

# Région Normandie

## Climate Change Adaptation Actions

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# Normandy Region

# 1. NORMANDY REGION



- Normandy is located in the north-west of France. It is bordered by the Channel Sea.
- The territory : 30 627 km<sup>2</sup> and 3,5 million inhab.
- **Diversity of landscapes:**
  - 640 km of coastlines
  - More than 34 000 km of rivers
  - 4 regional natural parks
  - An economic fluvial axis between Le Havre and Paris: the Seine river
  - 1st French Region for oyster farming
  - Agriculture, Industry and Construction



# THE NORMANDY REGION COUNCIL



- Annual budget : **2,4 billion €** for organizing transport, training, economy, ...
- Administrated by 102 elected representants + **6000 employees**
- **Powers**
  - **Spatial planning and environment:** waste management, regional natural parks, rural and urban development, regional air quality plan, etc. The region is also responsible for the Regional Plan for Spatial Planning, Sustainable Development and Equality (SRADDET).
  - **Economic development:** coordination of competitiveness clusters, support for the economic fabric and implementation
  - **Management of European programs:** managing authority for the European funds ERDF, EAFRD and part of the ESF.
  - **Vocational training:** integration of young people in difficulty, training for jobseekers, management of apprenticeships and sandwich courses, etc.
  - **Secondary schools:** construction, maintenance and operation of general secondary schools and agricultural secondary schools
  - **Transport:** management of ports and airports, Regional Express Trains (TER), inter-urban and school road transport, roads, public bus stations, etc.

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# Climate risks and challenges in Normandy

# NORMANDY REGION – CLIMATIC CHARACTERISTICS

- 2 main resilience challenges :
  - **coastal development**
  - **water management**
- Economic development :
  - **Land use and food systems**
  - **Local economic systems**
- And also :
  - **Health and human wellbeing**
  - **Climate proofing of critical public infrastructures**

## CLIMATIC HAZARDS

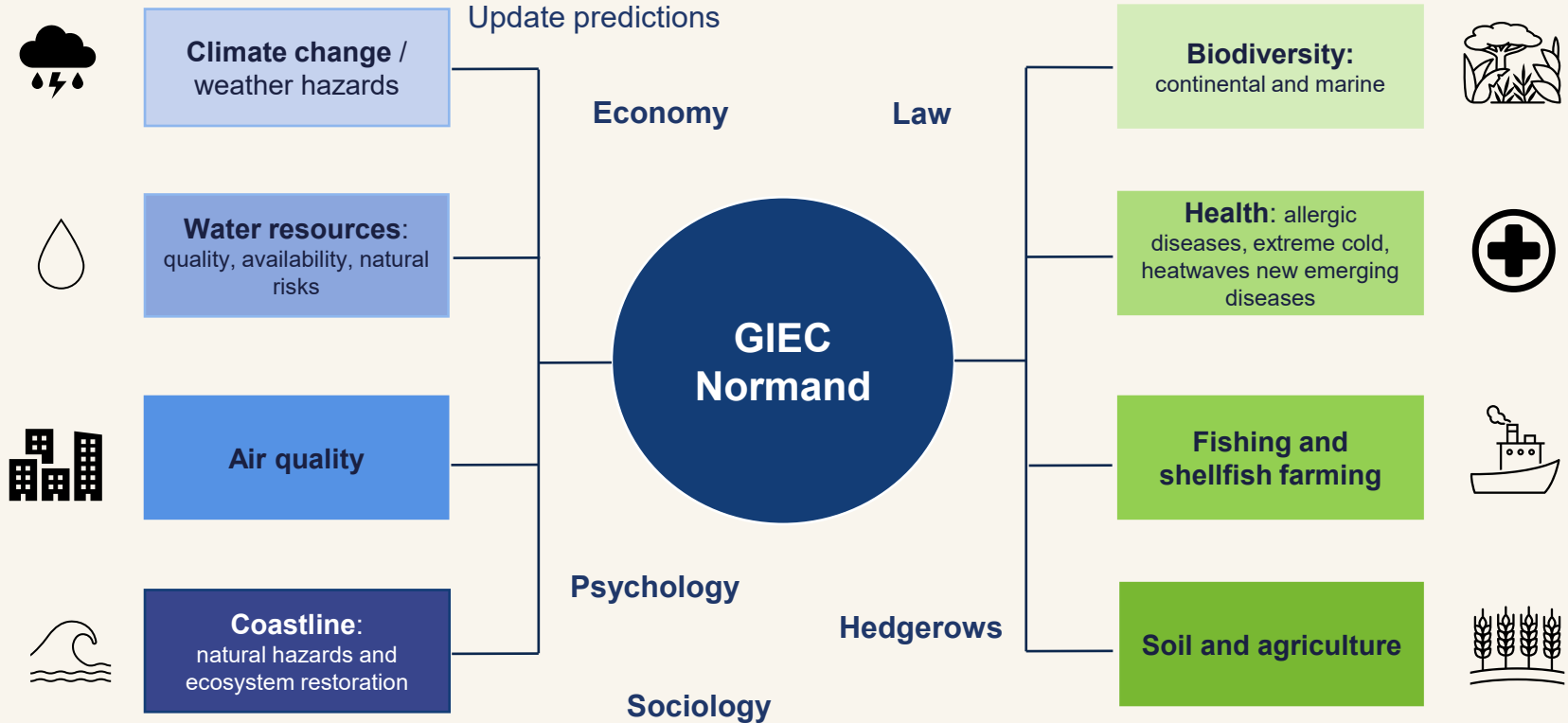
- Coastal erosion
- Marine submersion
- More periods of drought
- Intense rainfall events leading to more flooding...





