

# SŒURS DU MAINE

## 2019 - 2050

### IDENTITY CARD

#### GEOGRAPHICAL LOCATION

Biron (17)

#### TARGET ADAPTATION ISSUE(S)

- Soil erosion
- Loss of organic matter and water availability

#### HABITAT(S) CONCERNED

Farming ecosystems

#### TYPE(S) OF NBAS

Sustainable management of ecosystems : Rebuilding a family farm based on principles of agroecology.

#### PROJECT LEADER(S)

#### AND ASSOCIATED PARTNER(S)

- Sœurs du Maine
- Nature 2050 Programme – CDC Biodiversité
- Chamber of Agriculture
- Agricultural training institutions
- Charente-Maritime Organic Farmers' Association (GAB 17)
- Birds Protection League (LPO)
- « Farmer of the Future » competition 2019

Agroforestry features around a plot of land  
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#### FUNDERS AND BUDGET

- CDC Biodiversité Nature 2050 Programme : 16 650 €
  - Departmental Council : 6 432 €
  - Region : 5 880 €
  - Own funds : 27 436 €
- Total budget : **56 398 €**

In addition, the cost of maintaining and monitoring the project until 2050 will be covered by the Sœurs du Maine and CDC Biodiversité.







## PROJECT OBJECTIVES

- **For adapting to climate change :** preventing soil erosion and securing water resources.
- **For biodiversity :** encouraging functional and heritage biodiversity and creating habitats conducive to the development of beneficial organisms.
- **For the local area :** improve the landscape and living environment and diversify sources of income for the farm.

### REGULATORY CONTEXT OF THE PROJECT

- Territorial Contract for Quantitative Water Management

## CONTEXT AND ISSUES

The farm is located in the river basin of the Seudre, in the heart of the Saintonge agricultural area in the Charente-Maritime department. The farm grows field crops and vines and has been converting to organic farming since 2019.

The effects of climate change and conventional, even intensive, farming practices are having an ever-greater impact on the ability to ensure sustainable, resilient agricultural production. Whether in terms of soil erosion, loss of organic matter or water availability, the signs are alarming and require adapting agricultural practices.

The objectives of the project are to develop a resilient agroforestry farm that can diversify traditional production, foster functional biodiversity and create a pleasant living environment in which trees play their full part in the agricultural landscape while acting as a climate regulator.

## ACTIONS IMPLEMENTED

The farm’s overall plan is to gradually set up an agroforestry system based on planting trees including (fruit trees, birch, timber, etc.) to support existing production during the transition to organic farming and to develop new produce (fruit juice, birch sap).

The works, which started in 2019, have involved :

- Gradually setting up an agro-forestry system (fruit trees, birch trees, timber, etc.) both to consolidate existing production during the transition to organic farming and to develop new produce (fruit juice, birch sap),
- Planting 3042 saplings of around 30 different species over 43 hectares to create a variety of landscapes,
- Creating and setting up discontinuous linear features; hedges; intra-plot planting; intra-plot fruit trees and copses.

## GOVERNANCE ADOPTED

In the long term, the management, upkeep and monitoring of the planted trees will be the responsibility of the owners. The farm is supported by CDC Biodiversité via the Nature 2050 programme and its scientific partners in defining and monitoring indicators until 2050, in addition to co-financing the action.

The transition to environmentally friendly agriculture is being supported by the Charente-Maritime Organic Farmers’ Association (GAB 17), the association Prom’haies Nouvelle-Aquitaine, the Chamber of Agriculture, the local agricultural education institutions and the Birds Protection League (LPO).

## SCHEDULE

PROJECT LIFESPAN				
	2019	2020	2021	2020 - 2050
Works	Starting work (tilling and staking)	1 <sup>st</sup> planting phase (hedgerows, birch trees and 50% fruit trees)	2 <sup>nd</sup> phase of planting (remaining fruit trees, agroforestry development and alignment of trees)	
Monitoring and assessment				Monitoring indicators of the Nature 2050 programme





# BENEFITS AND CONTRIBUTIONS OF THE PROJECT



## BENEFITS REGARDING TARGETED ADAPTATION ISSUES

- Improving the resilience of farming systems to climatic variations by improving the water storage capacity of soils and their organic content.



## BENEFITS FOR BIODIVERSITY

- Increasing the number of habitats favourable to biodiversity.

## OTHER BENEFITS



- Diversifying the farm's traditional production by introducing fruit juice-and sap-producing trees into the system.
- Producing timber for local use.

