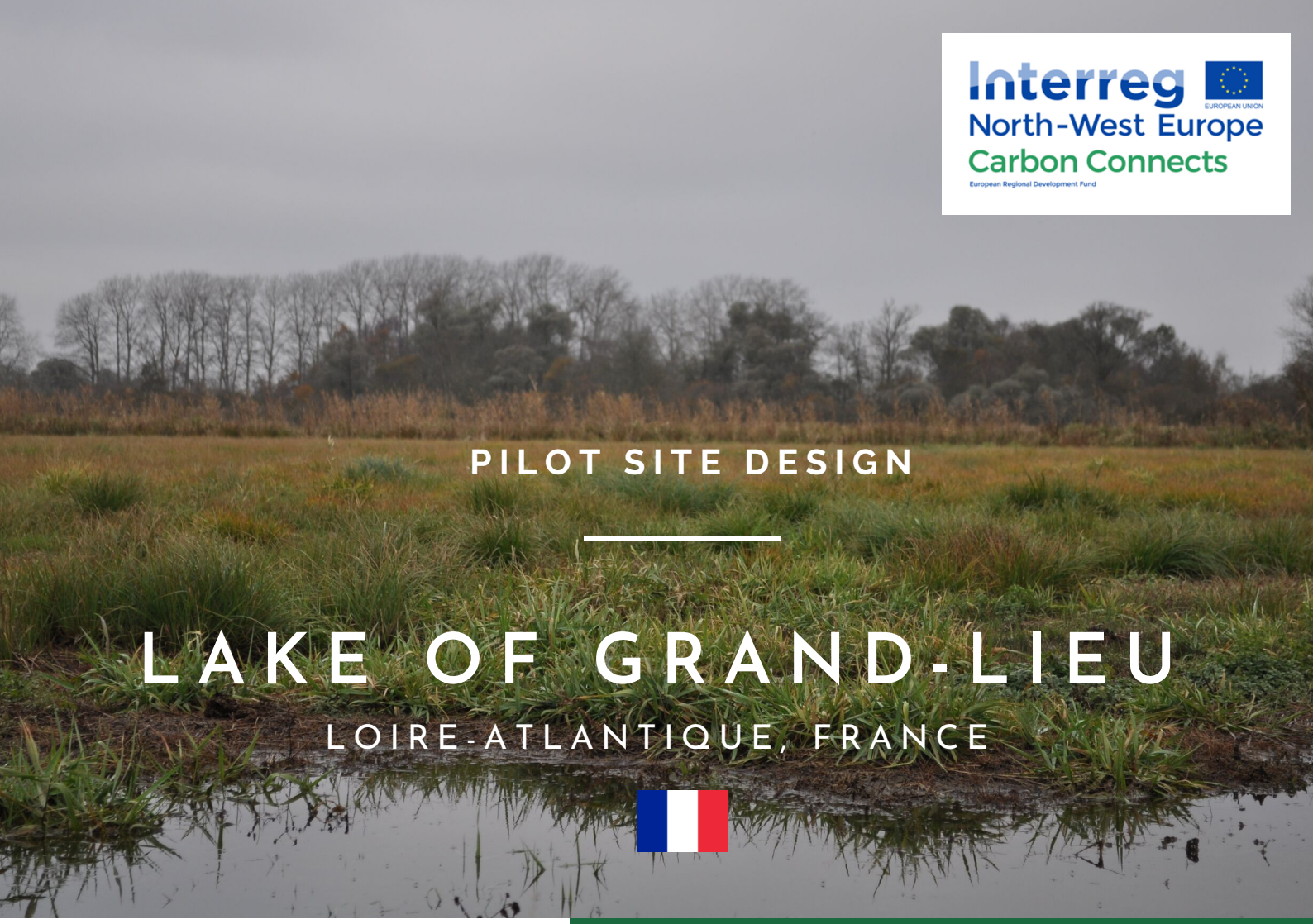

PILOT SITE DESIGN

LAKE OF GRAND-LIEU

LOIRE-ATLANTIQUE, FRANCE

The Lake of Grand-Lieu is situated at low altitude, it is the largest natural lowland lake in France. It is a protected Natura 2000 site; it is managed by 3 farmers who use the site in spring and summer for grazing cattle (for milk and meat). The area consists of the lake itself (up to 60m deep) and the surrounded marshy meadows mainly to the south of the lake.

The Lake of Grand-Lieu has very flat banks and is surrounded by vegetation. The lake is inhabited by several hundred animal species, including about 270 species of birds. Peat deposits exist under the marshland, reaching up to 4m in thickness and also around the lake in the areas covered with reed beds.

The flows of the two rivers connected to the lake are very low in summer. The lake plays an important role in flood control in winter when the locks of the lake are generally open to evacuate waters to the Loire. In summer, the locks are closed. Water levels are decided by a group of local representatives.

Size of pilot site: 30km2

Peatland type: Oligotrophic peatland

Land use: Nature reserve, grazing & grass harvesting

Crop type: Grasses grow naturally, no cultivated crops

Water level: 2-4m in winter and 0.7m-1.2m in the summer

Climate type: Oceanic, prevailing west & south winds

Total annual rainfall: 780 mm

Target CO2 reduction:

CHALLENGES

The drop in water levels in the summer has halted the process of the development of the peat deposits under the marshland. Nevertheless, it continues to develop in the areas covered with reed beds. It is also challenging to find the optimal breeding method in this area where water levels vary so much. The water level management is also limited because it depends on natural parameters, hunting and fishing criteria and a compromise with farming activity.

Regulatory obligations or constraints:

- no cultivated crops in peatlands because French law does not allow exhalations and scours in all wetlands. Peatlands are protected be law.
- Natura 2000 is a contract with regulatory requirements that has an impact on agricultural practices and the funding that this may represent (CAP).

GOALS

This pilot site aims to find a compromise between all activities and the maintenance of biodiversity, and to improve grazing techniques. Also it will enable grasses to be harvested in Autumn and used as animal feed/biomass. There is an expected water level increase on the shores of the lake in spring. The pilot site will analyse what is the ideal level of carbon storage and the realistic one for maintaining human and agricultural practices.

BUSINESS MODELS

Short distribution channels for cattle and pigs, producers' shops and direct sales. Use of reeds for ‘wood’ products.

PILOT SITE TIMELINE

Sep 2019: Peatland analysis (testing various parameters on 5 sub-sites and comparing them to a ‘natural, non-managed’ sub-site)

Oct 2019: Farmer to farmer session (discussing the results of the peatland analysis)

Nov 2019: Communication and technical meeting (discussing the results of the peatland analysis)

Dec 2019: Work on the peatland analysis and modification of practices for spring 2020

Spring/summer 2020: Choice of practices for new season of sub-site testing (including a Farmer to Farmer session). Application of decisions on sub-site practices

Autumn 2020: New round of peatland analysis. Analysis of results and potential for altering practices

https://www.nweurope.eu/projects/project-search/cconnects-carbon-connects/