# GIEC NORMAND

More information : [GIEC normand | Région Normandie](#)  
[GIEC EN - Google Drive](#)



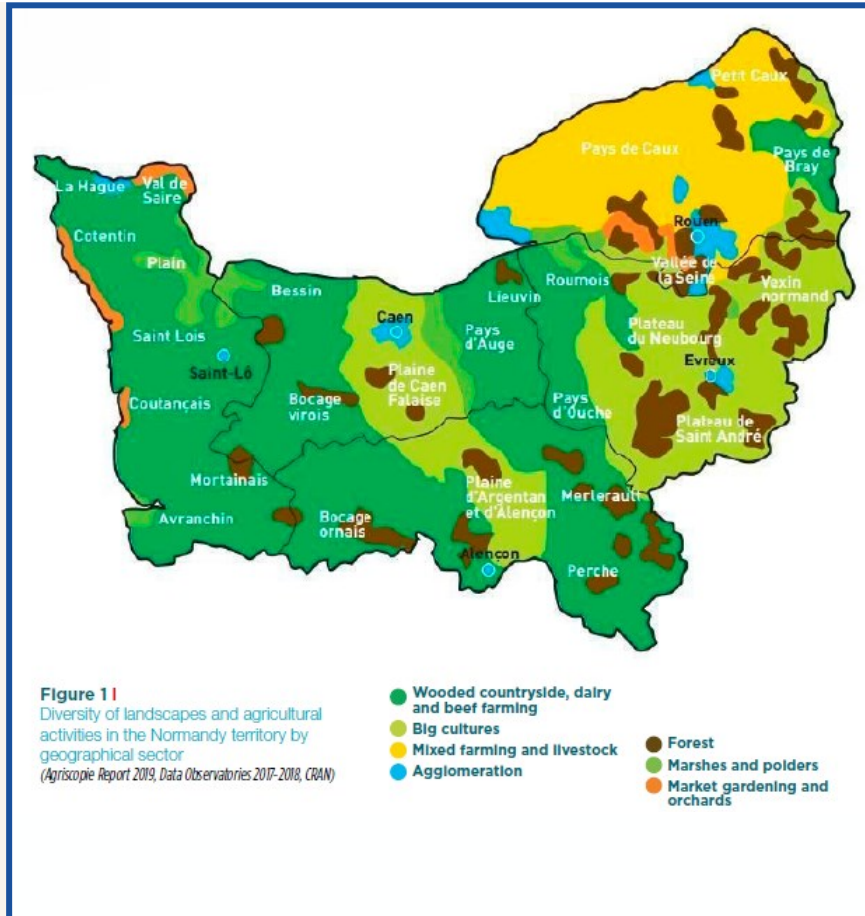
## SOIL AND AGRICULTURE 1/2

Normandy is the leading region in France in terms of agricultural production :

