



First reduce the pressure, then restore – the journey towards active seagrass restoration in Berre lagoon

Dr MAYOT Nicolas, DULEY Julie, GRISEL Raphaël



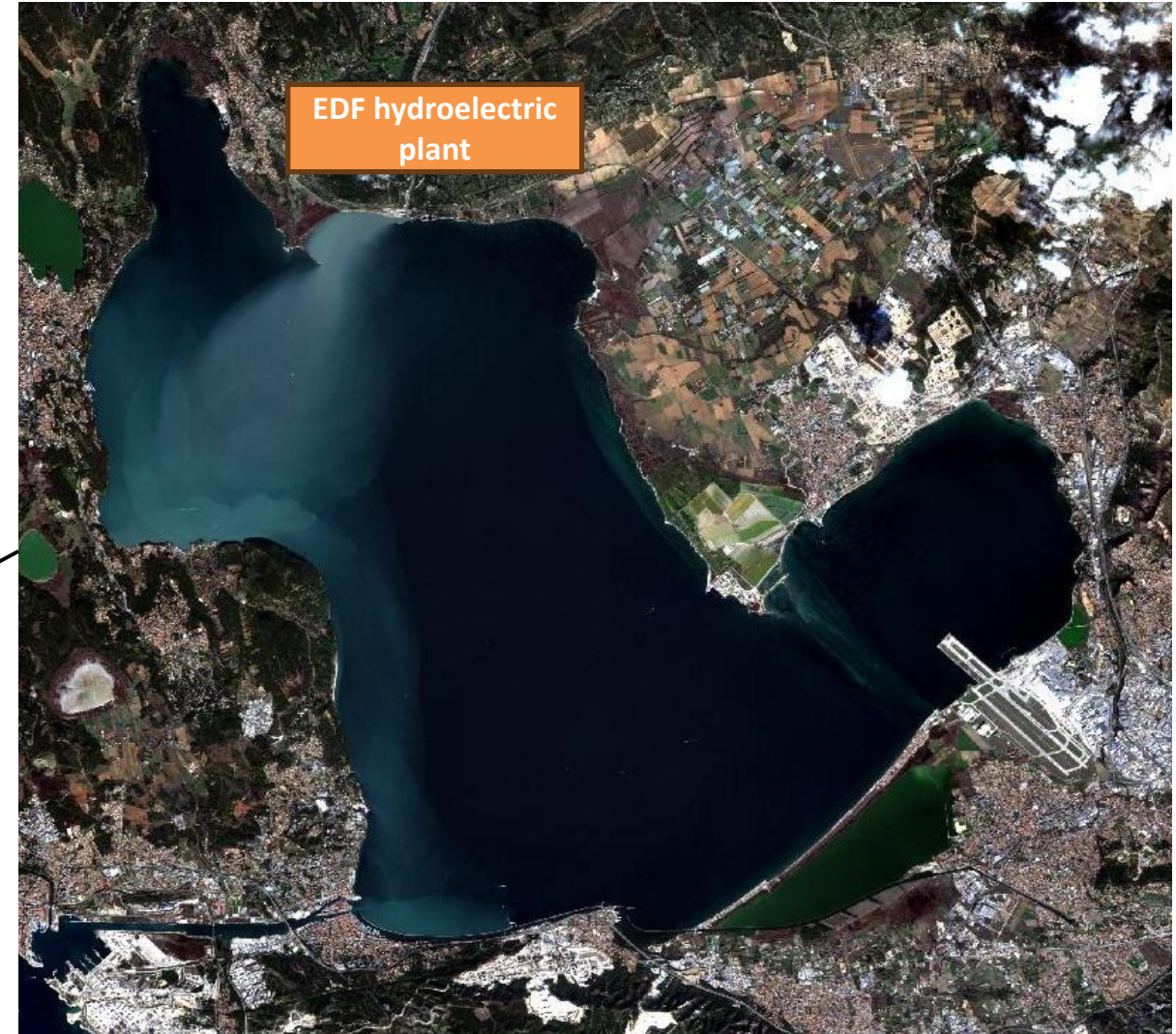
STEP 1 : Identity the cause of seagrass loss



