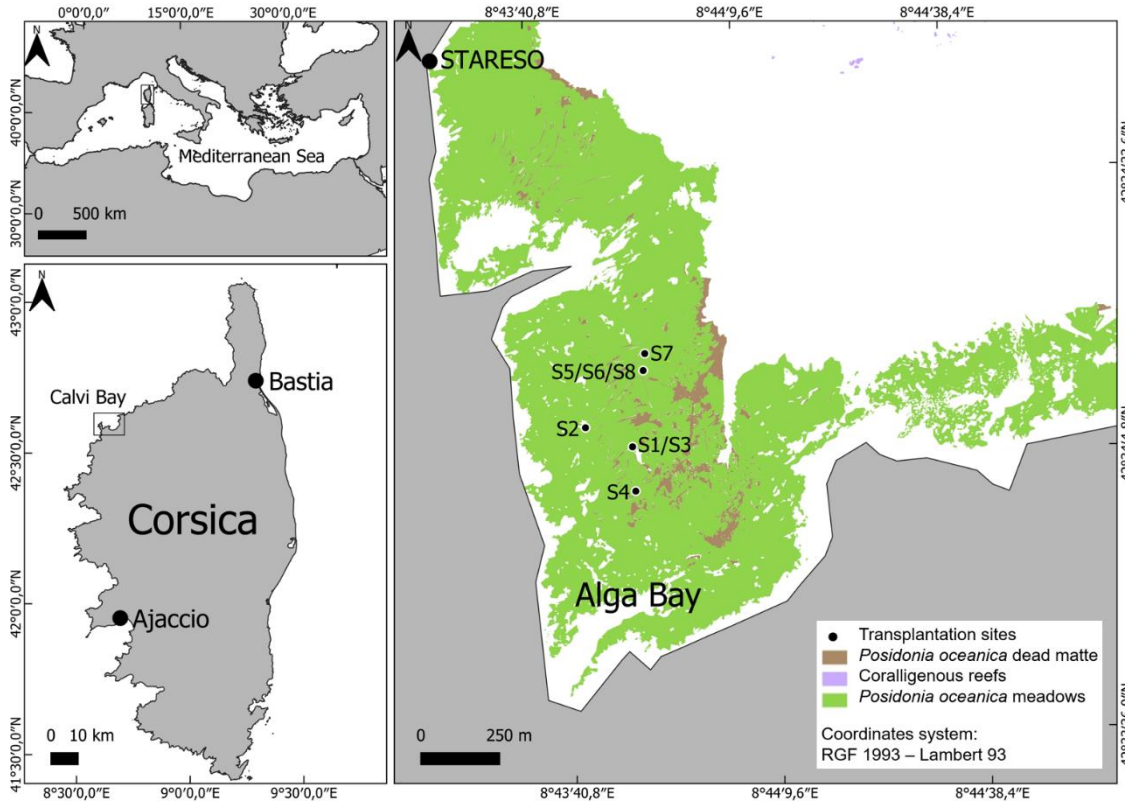# Assessment of different transplantation methods for *Posidonia oceanica* meadows restoration by means of morphological and physiological traits

Boulenger Arnaud, Marengo M., Lepoint G., Didderen K., Lengkeek W., Boissery P., Gobert S.

