

# Study and cooperation visit of KRIHS at Cerema: spatial planning, land-use frugality and NBS in urban areas



13rd May 2026

# Agenda

**Session 1: French spatial planning public policies**

**Session 2: The national Land Take Online Portal**

*Lunch Break*

**Session 3: Tools and approaches developed by the Cerema**

**Session 4: Green Belt Policy in South Korea**

**Conclusion and discussion**

## Session 1: French spatial planning public policies

Presentation of the Cerema: illustration of a French institutional approach

Intervention from the Ministry in charge of the Ecological Transition: public policies and associated monitoring frameworks

The role of the Cerema for the territorial implementation of spatial planning policies



Cerema\*, a public authority in regional planning, supports the State, local authorities and businesses in adapting regions to the climate challenge.

\* Cerema is a public institution under the authority of the ministries responsible for regional planning and Ecological Transition.

# A PUBLIC EXPERTISE SERVICE FOR ALL TERRITORIES, URBAN, RURAL, COASTAL OR MOUNTAIN



**1<sup>st</sup>** public institution at both national and local level

Over **70** years of experience

More than **1,000** member local authorities

**2,500** multidisciplinary staff members



**27** locations across mainland France and overseas territories

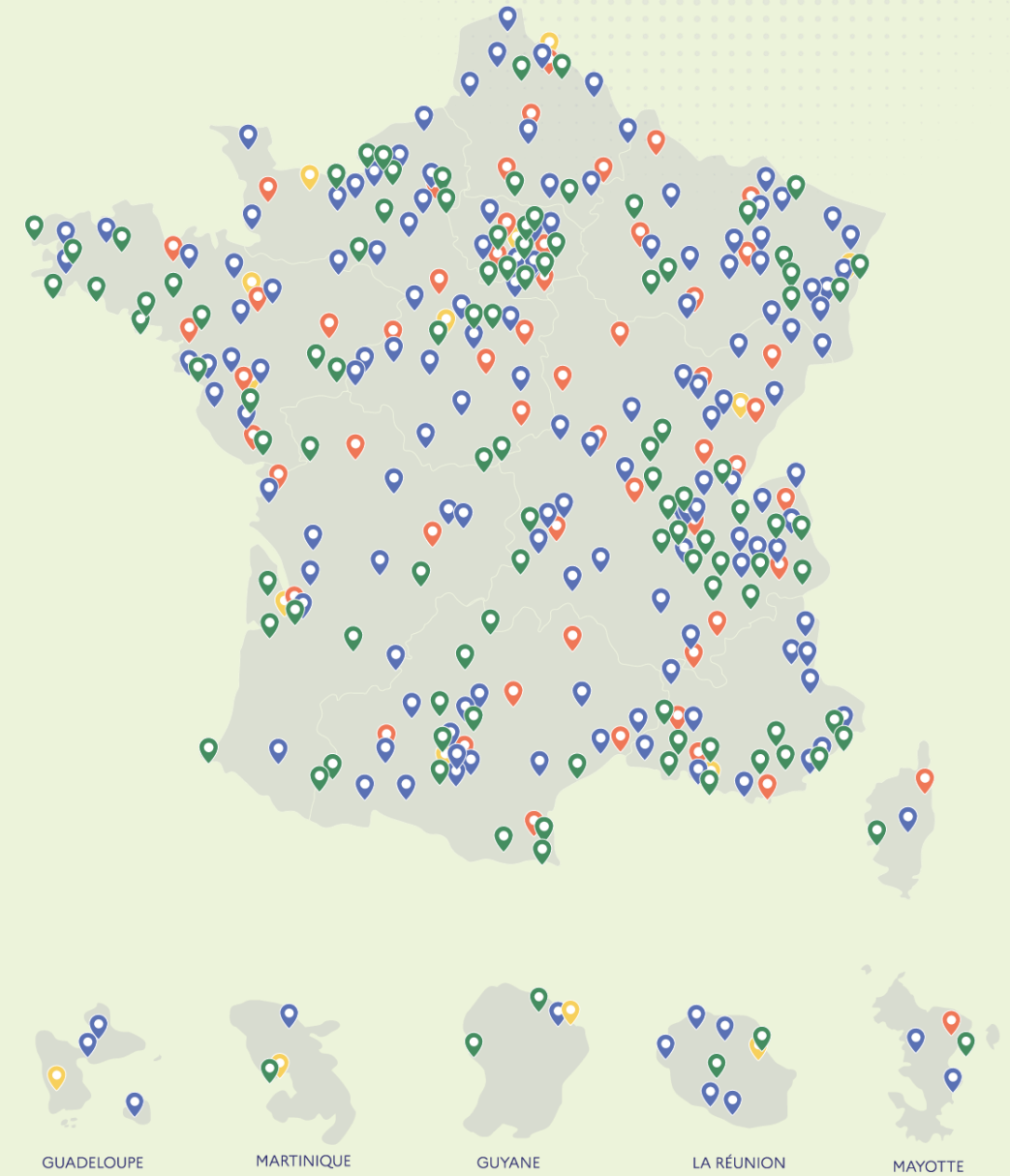
**11,000** references available freely accessible



**100** new editions per year

# FIRST PUBLIC INSTITUTION BOTH NATIONAL AND LOCAL

Throughout mainland France and its overseas territories, alongside government departments and local authorities, Cerema plays a key role in developing and implementing national public policies and regional projects adapted to the climate of tomorrow.



# 1,000

local authorities in mainland France and overseas territories that are members of Cerema in May 2025, including:

**16**  
regions

**87**  
departments

**467**  
municipalities

**430**  
EPCI

# TAKING ACTION FOR TERRITORIES ADAPTED TO CLIMATE CHANGE

Cerema plays a key role in the development and implementation national public policies and regional projects adapted to the climate of tomorrow in six areas of activity:

- **Regional planning and strategies**  
Envisioning and designing new ways of developing territories
- **Buildings**  
Adapting buildings to climate change and improving their quality of use and accessibility
- **Mobility**  
Developing carbon-free, secure mobility services for everyone and for all regions
- **Transport infrastructure**  
Ensuring the efficiency and sustainability of transport networks
- **Environment and risks**  
Prevent natural risks and preserve the environment in the context of development projects
- **Sea and coastline**  
Adapting coastal areas to climate change and ensuring the safety of maritime and river activities

# CEREMA'S THREE MISSIONS

A local, innovative, collaborative and unifying approach.



## Advise & Design

Supporting local authorities, government departments and businesses in adapting public policies and projects to climate change

*Be a trusted centre for regional climate challenges*



## Develop, disseminate & facilitate

Produce and disseminate freely accessible knowledge (standards, doctrine, rules, studies, tools and methods, etc.).

*Act as a key knowledge hub*



## Research & Innovate

Conduct research focused towards operational applications to accelerate the expertise of tomorrow.

*Drive the development of tomorrow's expertise and solutions*

# AN INTERNATIONAL DIMENSION

Internationally, Cerema is positioned as a key player in the dissemination and sharing of knowledge, standardisation and technical support in its fields of expertise:

- Research and innovation at European/international level
- Support for European neighbourhood policy
- State development aid policy
- Decentralised cooperation between local authorities
- International business development
- International standardisation and certification