## MONITORING INDICATORS

### Adaptation to climate changes

- Ecosystem evolution/maturity : measurements to assess soil condition and the natural Nitrogen-15 abundance rate in leaves

### Biodiversity

- Biodiversity monitoring: earthworms, pollinators, beetles
- Soil analysis
- Monitoring of spontaneous flora



# LEVERS FOR SUCCESS

## TECHNICAL ASPECTS AND PROJECT DESIGN

- **Soil preparation** : For the hedgerows and intra-plot features, deep subsoiling was carried out on the planting line. The existing vegetation was then destroyed before preparing the seedbed for planting the grass strip. For fruit trees, birch trees and tree rows, the soil was worked in planting holes using a mechanical shovel, without mixing the soil horizons, and with the addition of composted manure.
- **Mulching** : Wood chips or straw from the farm at the foot of each tree.
- **Intra-plot planting** : Two lines of trees spaced 4m between rows and 5m between plants, replicated every 42m. The rows are planted on an 8m wide grass strip with a 36m cultivation area. There are two fallow areas on either side of the cultivation plot.
- **Planting of hedgerows** : Fruit trees planted every 5 m on a 10 m wide grassy strip. Three-layered double hedges (conifers, Scots pine, birch).
- **Tree species** : The species chosen are adapted to the soil and climate conditions and are selected to provide complementary uses (timber, firewood, hardiness and multiple fruiting periods) and to promote biodiversity.

- **Protection from wild animals** : 1.2 m high sheaths held by two 1.5 m acacia stakes were set up. Sheep fat (a natural repellent) was sprayed on fruit trees and hedgerows (Hornbeam, Service Tree, Wild Cherry, Small-leaved Lime, etc.). Electric fencing.
- **Maintenance** : Medicinal and aromatic plants are grown in the strips under the trees to reduce the need for manual weeding.


## STAKEHOLDER COMMITMENT

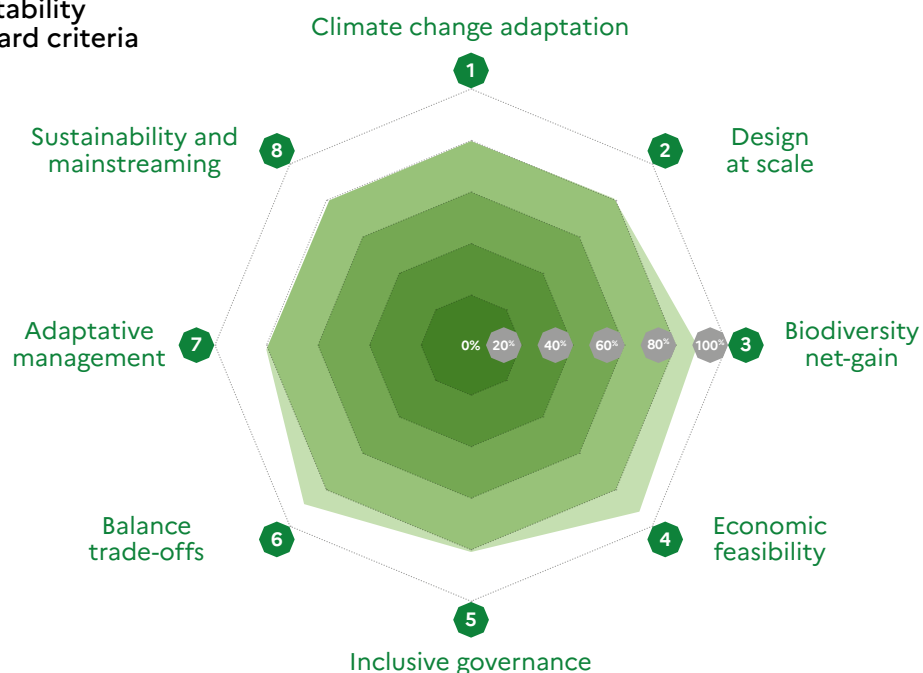
- **Training** : project with the Saint Antoine Agricultural Highschool to create training courses for adults.

## MONITORING AND REPLICABILITY OF THE ACTION

- **Promoting the project to the general public** : Ultimately, Isabelle wants to share her passion, her profession and her vision of eco-responsible farming by opening her farm to tourists, local stakeholders and schoolchildren.
- **Progressiveness** : The farm is striving to maintain its financial stability, currently supported by wine production, while adopting agroecological practices.

# ANALYSIS ACCORDING TO THE IUCN'S GLOBAL STANDARD FOR NATURE-BASED SOLUTIONS

 Project suitability with standard criteria



## FOR FURTHER INFORMATION

- Webpage (in French) of [the Nature 2050 programme](#)

## CONTACT DETAILS OF THE PROJECT LEADER

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## DATE

March 2023  
January 2024

## DATE AND FACT FILE EDITOR

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