2024 World Seagrass Conference &
15th International Seagrass Biology Workshop

800 cuttings transplanted between
20m and 28m depth in 2022

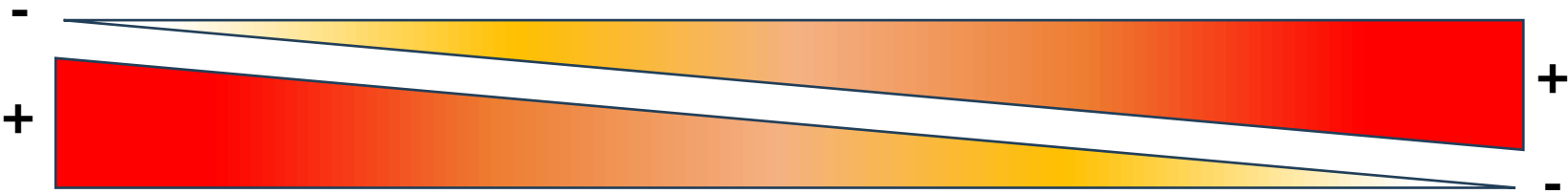# Transplantation methods

BESE elements
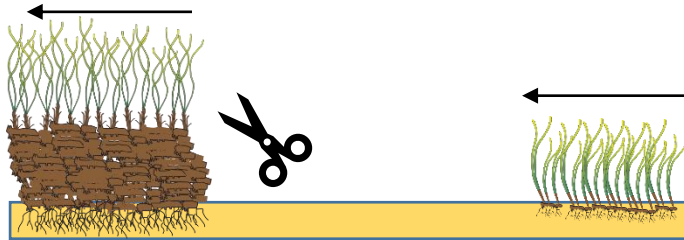

Coconut fiber mat

Staples

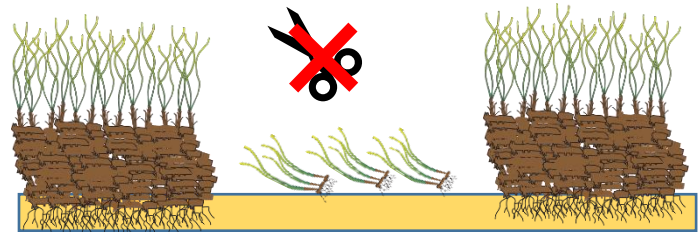Biodegradation speed

Structural complexity
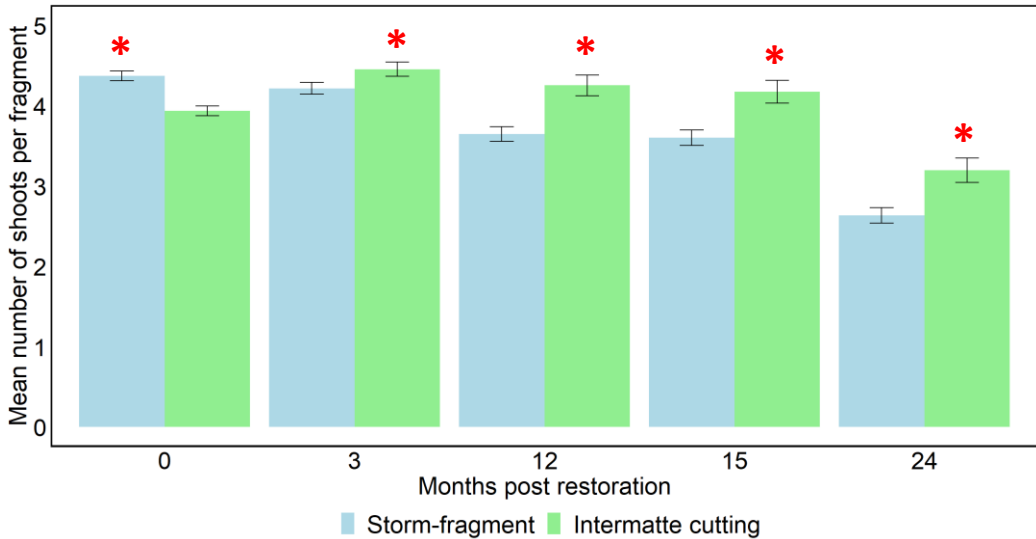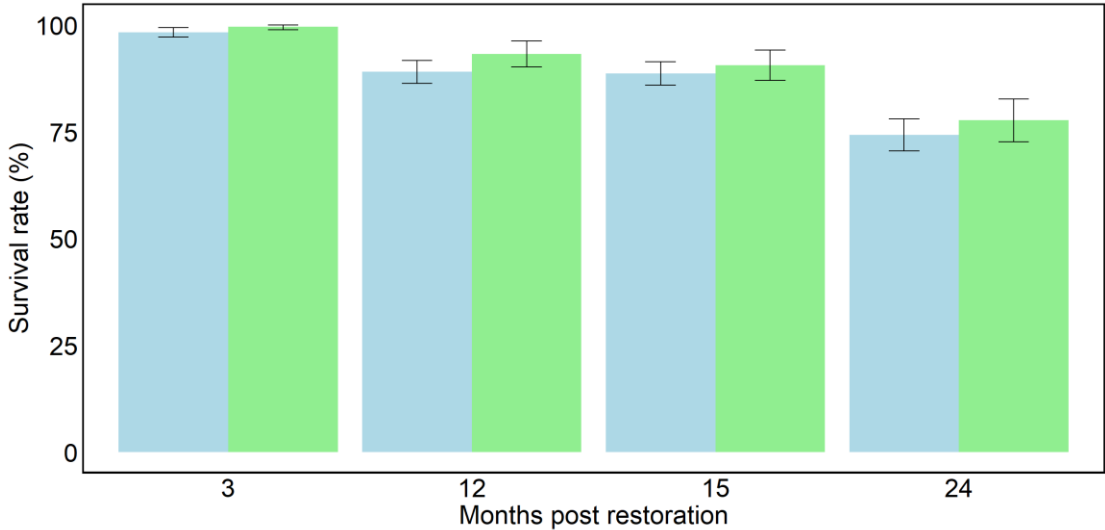
Donor populations