*735 missions carried out in 53 countries*

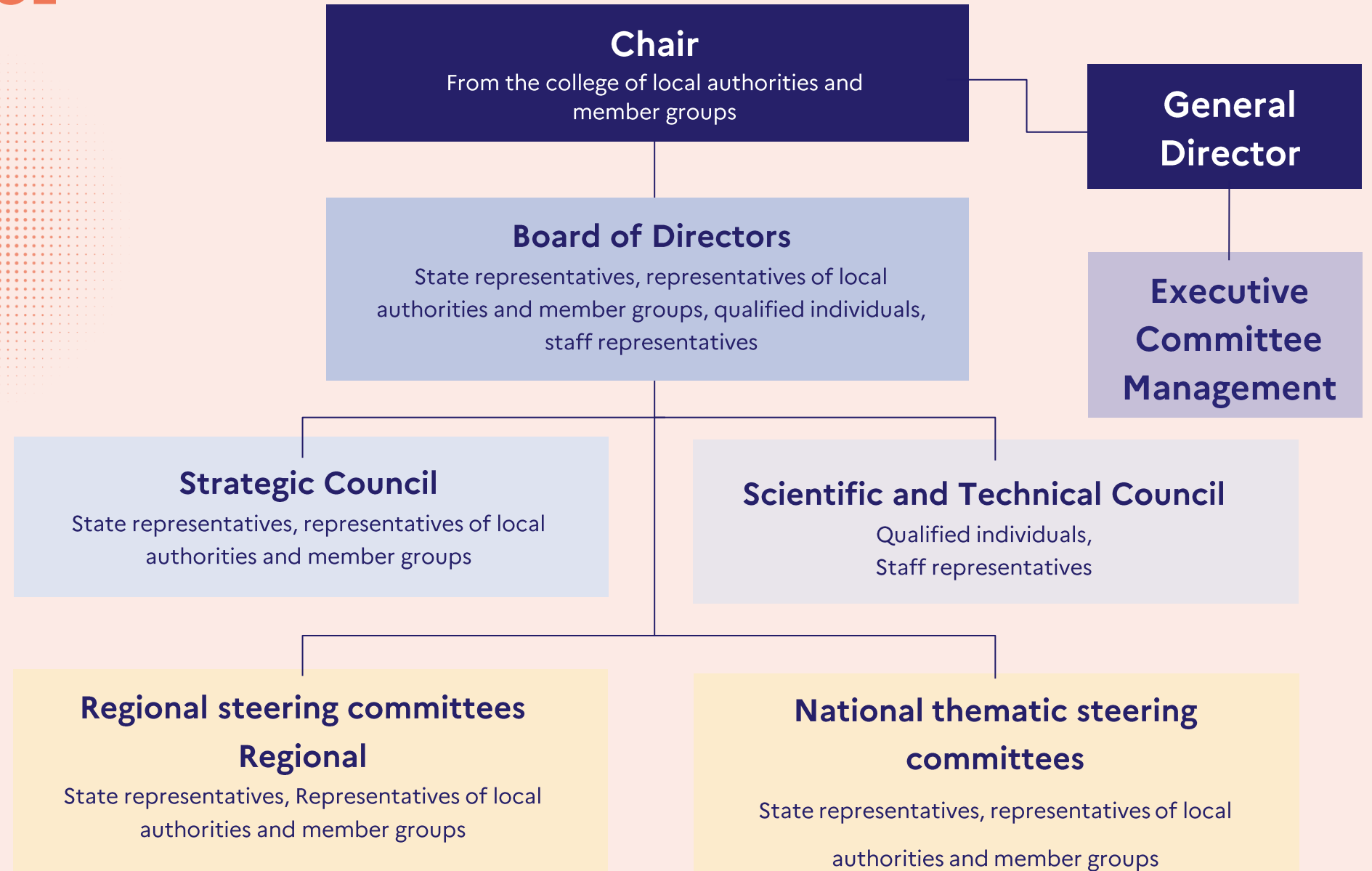
# ANNEX 1: DETAILED PRESENTATION OF THE CEREMA

# OUR GOVERNANCE

Since May 2023, member local authorities have been represented within the institution's governing bodies.

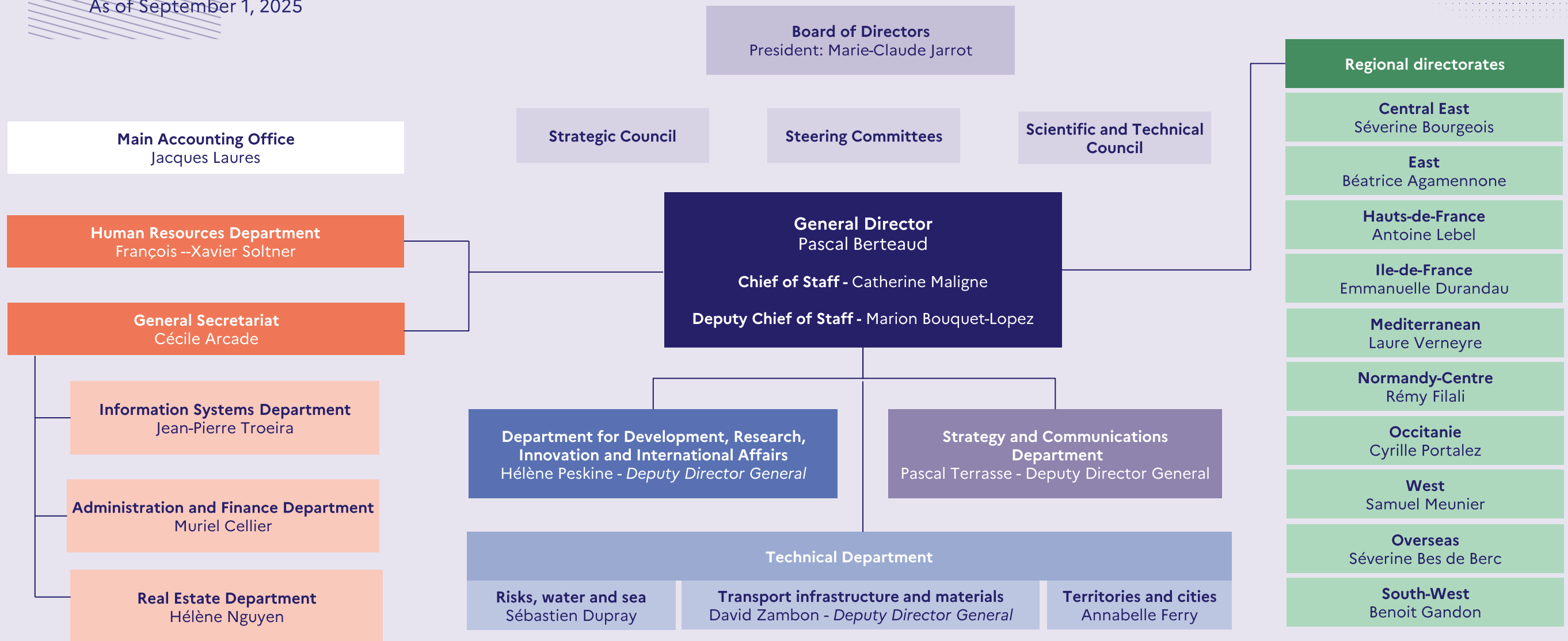
More than 1,000 member local authorities can call on Cerema without a call for tenders thanks to the "quasi-public service" system:

- regions
- departments
- public establishments for inter-municipal cooperation
- municipalities



# OUR OPERATING MODEL

As of September 1, 2025



# CEREMA'S THREE MISSIONS

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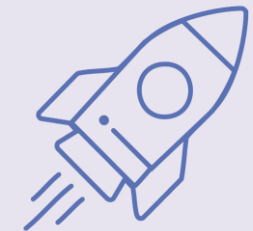
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# ADVICE & DESIGN

*Be a trusted centre for regional climate challenges*

Cerema supports local authorities, government departments and businesses in the development and implementing land use planning projects adapted to climate change, as part of local initiatives or national programmes.

It designs and provides methods, services, tools, diagnostics and assessments.