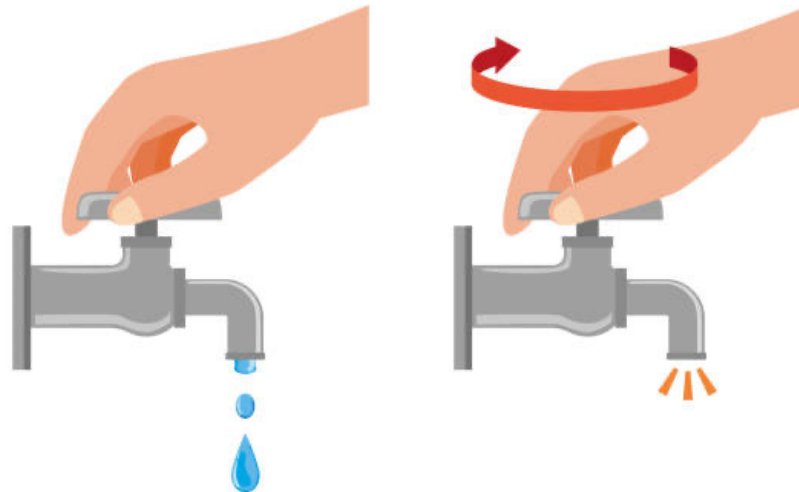
STEP 1 : Identity the cause of seagrass loss



- ❖ 155 km²
- ❖ Before 1960: **6,000ha** of seagrass meadows
- ❖ 1966 the commissioning of EDF hydroélectrique plant (HUGE input of freshwater)
- ❖ 1990: **1.2ha** of seagrass



STEP 2 : Reduce the pressure



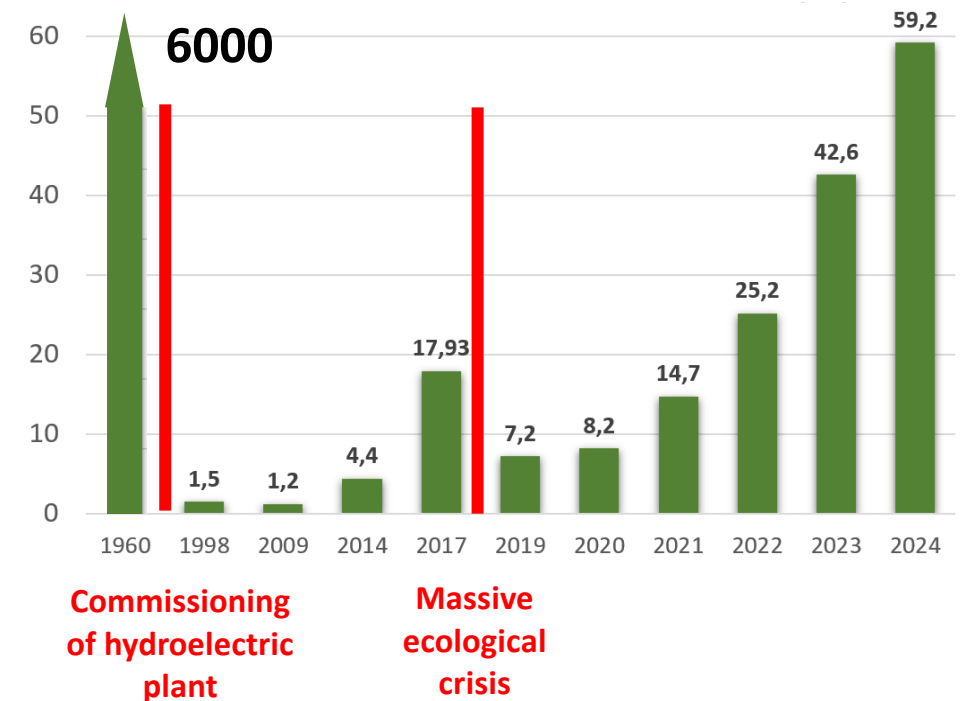
STEP 2 : Reduce the pressure



- ❖ 1980-2000 : reduction of N input (wastewater treatment plant)
- ❖ 1994 : First significant reduction of freshwater input
- ❖ 2005 : EU regulation of freshwater input
- ❖ 2018 : Massive ecological crisis
- ❖ 2019 : Legal complaint
- ❖ 2024 : Legal agreement EDF – Gipreb :
 - No freshwater inputs from April to September
 - Salinity constraints all year



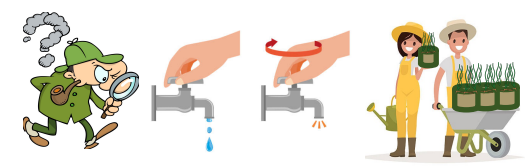
Evolution of seagrass spatial area in étang de Berre