Intermatte cuttings

Storm-fragments

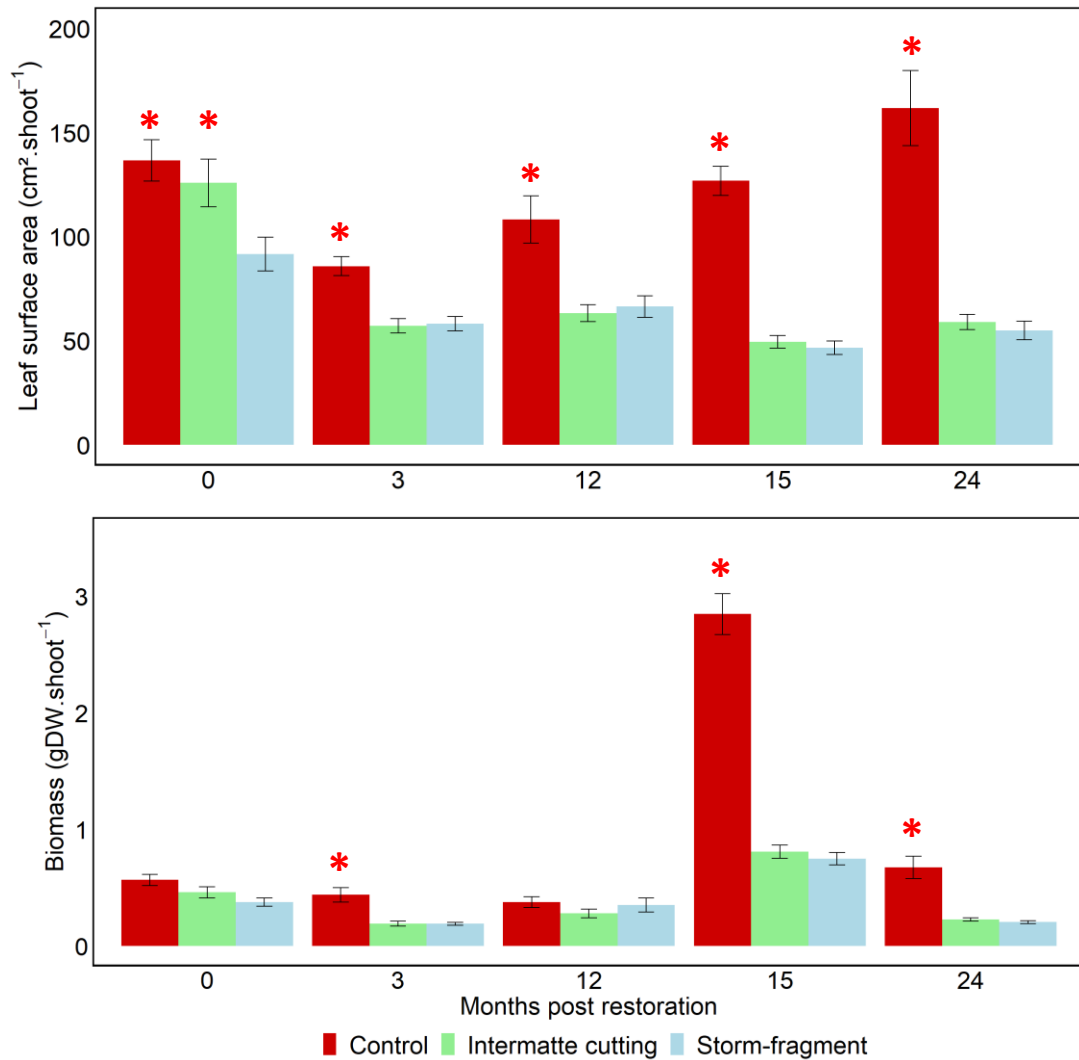# Effect type: Donor population