It is ISO 9001 certified

## Cerema's services

- Exploratory, strategic or operational studies
- Regional diagnostics
- Project management assistance (PMA):
  - Definition and qualification of needs
  - Selection of service providers
  - Strategic decision-making support
  - Methodological support
- Coordination of multi-stakeholder and multi-thematic projects
- Awareness raising and training
- Standardisation, certification and labelling
- Provision of services to businesses

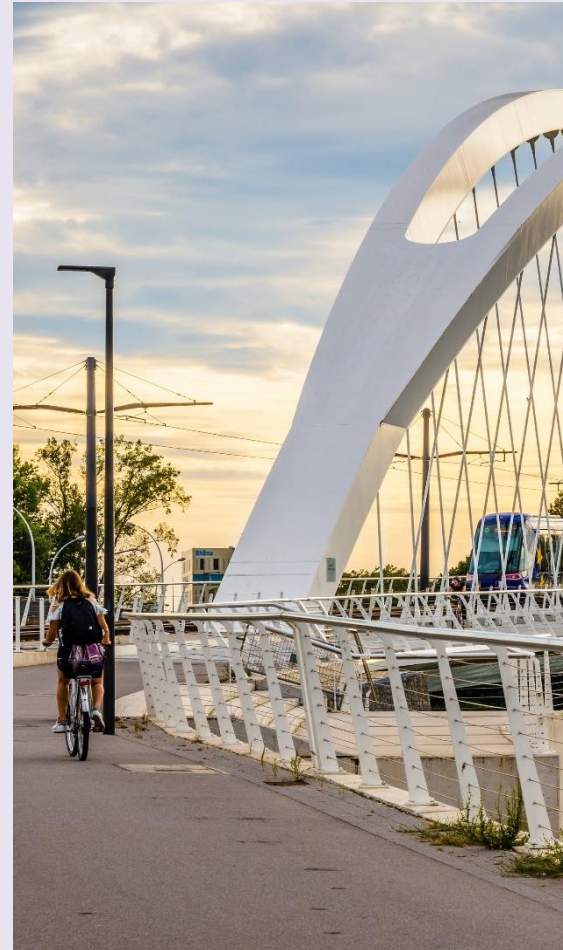


# ADVISE & DESIGN

*Be a trusted centre for regional climate challenges*

## EXAMPLES OF APPLICATION

- Designing public spaces to cope with heat waves
- Making transport infrastructure resilient
- Anticipating flood risks
- Adapting built heritage to climate change
- Making soil an ally in the face of climate change
- Optimising water resources
- Managing coastal change
- Involving citizens in regional projects





# DEVELOP, DISSEMINATE & FACILITATE

*Act as a key knowledge hub*

As a national public resource centre, Cerema produces a wealth of knowledge and studies related to its activities, including elements doctrine and best practices.

All this public data is freely accessible to support innovation and best practices in order to support regional stakeholders in implementing their projects.

## Cerema's services

- Development and dissemination of standards, doctrine and best practices
- Production of data, statistics and reference materials
- Production of study reports, guides and technical advice, feedback, etc.
- Capitalisation of methods and recommendations
- Dissemination of solutions, services and tools
- Training, facilitation and awareness-raising



# DEVELOP, DISTRIBUTE & FACILITATE

*Act as a key knowledge hub*

## MAIN RESOURCES



### Cerema publications

Over 3,000 publications, divided into six collections: References, Files, Notebooks, Resources, Essentials and Proceedings

All research reports, press articles and scientific publications on the [doc.cerema.fr](https://doc.cerema.fr) document platform



### Training catalogue



Cerema is accredited to provide training for local elected officials



### Regional Technical Conferences (CTT)

Regional meetings between local stakeholders with the aim of sharing expertise, feedback and solutions for the benefit of the regions.



### Platform Expertises.territoires

Collaborative platform organised into thematic communities to help co-develop national or regional projects adapted to the climate challenge.

[expertises-territoires.fr](https://expertises-territoires.fr)

[Cerema.fr](https://cerema.fr) Institutional website



# RESEARCH & INNOVATION

*Drive the development of tomorrow's expertise and solutions*

Cerema is involved in research missions research projects geared towards operational and innovation with the aim of to build the expertise for tomorrow, in close collaboration with its partners.

## Cerema's services

- Applied research: bridging the gap between academia and operational engineering
- Open innovation, technological development and dissemination:
  - Technology platforms
  - Experiments
  - Prototyping
  - Certifications and ecosystem facilitation
- Digital innovation:
  - Qualified and certified reference frameworks and datasets
  - Innovative, user-centred digital services and tools based on shared business knowledge and capable of harnessing artificial intelligence (AI)
- Projects funded by the European Union (H2020, Interreg, Life, etc.)
- Carnot Clim'adapt Institute (see next page)

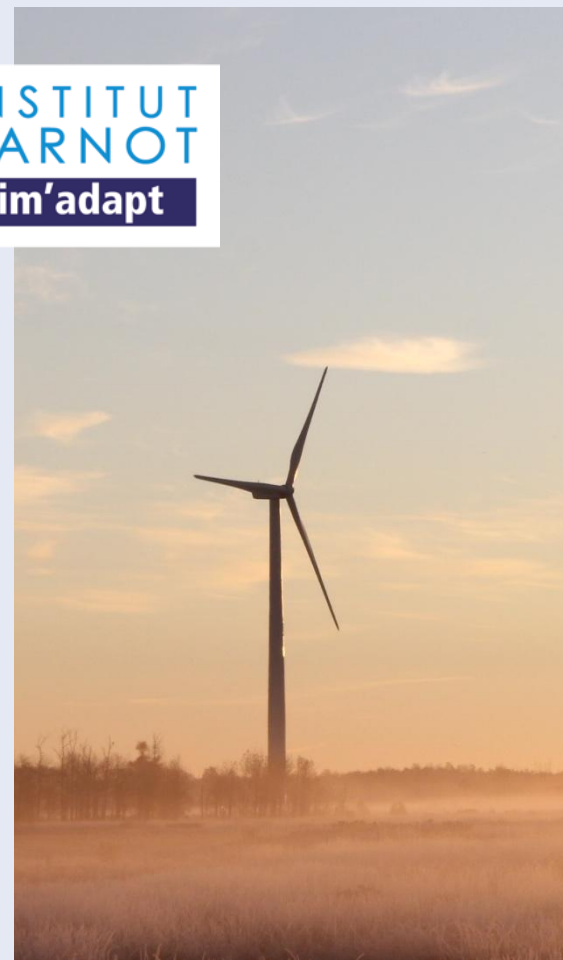


# RESEARCH & INNOVATION

*Drive the development of tomorrow's expertise and solutions*

The Carnot Clim'adapt institute, supported by Cerema, is a strategic partner for companies seeking to innovate in resource-efficient, decarbonised solutions, , decarbonised and environmentally friendly the environment.

Through research partnerships , it provides the scientific and technical excellence of its experts.



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# PLANNING AND TERRITORIAL STRATEGIES

Climate, environmental and societal issues require an **evolution of existing developments and practices**, at all scales.

**From the operational project to the territorial strategies,**

Cerema supports local authorities by providing land data, analyses, methods and tools.

It also helps to strengthen citizen involvement and to better integrate complex issues **to prepare territories for the challenges of tomorrow.**

## *Themes*

### **Territorial transition**

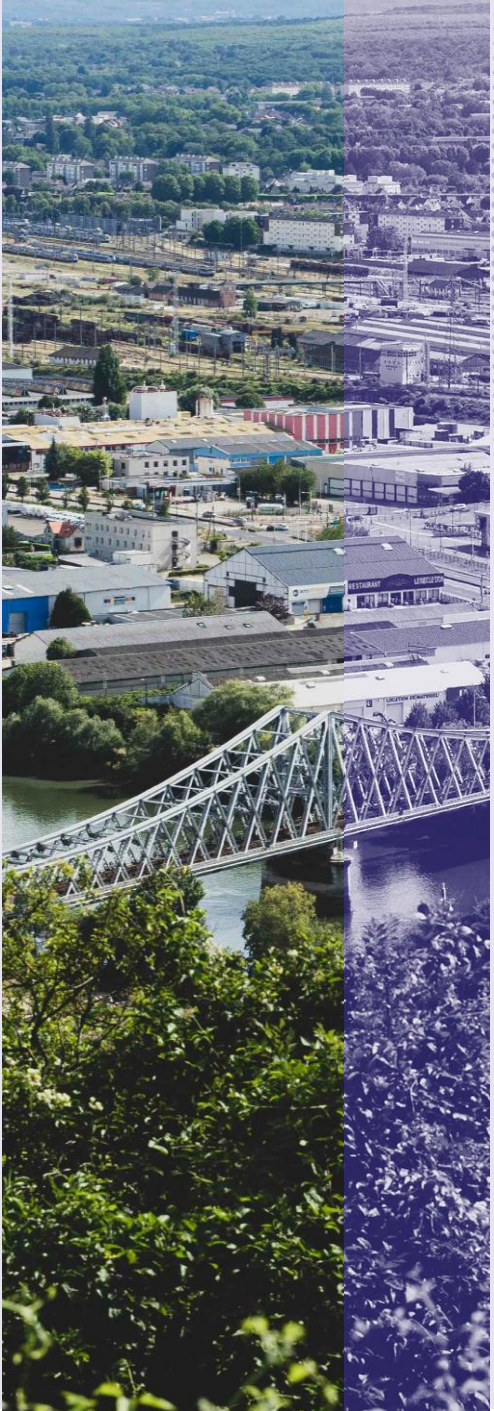
- Towards strong sustainability
- Adaptation to climate change

### **Sustainable development**

- From large territories to neighbourhood scale
- From global strategies to operational planning

### **Land knowledge and Mobilisation**

- High-performance data and tools
- Land use restraint strategies



# SPATIAL PLANNING AND TERRITORIAL STRATEGIES

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## Lot Department **Climate Change Vulnerability Assessment**

In response to the intensification of climate hazards affecting its territory, Cerema supported the Lot Department in an approach aimed at establishing an overview of local sensitivities and expected climate changes by 2050, identifying sectoral vulnerabilities through collaborative workshops, co-developing facilitation tools, and preparing an adaptation plan structured around the department's areas of responsibility.

