French multi-level governance of climate change adaptation

The facilitating role of the French Environment and Energy Management Agency (ADEME)

Céline Phillips

Plan

- The Geography and Climate of France
- French Multilevel Governance of Climate Change Adaptation and Mitigation
- ADEME's facilitating role
  - Facilitating the Development and Transfer of Knowledge
  - Building Capacity at the Local Level

ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

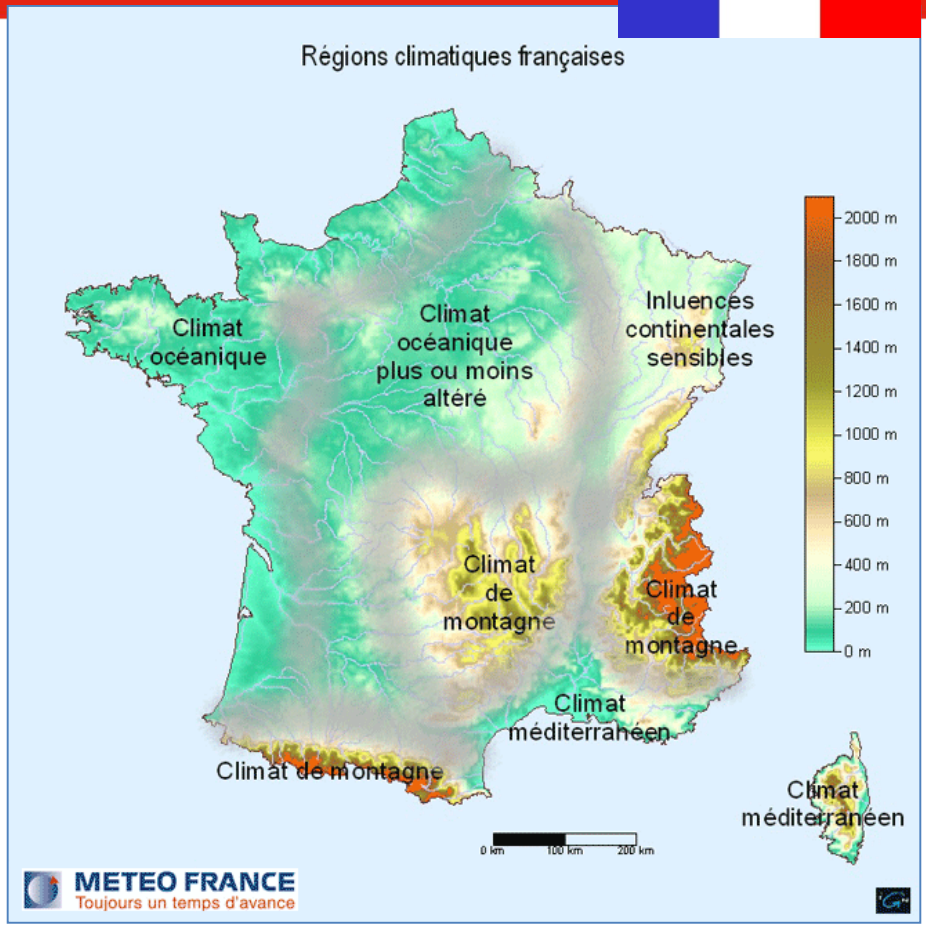
The Geography and Climate of France

ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

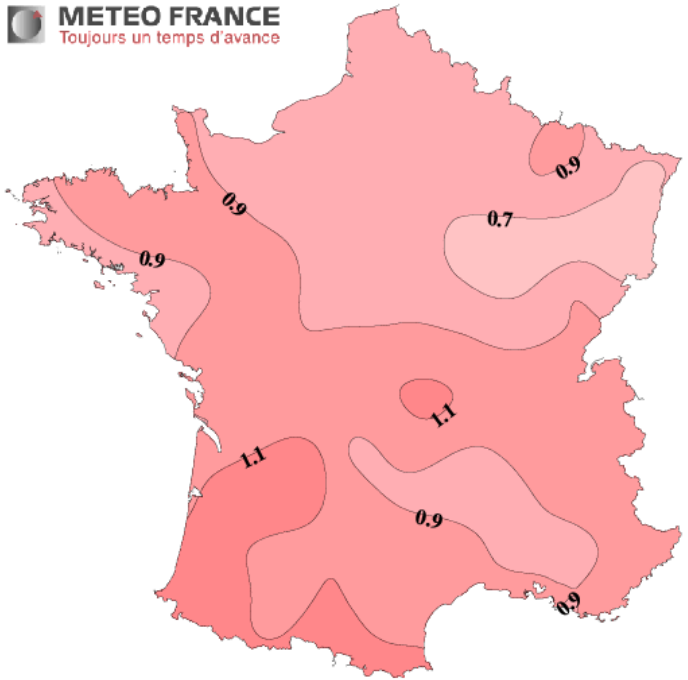
Population: 66 million

Area: 551 600 km^2
(675 000 km^2 including overseas territories)