STEP 3 : Active seagrass restoration



STEP 3 : Active restoration



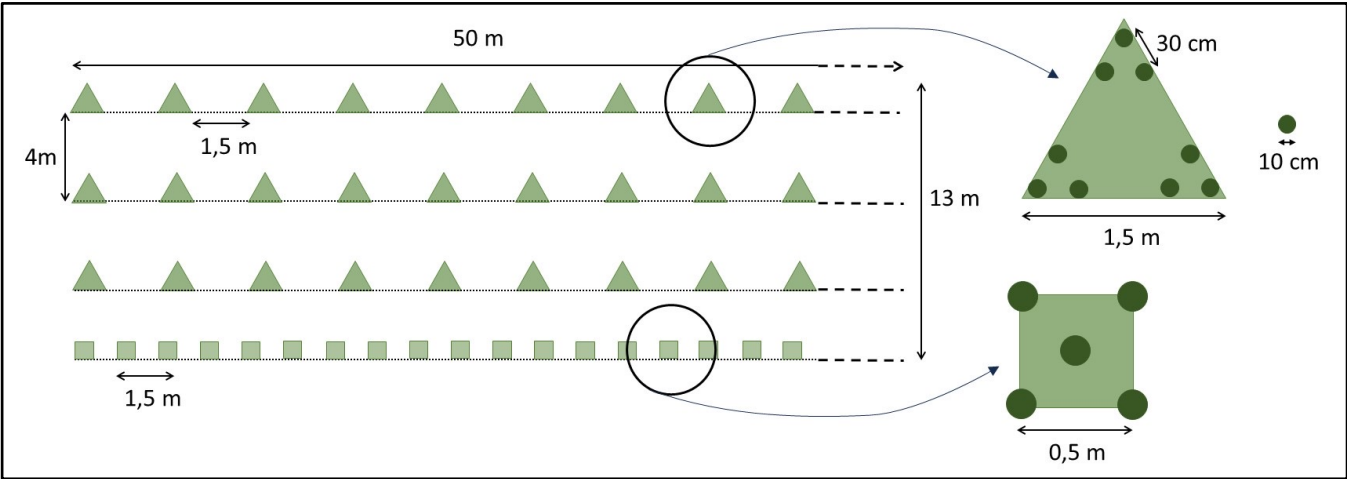
Transplantation method



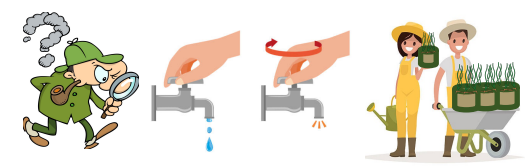
Sampling



Planting



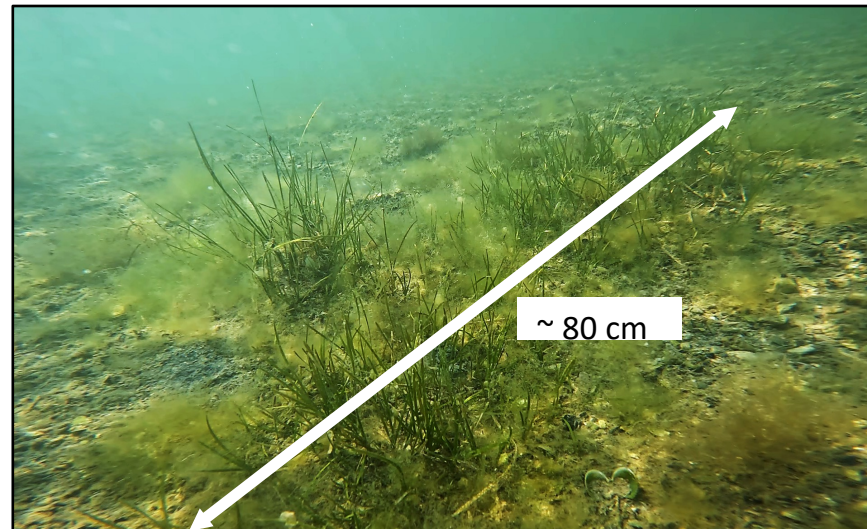
STEP 3 : Active restoration



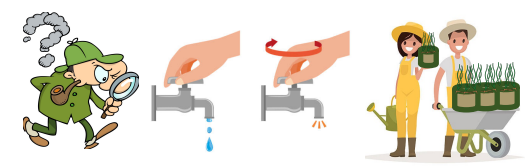
- ❖ Teamwork : 18 people involved



- ❖ Mean growth at T+4 months : **88cm** and **41cm** at the 2 sites
- ❖ Surviving rate at T+2 months : **96%** and **70%** at the 2 sites
- ❖ Increase in **juvenile fish biodiversity**