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## South Mayotte Intermunicipal Authority **Support for the implementation of the recovery and transition contract**

In response to strong population growth and socio-environmental vulnerabilities, Cerema supported the local authority in structuring a territorial strategy for ecological and social transition, prioritizing actions based on local needs, and mobilizing institutional partners around a shared roadmap

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## Limoges Metropolitan Area **Support in developing an economic land strategy**

In response to land scarcity affecting economic development, Cerema supported the metropolitan authority in identifying and characterising available land, analysing the barriers to its mobilisation, and raising awareness among stakeholders about the densification of economic land for more effective land



# SPATIAL PLANNING AND TERRITORIAL STRATEGIES

## Climate Change Adaptation Resource Centre

Reference website to understand, get inspired and take action on climate change

## Resilience Compass

A tool dedicated to the resilience of territories

## UrbanSIMUL

A solution for the analysis and simulation of land use to support land-efficiency strategies

## Cartofriches

A data platform for the national inventory of brownfield sites, based on local and national data

## Planning tool Portal

A reference website to support territorial planning with information and tools

## Adaptation Mission

A shared support and guidance service for local authorities on climate change adaptation

*Learn more*

Explore all the resources in this field



# BUILDING

Whether new or existing, every building must meet the climate challenge.

Cerema supports **public and private building asset managers** in applying **regulations and innovating** in their practices.

It offers solutions for energy and environmental performance, ventilation and air quality, accessibility and well-being users, while controlling costs.

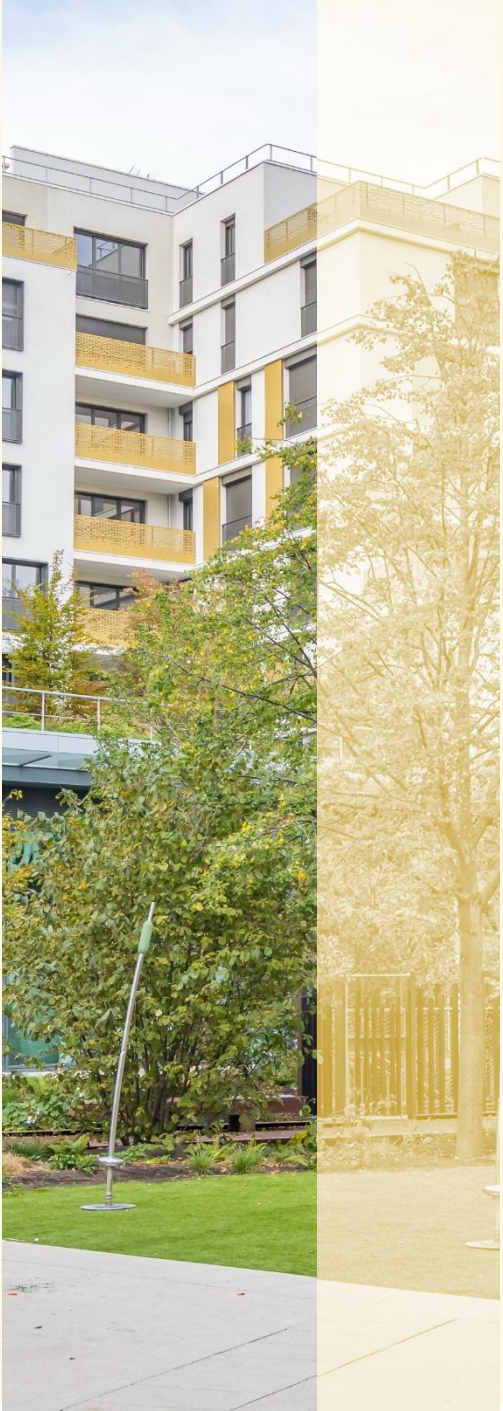
## *Themes*

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### **Performance optimization on public and non-residential buildings**

- Energy efficiency (deployment of tertiary eco-energy system)
- Ventilation
- Summer comfort
- Accessibility
- Adaptation to climate change and reduction of carbon impact (bio-based materials)

### **Public Real Estate Asset Management**



# BUILDING

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ACTEE Cube Challenges

## A collective challenge to scale up energy savings

Cerema teams support the development of the ACTEE Cube programmes, which aim to mobilize staff around energy-saving practices and consumption monitoring, reduce energy consumption by up to 15% in one year without major renovation works, and prepare action plans for more ambitious future renovations.

Municipality of Château-Salins (57)

## Property and Energy Strategy

As part of an energy transition and sustainable management approach for its building assets, Cerema supported the municipality of Château-Salins in assessing its building stock, identifying opportunities for energy and functional optimization, and developing a roadmap to adapt, renovate or reorganize municipal buildings.

Municipality of Couches (71)

## Multi-issue assessment of the Bergerie village hall > Multi-issue expertise of a municipal building

As part of a sustainable renovation approach and to improve user comfort, Cerema teams supported the municipality in assessing indoor air quality, acoustics and thermal performance, identifying opportunities for improvement in energy and health aspects, and assisting the municipality in defining an appropriate works programme.

# BUILDING



## RITE

Tool for assessing the risk of summer thermal discomfort in residential buildings



## Guides - Public Buildings

"Saving energy"  
"Inaction is costly"

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# MOBILITY

Mobility services must evolve to **meet the ecological, accessibility and safety challenges faced by territories.**

Cerema conducts diagnostics, provides data, develops the definition and implementation of projects, disseminates best practices and fosters innovation.

It contributes to **the deployment of low-carbon, efficient and Accessible mobility policies**  
**And services for all.**

## *Themes*

### **Mobility Decarbonization**

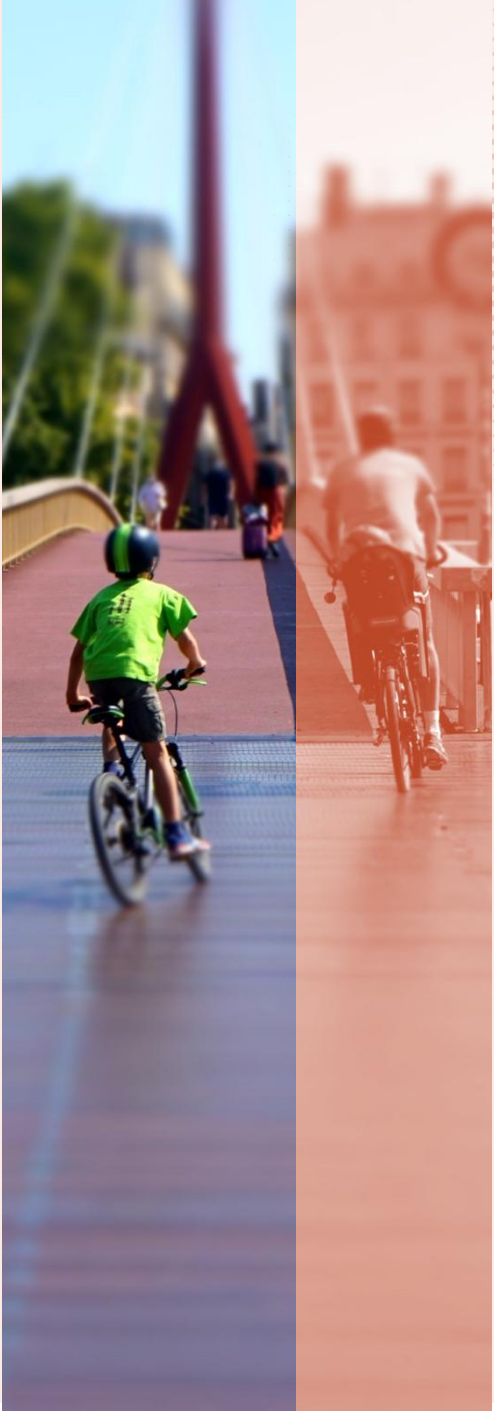
- Intermodality, carpooling, traffic regulation, electromobility, active modes, low-emission zones (LEZ), sustainable logistics

### **Innovation and digital**

- Smart mobility, mobility data, publication of EMC<sup>2</sup> data in open data, new mobility services

### **Transport safety**

- Road safety and infrastructure for vulnerable users: pedestrians, cyclists, and personal mobility devices



# MOBILITY

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## Sources de l'Orne Intermunicipal Authority Mobility strategy in a low-density area

In response to challenges related to accessibility, autonomy and energy efficiency, Cerema teams supported the local authority in assessing mobility practices and residents' specific needs, identifying solutions suited to low-density areas, mobilising local stakeholders to co-develop solutions, and defining an operational roadmap.