- 70% of the Normandy territory is usable agricultural areas,
- 63% of the French production is from Normandy.

### An economic sector threatened by climate change - Predictions for 2100 :

- 10% lower rainfall and greater seasonal disparities, with drier summers and wetter winters,
- More frequent intense rainfall events which will further expose the soil, accentuating runoff and erosion,
- A decline in soil quality, damage to farmland, mudslides reflecting the increasing degradation of soil, an essential resource with very little renewable potential.



## SOIL AND AGRICULTURE 2/2

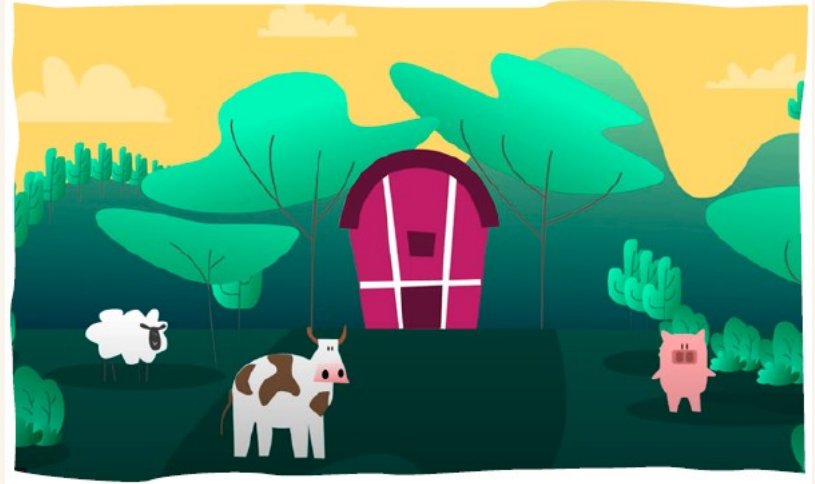
**Changes to be expected in the agricultural sector are significant :**

*Less grain filling in cereals, delayed growth periods for grassland, need to build up fodder supplies for the summer,*

*Adapting livestock buildings to avoid deterioration in the health and production capacity of the animals,*

*Introduction of grassland species (fescue, cocksfoot, chicory) and forage crops (sorghum, fodder beet) that are **more resistant to water stress**,*

*Sowing of crops **adapted to high temperatures**, providing the soil with new organic resources.*



***Reducing soil sealing** to improve water infiltration,*

*Creating **buffer zones** (fascine, hedges, grassed hillsides),*

***Planting hedges, trees and coppices** near livestock buildings.*

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## Regional policies to help Normandy adapt to climate change

# CCA IN THE REGIONAL CLIMATE PLAN

*Regional fundings and European funds supporting CCA*



## ➤ **Coastal adaptation and management:**

- Since 2016, a **policy on the coast for long-term adaptation of the territory** taking into account climate change ("Our Coastline for Tomorrow", adaptation strategies)
- European and Regional Development Fund for **relocation to the coast** (10M€ FEDER + 15M€ Région Normandie)

## ➤ **Water management:**

- In 2022, creation of a **regional policy for adaptation to climate change in the field of water resources "Water in Normandy Tomorrow"** supporting adaptation strategy or exemplary actions of adaptation.