- Overall **survival** rate of **75.4%** after two years

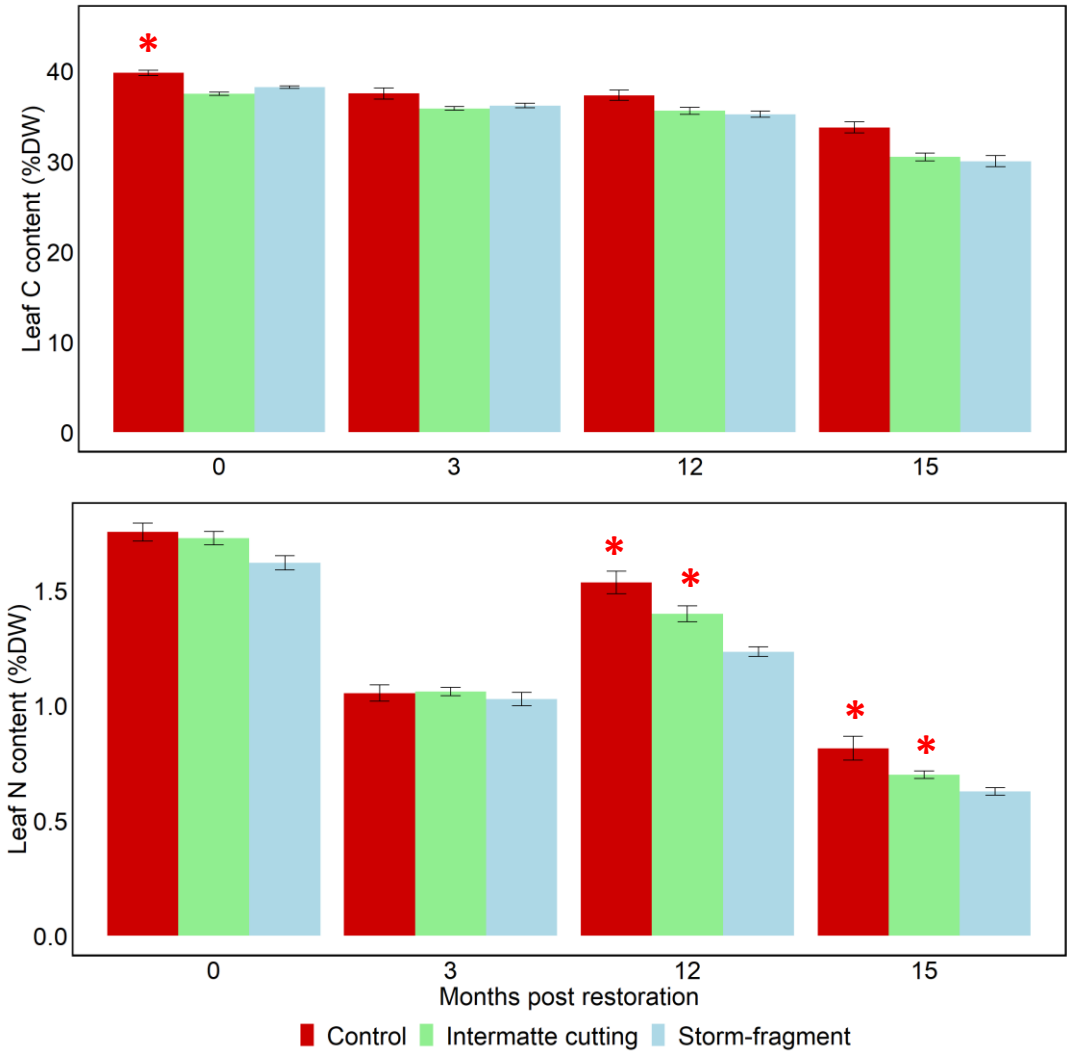→ **No differences between donor populations**