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## Haute Garonne Department Implementation of a Cycle Express Network (high-level of service cycling network)

To support decision-making on cycling infrastructure, Cerema provided the department with regulatory and technical assistance to define a high level of service cycling network, carry out a technical analysis to select appropriate infrastructure according to traffic, speed and the expected number of cyclists, and deliver a reasoned opinion on the proposed route.

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## Pays de Loire Region Evaluation and monitoring of the carpooling scheme

Since 2021, Cerema teams have supported the Region in designing, evaluating and improving its carpooling scheme, a key transition lever for low-density areas: strategic and technical support, impact assessment, and knowledge sharing at regional and national level as part of the National Carpooling Plan.

# MOBILITY

**Guide** to facilitate cyclists' circulation / cycling infrastructure

## **CAPAMOB**

A diagnostic and decision-support tool to help define mobility strategies in low-density areas

## **LUD+**

A national energy savings certificate scheme to promote the development of sustainable urban logistics charters

**National methodology** for implementing the directive on road infrastructure safety management (2019/1936/EC)

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# TRANSPORT INFRASTRUCTURE

Transport infrastructure must adapt to **new uses and climate change.**

Cerema supports local authorities, infrastructure managers and companies in **designing, maintaining, modernising and adapting infrastructure**, while ensuring the best economic and environmental performance.

## *Themes*

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### **Climate Change Adaptation**

- Infrastructure resilience, decarbonisation, adaptation of road policies and standards

### **Road asset management**

- Monitoring of infrastructures and management tools, adaptation to new uses

### **Digital innovation and AI:**

- Data management and integration of AI into wealth management

### **Standardization, certification, labeling**



# TRANSPORT INFRASTRUCTURE

*They trusted us*



Montpellier Méditerranée Métropole

## **Definition of the road asset management policy for Montpellier Méditerranée Métropole**

Cerema supported Montpellier Méditerranée Métropole in developing an innovative methodology to manage its road network, cycle paths and sidewalks. This approach provides a consistent overview of infrastructure conditions, helps define appropriate service levels, and enables optimized prioritization of maintenance works.

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Ivry-la-Bataille, in the Eure département

## **Support for the management of the engineering structures assets**

Cerema teams supported the municipality in inventorying and mapping its engineering structures, assessing their condition, identifying maintenance needs and priority works, and proposing a management plan along with a digital tool dedicated to asset management.

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Provence Alpes Côte d'Azur Region

## **Transport Infrastructure Resilience Study**

Cerema teams supported the Provence-Alpes-Côte d'Azur Region in analyzing the climate vulnerabilities of its road, rail, port and airport networks. Cerema's methodology made it possible to identify critical points and propose appropriate adaptation solutions, thereby strengthening the overall resilience of infrastructure to climate change. The study supports the preparation of a unified adaptation plan for all infrastructure managers and operators across the region.

# TRANSPORT INFRASTRUCTURE

**Tools and methods** to optimize the management of road networks.  
High-performance monitoring equipment  
Methodologies adapted to different types of road networks

**Adapting infrastructure to climate change**

Systemic approach to the adaptation of transport infrastructures (ASAIT method), Observatory of Roads Damaged by drought (ORSS), Shrinkage-Swelling of Clays (RGA)

**Toolbox** for the management of municipal bridges

**PILES – Engineering Structures platform**

Thematic site on the design, management and maintenance of engineering structures.

**DTRF - Documentation des Techniques Routières Françaises**

Reference website on the design, maintenance and operation of road infrastructure in France, including standards, guidelines and recognised practices

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in this field





# ENVIRONMENT & RISKS

Planning and Infrastructure projects must integrate **biodiversity, resource management, nuisance reduction, quality of life and the adaptation of territories to climate change.**

Cerema supports territories in **better preventing natural risks and nuisances, preserving resources and the environment, and promoting the production of renewable energy and low-carbon materials.**

## *Themes*

### Protecting populations from natural risks and nuisances

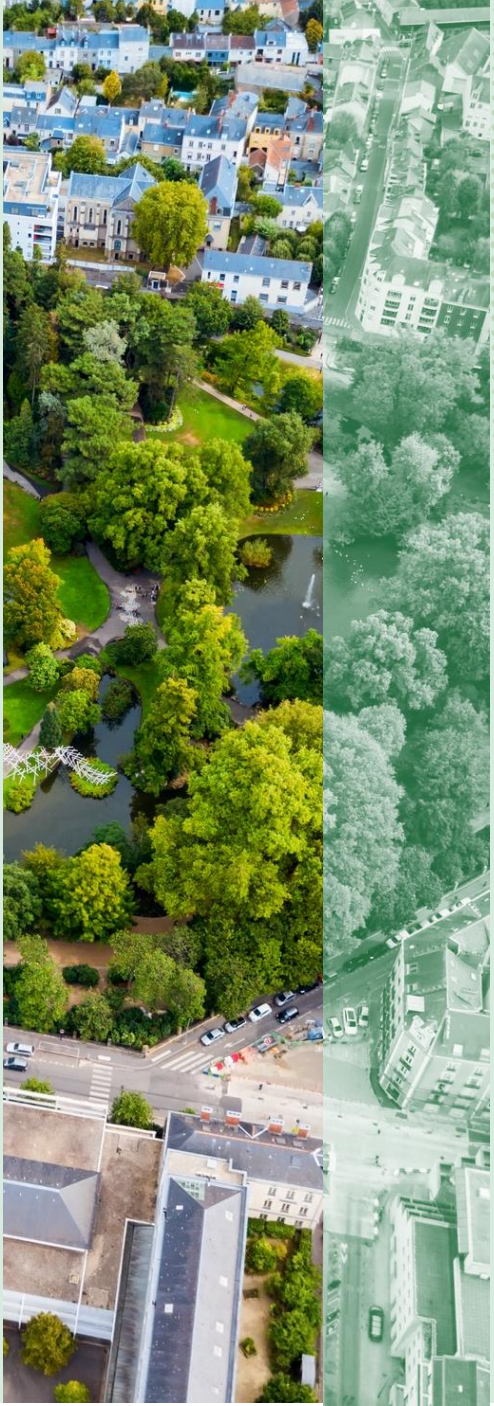
- Prevention and management of natural risks (flood risk, terrestrial natural hazards), assessment of territorial vulnerability, and risk awareness
- National Air Quality Program
- Assessment of the impacts of noise and vibration pollution

### Preserving natural resources and biodiversity

- Integrated urban water management strategies, and sustainable management of hydrosystems
- Nature in cities, urban cooling areas, ecological networks and habitats, soil de-sealing, biodiversity and infrastructure

### Reducing the environmental impact of energy and construction materials

- Circular economy of construction materials, decarbonization of infrastructure, preservation of resources
- Energy transition, development of renewable energies and territorial energy and climate strategies



# ENVIRONMENT & RISKS

*They trusted us*



Martinique (972)

## Identification of offshore renewable energy sources

As part of the energy transition and the development of maritime potential, Cerema mapped offshore renewable energy resources, analysed technical, environmental and regulatory constraints, identified suitable areas, and proposed development scenarios compatible with uses and ecosystems.