STEP 3 : Active restoration

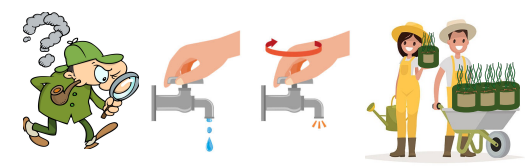


❖ Surface area growth from restoration pilot?

7,8 m²



STEP 3 : Active restoration



- ❖ Surface growth : ~ x50 in 4 months

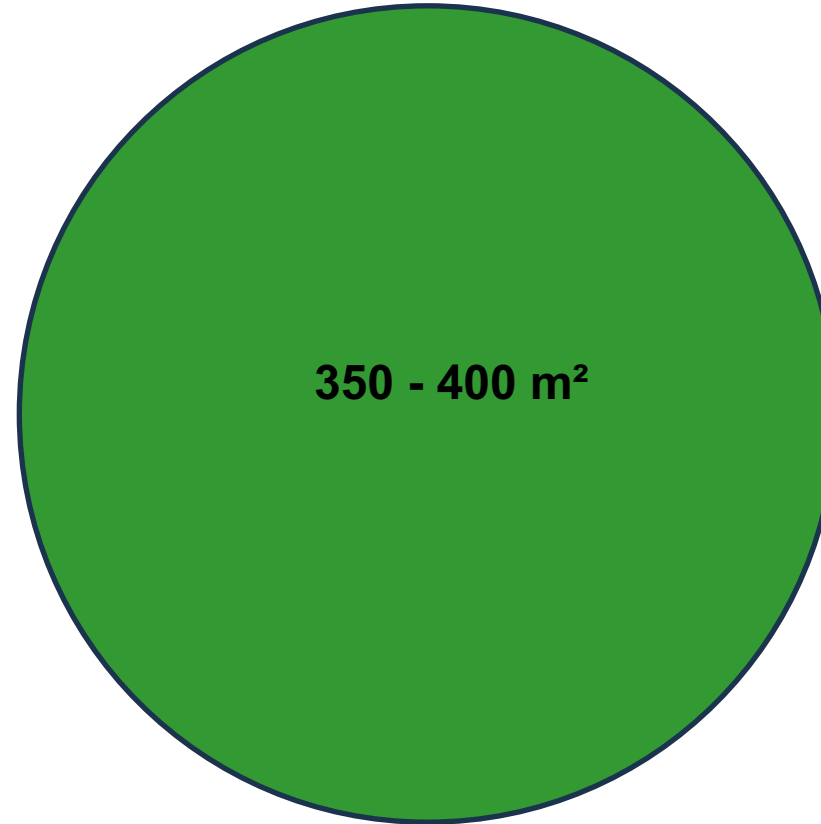
7,8 m²



4 months



350 - 400 m²

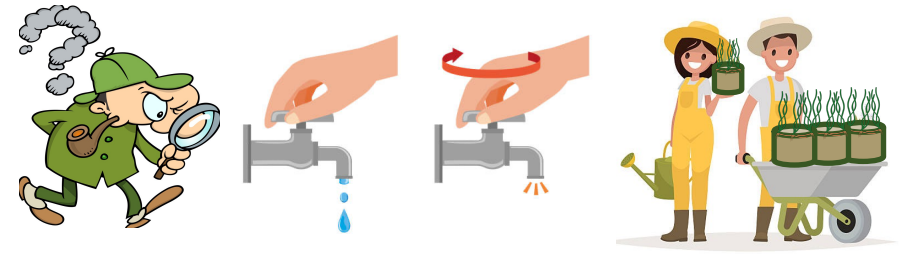


Conclusion

Optimistic that active seagrass restoration **could** (2024 was the first year) have incredible results in accelerating the recovery of this coastal lagoon.

But, it has taken **decades** of work on pressure reduction to get to this point.

Take home message:



Reducing the pressure first and then engaging in active restoration is the key to restoration success



REHAB project 2025-2027 : Better, Bigger, stronger!