $\pm 1.35$ )
2025 08 06	571 ( $\pm 20.1$ )	7.71 ( $\pm 0.02$ )	94.12 ( $\pm 1.77$ ) 8.26 ( $\pm 0.14$ )	21.40 ( $\pm 0.10$ )
2025 08 26	554 ( $\pm 12.9$ )	7.83 ( $\pm 0.23$ )	91.86 ( $\pm 6.30$ ) 8.21 ( $\pm 0.64$ )	20.60 ( $\pm 0.34$ )
2025 09 25	483 ( $\pm 4.8$ )	7.71 ( $\pm 0.03$ )	79.81 ( $\pm 2.52$ ) 7.49 ( $\pm 0.25$ )	17.80 ( $\pm 0.10$ )