Toulon Provence Méditerranée Metropolis(83)

## Integration of urban overheating in development projects

Cerema supported the metropolis in its approach to climate change adaptation and improving the living environment. The teams diagnosed urban heat islands, identified measures to mitigate overheating, integrated these issues into planning documents, and proposed operational tools for development stakeholders.

Convergence Garonne Intermunicipal Authority

## Study of flood risk due to surface runoff

In response to the increasing risk linked to intense rainfall, Cerema supported the intermunicipal authority in an innovative study aimed at producing detailed mapping of runoff risk, cross-analysing risk areas with territorial stakes, and defining clear regulatory zoning and adapted planning rules to better guide future development.



# ENVIRONMENT & RISKS

## LCZ

National mapping of urban heat islands

## AGIRISK

A diagnostic and monitoring tool for assessing territorial vulnerability to flooding

## SESAME

A solution for integrating trees into urban development projects, enhancing the ecosystem services of each species to adapt to local conditions

## EnRezo

National mapping of the development potential for district heating and cooling networks

## 2EC Label

A national label to develop and promote the circular economy in construction and urban development projects

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all the resources  
in this field



# SEA & COASTLINE

As the only public institution addressing the full range of **coastal, maritime and inland waterway** issues, Cerema supports the State, local authorities and companies in their projects **to control impacts** on marine and coastal environments, **adapt to coastline retreat**, and improve the performance and **safety of maritime and inland waterway transport**

## Themes

### Adaptation of coastal territories to climate change

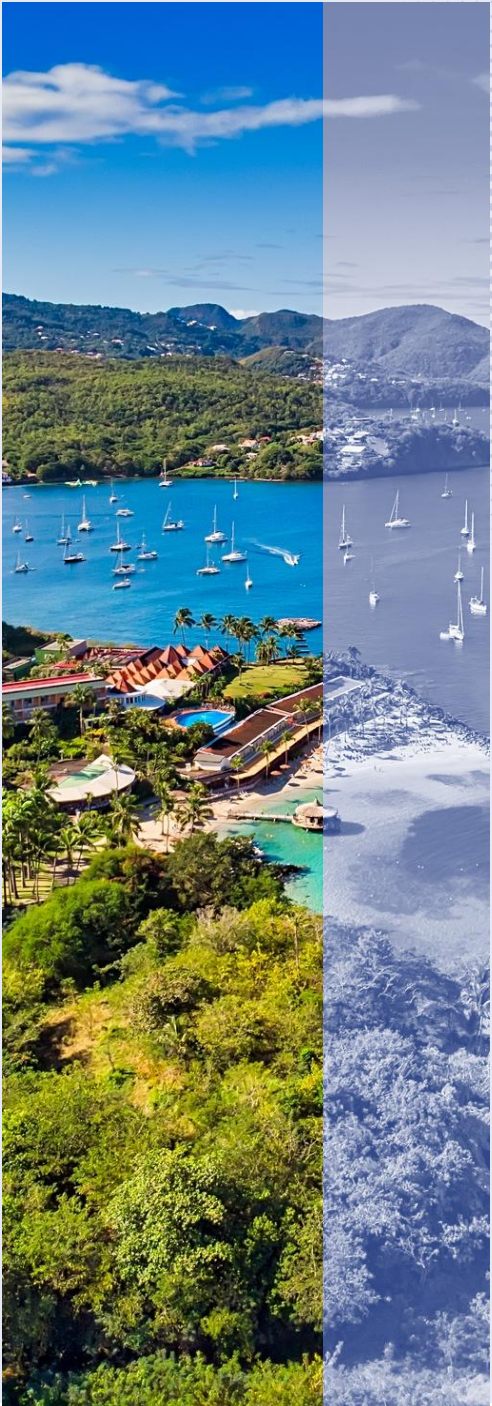
- Support for coastal knowledge and monitoring, resilient projects, and shoreline management

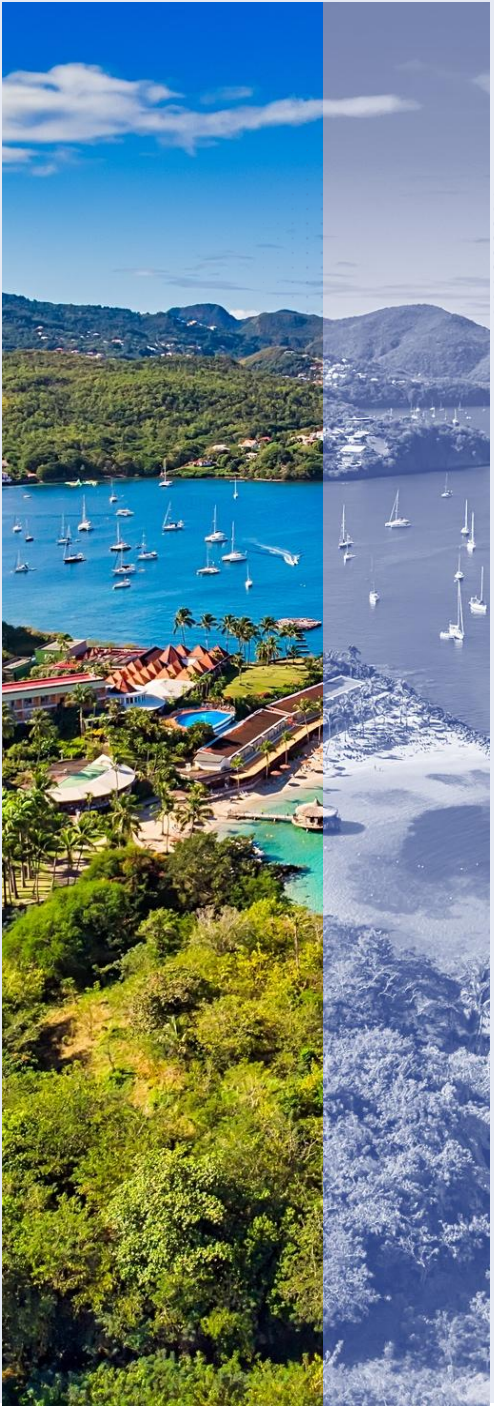
### Impacts of activities and developments on the Coast and Marine environment

### Navigation and Marine Safety

- Navigation support, observation, analysis and monitoring of maritime traffic

### Ecological transition of Ports and inland waterways





# SEA & COASTLINE

*They trusted us*



Hérault Méditerranée Agglomération Community

## Preparing for the future and testing innovative solutions for coastal areas

As part of an approach to adapt to climate and environmental challenges, Cerema supported the local authority in identifying and testing innovative solutions for coastal management, evaluating their effectiveness, supporting local stakeholders, and laying the foundations for a long-term strategic framework for coastal management.

Master plan for dredging operations and territorial recovery of sediments

## Towards sustainable and territorialised sediment management

As part of a sustainable sediment management approach and the optimization of local resources, Cerema developed a master plan to identify dredging needs, determine reuse pathways, plan operations at the territorial scale, and integrate all environmental, technical and regulatory considerations.

Upper Rhine Inland ports (European project)

## Challenges and adaptation solutions to climate change

In a context of climate warming and extreme events, Cerema is involved in the Interreg CRANE programme to identify climate hazards and risks likely to affect ports, analyze vulnerabilities, develop a shared adaptation strategy, and mobilize the relevant stakeholders.



# SEA & COASTLINE

## GéoLittoral

An overview of public policies related to the sea and coastal areas.

## Reports and shoreline projection maps

Produced by Cerema, they help to better understand coastal erosion across mainland France and overseas territories.

## Candhis

The national coastal wave monitoring observatory.

## Offshore wind in France

This website presents the status of offshore wind development in France. It centralizes information related to each project: technical characteristics, consultation documents, and studies carried out on the sites.