- **More shoots** for the **intermatte cuttings**
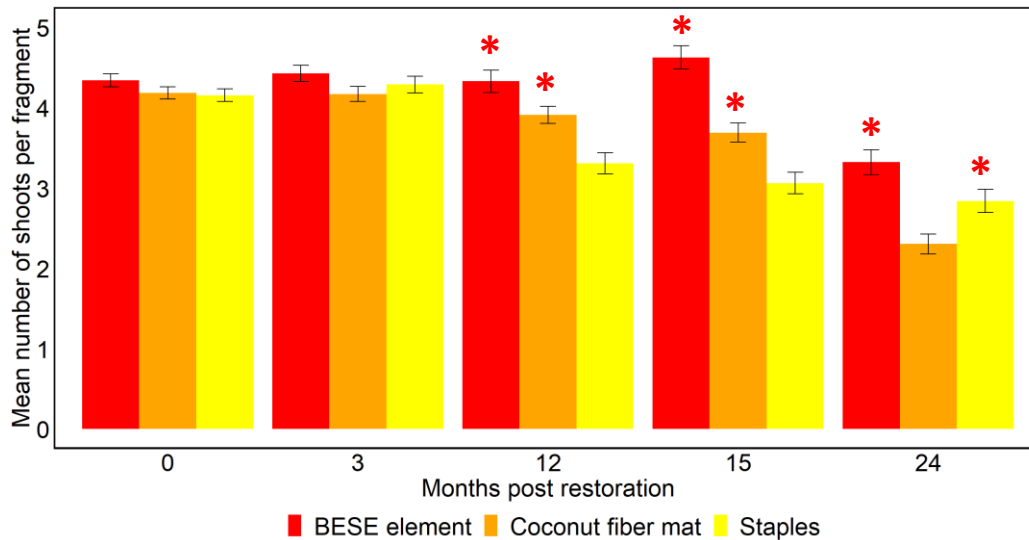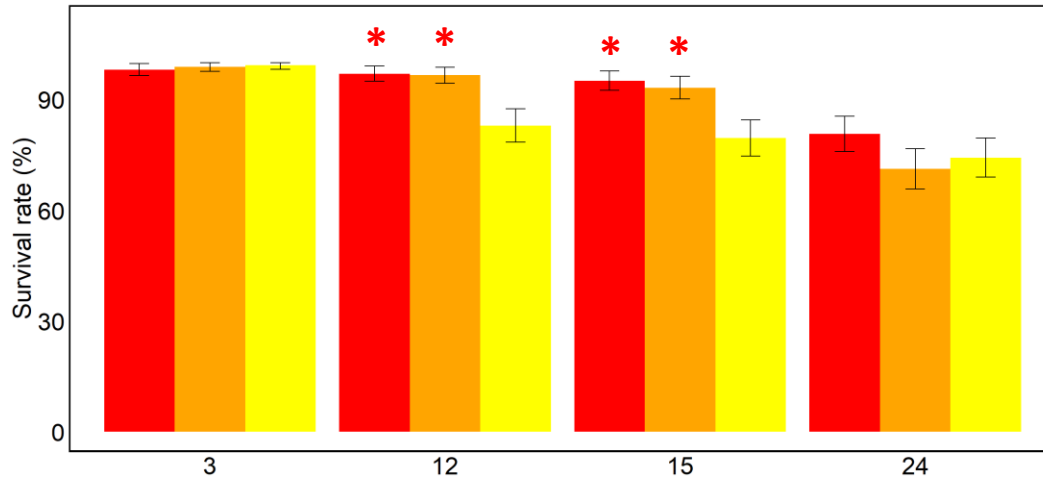
Effect type: Donor population

- **No differences between donor populations**

- Similar pattern for biomass and leaf surface area
→ Control > Transplants

Effect type: Donor population

- Initial leaf C content differences disappear

- Leaves' transplants deficiency in N after one year

- **Higher N deficiency for the storm-fragments**

Effect type: Transplantation method

- **No differences** in **survival rate** after two years

- **More shoots** for **BESE elements** but decreasing over time

Intermatte cuttings + **BESE elements** ?

Intermatte cuttings   **+**   **BESE elements** **?**

- Longer monitoring needed

- Additional monitoring parameters →

water   MDPI

Article

The Use of Photo-Biological Parameters to Assess the Establishment Success of *Posidonia oceanica* Cuttings after Transplantation

Arnaud Boulenger [1,2,*], Stéphane Roberty [3], Maria Margarita Lopez Velosa [1], Michel Marengo [2] and Sylvie Gobert [1,2]

THANK YOU !

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