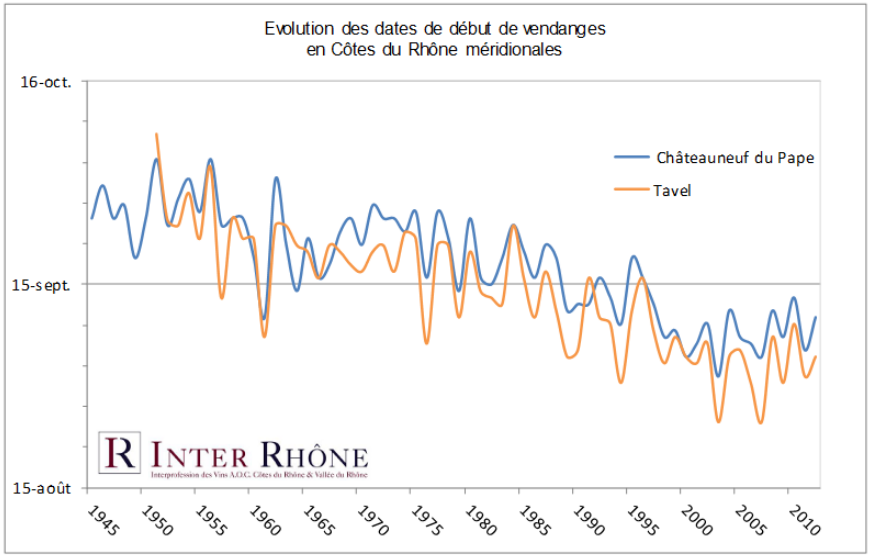
Summit: 4 810 m (Mont Blanc)



Some impacts of climate change can already be observered

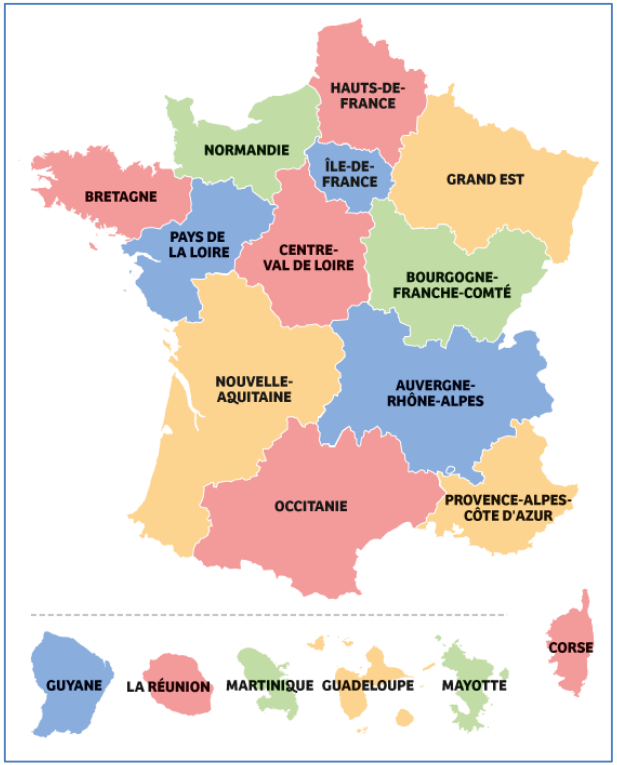


+1°C increase observered 1901 – 2000



Impact : earlier grape harvests

Multilevel Governance of Climate Change Adaptation and Mitigation



Legal requirements, 2010

- Regional level
  - Scheme pour planning, sustainable développement and territorial equality
- Local level
  - Climate Air Energie Plan: all inter-municipalities > 20 000 inhabitants
  - Local Urban Plan
  - Territorial coherence scheme

Multi-level Governance

- European - National - Regional - Local

Multilevel Governance of Climate Change Adaptation and Mitigation

ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

National Climate Plan (axis 19 national adaptation plan)

National Low-Carbon Strategy

National Adaptation Plan

Ministries

Regional Land Planning and Sustainable Development Framework
(Schéma Régional d'Aménagement et du Développement Durable du Territoire SRADDT)

- Climate change vulnerability analysis
- Framework for climate change adaptation

Regional governments and representatives of the state.