*Learn more*

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# Project Highlights

International level

National level

# SOME EXAMPLES AT INTERNATIONAL LEVEL

## Among the 50 European projects currently underway:

- Partner in the **NetZeroCities project**, as part of the Horizon Europe programme's "**Smart and Carbon-Neutral Cities by 2030**" initiative
- Project leader for the **Mission Adaptation Hub project** funded by Horizon Europe (2025)
- Participation in the RESIST project – Regions for climate change RESilience through innovation, Science and Technology – which aims to test ways of adapting to the impacts of climate change by mobilising 56 organisations from 14 countries (2023–2028)
- Participation in the European Commission's Time2Adapt project - **Europe Urban Initiative - Urban Innovative Actions** -, which aims to adapt the region to climate change (2024-2027)

## Among the international projects currently underway:

- Technical assistance mission to Costa Rica on **eco-neighbourhoods and sustainable construction** for Expertise France (2022–2024)
- Project management assistance mission as part of the EICPAD project (Expertise, Engineering and Skills for Sustainable Development Policies in French-speaking Territories) I (2021–2022) and II (2023–2024)
- Technical assistance for the development of **AI-Ula in Saudi Arabia (smart city)**

- *Participation in the Eco-Miasto project launched by the French Embassy in Poland*
- *Co-facilitation of national, European and international standardisation efforts, particularly the revision of ISO 37101 on sustainable and smart cities*

# SOME EXAMPLES AT INTERNATIONAL LEVEL



## *Focus on : Technical assistance in Costa Rica on Eco-Neighbourhoods and Sustainable Construction (2022-2024)*

- **Objectives:** Implementation of the National Decarbonisation Plan (PND) via the second public policy loan (PrPP) of €150 million granted by the AFD in the sustainable construction and waste management sectors.
- **Cerema's role:**
  - Presentation of the French Eco-Neighbourhoods Reference Framework, the EcoQ Label process and urban planning in France;
  - Organisation of exchanges with stakeholders on planning tools in France;
  - Organisation of missions to Costa Rica to identify data and stakeholders to be mobilised;
  - Organisation of the visit of the Costa Rican delegation to France (June 2023);
  - Support for the development of the EcoBarrio guide adapted to local needs.

# SOME EXAMPLES AT INTERNATIONAL LEVEL

## Focus on : Mission for Expertise France: Twinning in Morocco – Support for strengthening the energy sector (2019-2020)



### Cerema's role :

- **Assessment of thermal regulations in construction in Morocco.**
- **Training courses :**
  - Break down energy policy statistics and indicators at regional level;
  - Provide training in monitoring energy efficiency programmes and projects (energy statistics, energy efficiency, development of renewable energies);
  - Support the mapping of sites that could host renewable energy production facilities based on concrete projects.
- **Energy performance contracts (EPC)**
  - Present feedback on the implementation of energy performance contracts in France and various European countries ;
  - Assist the MEMDD in developing energy performance contract (EPC) models ;
  - Contribute to the discussions of the MEMDD and its partners on the development of energy service companies in Morocco and the capacity building of public (state and local authorities) and private project owners for the implementation of EPCs.

# SOME EXAMPLES AT INTERNATIONAL LEVEL

**Focus on : Technical cooperation in Egypt aimed at improving the urban transport system, funded by the Agence française de développement (2017-2020)**

## Objectives :

- Define an action plan and monitor the implementation of financing mechanisms (excluding pricing).
- Improve metro operation and maintenance to reduce costs.
- Set up management and training programmes for metro staff to increase their skills.
- Analyse the pricing systems in place on the Cairo and Alexandria metros.
- Analyse the functioning and efficiency of the recently created Greater Cairo Transport Regulatory Authority (GCTRA).
- Define an action plan to improve the design of Cairo metro stations and the Alexandria tramway to enhance their commercial operation, particularly in terms of advertising.
- Review and improve the design of two major intermodal stations on metro line 3.



# SOME EXAMPLES AT INTERNATIONAL LEVEL

Focus on : EXPERTISES.TERRITOIRES, THE ALLIANCE OF DIGITAL AND TERRITORIES



## ASSESSMENT AND METHOD

- Territorial isolation in tackling ecological transition & climate adaptation
- 40+ internal and external interviews conducted
- Need for shared solutions and collaborative spaces
- Cross-sector expertise connection
- User-centered approach: listen, prototype, test

## AMBITION

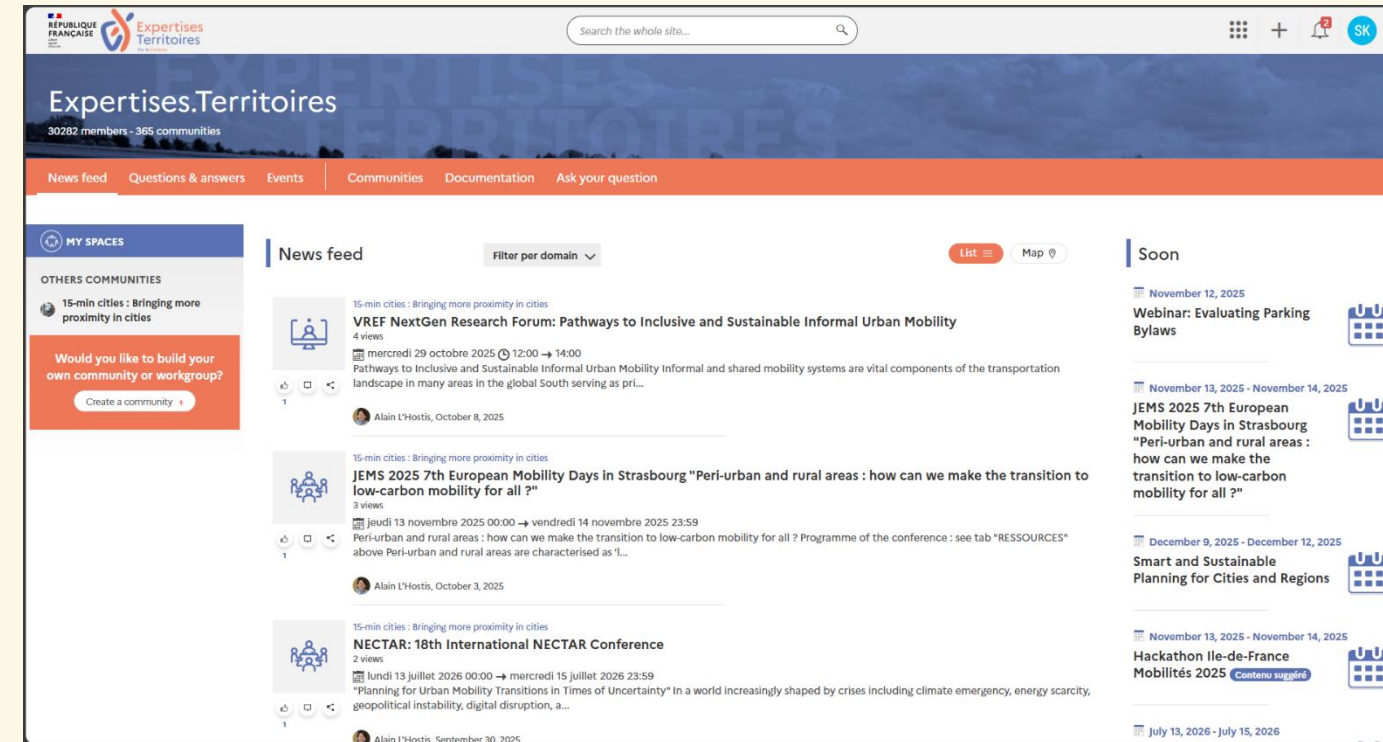
Lead the national expertise community on ecological transition and climate adaptation

How?