## ➤ **ACC strategy:**

- In 2023, a new **regional policy on the multi-risk adaptation to climate change in local territories "Territories and Climate"** *Led with the regional delegation of the French Agency For Ecological Transition (ADEME) and the Normandy Agency for Biodiversity and Sustainable Development (ANBDD))*

## Some examples of projects

Reconnecting the Saône river to the sea leading to relocation actions such as camping site and a water treatment plant initiated by the Conservatoire du Littoral (France) and the Environnement Agency (England) through the Interreg program ([PACCo](#)/Promoting Adaptation to Changing Coasts).

Region Normandy supported financially the project while covering staff costs for local coordinators and communication and awareness-raising activities.



## Some examples of projects

### Installation of rainwater collectors at a horse-riding centre :

- Improve an eco-friendlier water management system // preserve the water resource,
- Supporting the site to become self-sufficient while watering competition quarries
- Installation of three rainwater recovery tanks, with a total capacity of over one million litres.



### Experimentation with the relocation of a museum related to the D-day during the 2<sup>nd</sup> WW and severely affected by erosion and the risk of marine submersion:

- Define a methodology for preparing its relocation,
- Raise the issue of the duty of remembrance linked to the current site (museum installed in a bunker on the D-day landing beach).



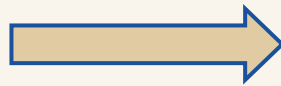
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# Normandy's ACC strategy at the European level

# ADAPTATION MISSION CHARTER AND COMMUNITY OF PRACTICE



- **Normandy Region in the 1st wave of the Adaptation Mission Charter's signatories**
- **Member of the MIP4Adapt Community of Practice:** opportunity to exchange practices with experts and other European regional/local authorities + access to expertise and technical assistance
- **Follow-up of the Mission's future calls for proposals to strengthen:**
  - Normandy Region's own public policies in the field of climate adaptation (ex: Pathways2Resilience project)
  - Climate risks and vulnerabilities assessment by the GIEC normand (opportunity to work on new topics, e.g.: health, biodiversity, etc.)



EU projects opportunity  
Promoting actions at European level

# RESIST – Regions for climate change resilience through Innovation, Science and Technology

## Objective:

- 5-year project,
- Support european regions to get more resilient facing climate change,
- Region Normandy will test and exchange on CCA actions, such as Nature-based Solutions and Graphical Digital Twin, to deal with water-related risks: flooding, run off and soil erosion.

## 57 partners all over Europe

**LSDT1** : South West Finland and Eastern Makedonia and Thrace (Greece)

**Normandy Region** is partnering with the French Office of Biodiversity (**OFB**) and the Study and Expertise Center on Risks, Environment, Mobility and Planning (**CEREMA**)

## 4 pilot sites in Normandy to test and develop ACC solutions from SWF:

- **Lisieux**: redevelopment of the riverbank of the « Petit Lieux » stream, including houses' relocations and NBS implementation
- **Barentin**: evaluate the desilting and renaturation needs in urban areas.
- **Saint-Lô**: 1 case study on the hedgerows preservation
- **Parc Cœur de Nacre**: support NBS implementation



## 1.2.1. OVERALL METHODOLOGICAL APPROACH



Figure 1.2 – Methodological approach

**RESIST Graphic Digital Twin:** hydraulic modelization in order to simulate heavy rains scenarios on urban areas and to visualize the floods/runoff/soil erosion consequences and to show how NBS can prevent these risks

## **NORMADapt – NOrmandy Resilience Method to climate change ADAPTation**



- 18-month project (september 2024 - february 2026)
- **Study the P2R method for adapting to the consequences of climate change;**
- Test parts of the method with volunteer territories in Normandy (in particular those involved in « Territories and Climate » programme) and learn lessons from them that could be useful while **developing a potential regional strategy of adaptation to climate change;**
- Develop key elements such as:
  - **A storytelling approach for adapting to climate change**, to facilitate engaging the dialogue with the different audiences (working with regional stakeholders in education for sustainable development, developing graphic facilitators, etc.);
  - **Supporting change and involving stakeholders in transition projects** (working with regional psychology/sociology and economy researchers);
- Develop a resilience investment plan in conjunction with the college of funders proposed as part of the 'Territories and climate' programme.



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Thank you !

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