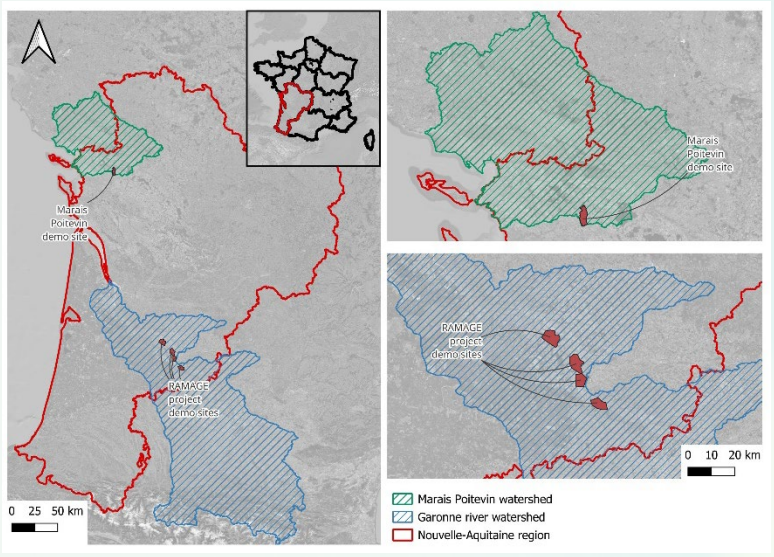
NBRACER
Nature Based Solutions
for Atlantic Regional Climate Resilience

Rural

Nouvelle-Aquitaine Region, France

About the Region:

The Nouvelle-Aquitaine is the largest region in France, home to about 6 million inhabitants. It boasts an extensive network of 74,000 km of streams and 700 km of coastlines. Water availability is a prominent challenge, addressed through different strategic initiatives. The NBRACER project allows to handle this topic working on two demonstrators on water management.



Demo 1: Marais poitevin ; Demo 2: RAMAGE project

Climate hazards

- Reduction of low water levels endangering aquatic and wetland ecosystems
- Risks to population and economic sectors due to water scarcity
- Risks to population, economic sectors and infrastructures due to floodings

Marais poitevin: remeandering

The river Vendié is a tributary of a main river within the Marais poitevin watershed. It is strongly rectified and has been deviated out of its valley bottom to supply watermills with a sufficient waterflow. It is a wetland rich in biodiversity as the downstream part of the river is in the Marais poitevin protected Natura 2000 sites. The local public organism in charge of preventing floods and restoring water dependant habitats (SMBVSN) is currently carrying restoration works on the downstream part of the Vendié river. The main expectations are to slow down the waterflow and reconnect the Vendié river to its alluvial plain in order to prevent or limit further floodings and droughts.

RAMAGE: aquifer water recharge

The Garonne basin experiences significant low water levels every year. Support is done from hydroelectric dam to preserve the river's ecological and landscape features while maintaining economic activity, including farmland irrigation. In the context of climate change, solutions for artificial recharge are being explored This hybrid solution combines NbS with human intervention to activate the recharging system. This experimental project aims to infiltrate 8-10 hm^3 into the Garonne aquifer and determine if this solution can contribute to supporting the Garonne's flow in summer and thus the replication of this method can be considered.

Past 2 years vs. Future 2 years:

- **Marais poitevin:** The startup was complicated due to team reorganization. Nevertheless, thanks to collaboration between regional stakeholders and NBRACER partners, the demo site is now equipped with sensors to monitor water levels, and several studies have been carried out to study the Vendié ecosystem and water behaviors. The restoration works designed by the SMBVSN 3 years ago have started in august 2025. Next steps : to analyze all the produced data and identify lessons learnt as well as consider possible replication sites.
- **RAMAGE:** New infiltration tests in the Garonne watertable have been carried out. New experimental sites have been identified, and permits have been delivered to start experimentations. The next steps will allow to keep on working on the watertable model to estimate the impact of this solution on the Garonne river and consider replication on other sites. Time will be taken to identify the obstacles and levers for implementing this type of project.

Regional Partners:

Funded by the European Union

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