- Build a shared digital commons
- Engage stakeholders at all levels
- Provide scalable, white-label solutions
- Ensure continuous user-centered support

More than 30 000 actives members all over the world

More than 300 community's local, national and internationals levels



# SOME EXAMPLES AT INTERNATIONAL LEVEL

## Focus on : SMART SUSTAINABLE CITIES

### ISO 37101 Sustainable cities and communities :

Revision process facilitation (ISO TC 268, WG Management System Standard)

Main objectives :

- Integrate local & global environmental limits into territorial development
- Improve usability and scalability (AI, digital twins)
- Align with other management system standards (quality, environment, carbon, energy)

### Net Zero Cities European programme :

Member of the Monitoring, Reporting and Verification Group

Main objectives :

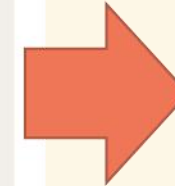
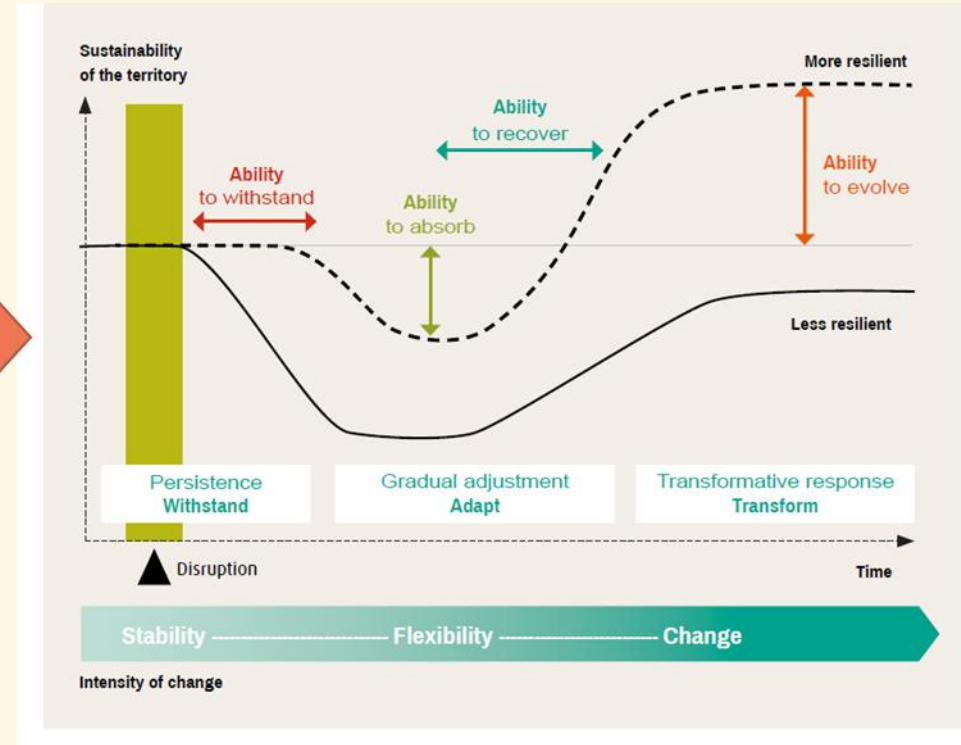
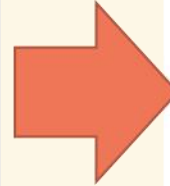
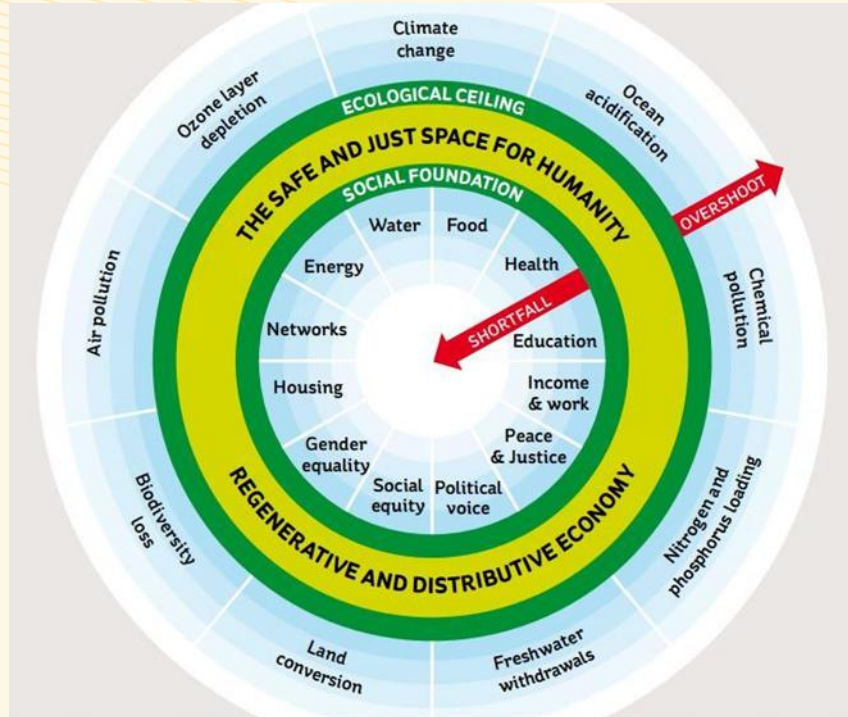
- Collection and analyze of best practices
- Shaping of Impact Pathways
- Raising frugal AI in sustainability targets (Carbon Attenuation, Biodiversity, water,
- Preparing the setting of the sustainability layer of Local Digital Twins



# SOME EXAMPLES AT NATIONAL LEVEL

## Focus on : THE RESILIENCE COMPASS

From shocks and stresses : choose a path to resilience



**NEED TO OVERCOME CURRENT BARRIERS AND OBSTACLES**

Balance between climate change impacts, natural resources depletion and basic social needs

Diagram on resilience capacities

# SOME EXAMPLES AT NATIONAL LEVEL

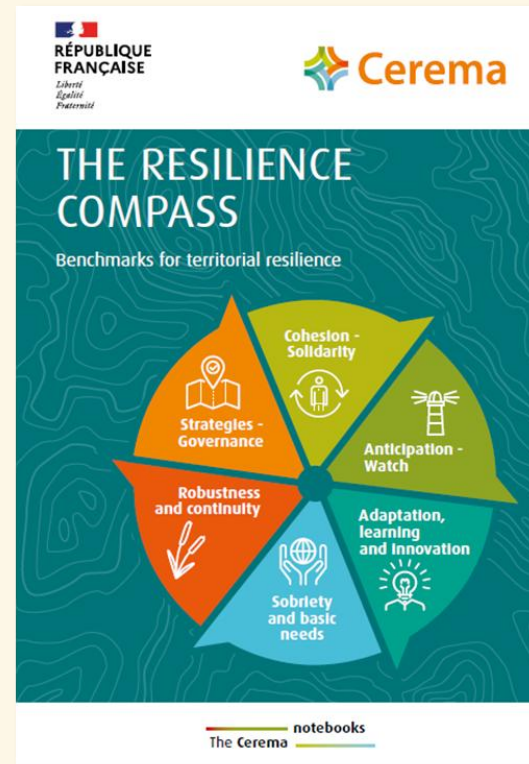
## Focus on : THE RESILIENCE COMPASS

A decision making tool for local authorities - Engage multi-stakeholders cooperation to facilitate actions

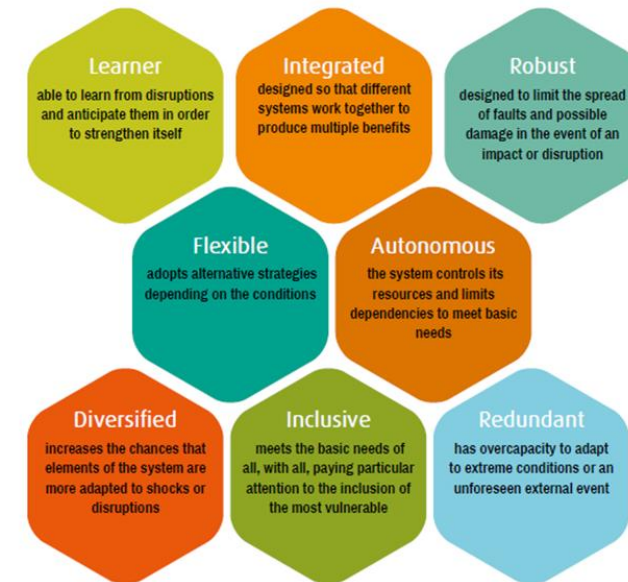
### A FRAMEWORK FOR ASSESSMENT



### A GUIDEBOOK



### EXAMPLES OF DRIVERS FOR ACTIONS



<https://doc.cerema.fr/Default/doc/SYRACUSE/21542>

# SOME EXAMPLES AT NATIONAL LEVEL



An innovative mapping tool for analysis and decision support to help local authorities achieve land use efficiency in mainland France and overseas territories



# SOME EXAMPLES AT NATIONAL LEVEL



## The National land portal economy

A collaborative tool that lists and classifies available commercial land throughout the country in order to connect businesses seeking to set up operations with regions offering land.



# PAVIN Extreme Weather

a simulation facility for adverse weather conditions



Thank you!

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