Local Operational Climate Plan
(Plan Climat Air Energie Territorial, PCAET)

Local planning documents

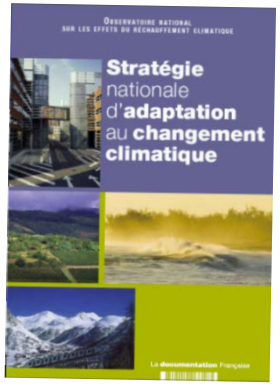
Territorial Coherence Scheme
(SCoT)

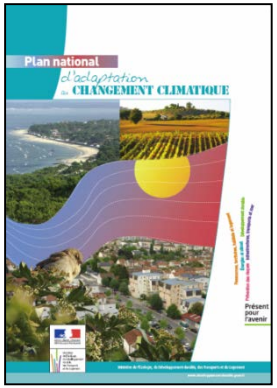
Local Urban Plan
(PLU)

Regions, departments, urban communities , agglomerations, communes, communities of communes over 20 000 inhabitants

Climate Change Adaptation Planning at the National Level

- 2006: National Climate Change Adaptation Strategy
- 2009 & 2010 : “Grenelle” laws
  - Formal framework for the multilevel governance
  - Legal requirements for subnational governments
- 2011: National Climate Change Adaptation Plan (2011-15)
  - Direct mobilisation of sectorial ministries
  - Priorities:
    - knowledge development
    - “no-regret” adaptation measures
- 2015 : Evaluation of the first National Climate Change Adaptation Plan
- Preparation of a 2nd National Plan underway (Adoption forseen July 2018)
  - Overarching objective
    - Be adapted to the regional climate in mainland France and its overseas territories by the middle of the 21st century, in line with a worldwide temperature rise of +1,5 / 2°C compared to the pre-industrial conditions.
  - New priorities
    - Sub-national adaptation (territorialisation)
    - Overseas territories
    - Nature based approaches
    - Economic sectors

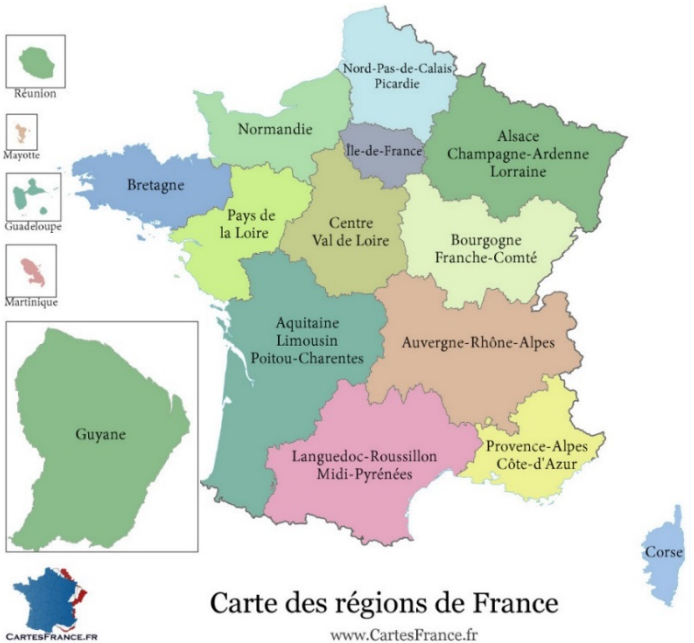




The facilitating role of the French Environment and Energy Management Agency (ADEME)

The French Environment and Energy Management Agency ADEME at a glance

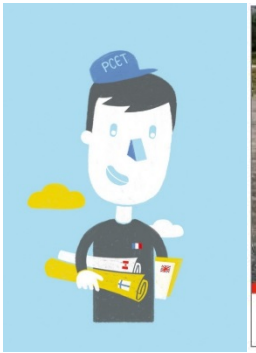
- Public Agency under the authority of
  - Ministry for an Ecological and Solidary Transition
  - Ministry for Higher Education, Research and Innovation
- Mission
  - encouraging, supervising, coordinating, facilitating and undertaking operations with the aim of protecting the environment and managing energy
  - ADEME funds projects, from research to implementation
- Policy areas
  - waste management ; soil conservation ; energy efficiency ; renewable energy ; raw materials savings ; air quality ; noise abatement ; circular energy transition ; food wastage abatement
- Budget
  - 2018 operating budget : 540 M€
  - 2010-2020: 4,5 Billion € for the « Investment for the Future » programme
- Staff
  - ~ 1000
  - 3 central sites (~50%), 17 regional directions, 3 representations in overseas territories, office in Brussels (European Union)
- Mandate to facilitate Climate Change Adaptation since 2009
  - Strategy for climate change adaptation : 2010
  - Founding principles:
    - Mainstreaming and embedding of adaptation
    - **Synergy with, and co-benefits for mitigation**



Facilitating Climate Change Adaptation

Support from ADEME's national offices

- Development of the knowledge base and transfer to decision-makers
  - funding of research
  - publication of technical documents
  - seminars
- Capacity Building
  - Reviews of international experience
  - Impact'Climat and Objectif'Climat tools
  - Training sessions
- National conferences
- National Adaptation Competition "Trophées…"



Support from ADEME's regional offices

- Support for regional authorities
- Animation of infra-regional networks of local authorities
- Funding of local projects

TROPHÉES 2016
ADAPTATION
AU CHANGEMENT
CLIMATIQUE &
TERRITOIRES

Facilitating research

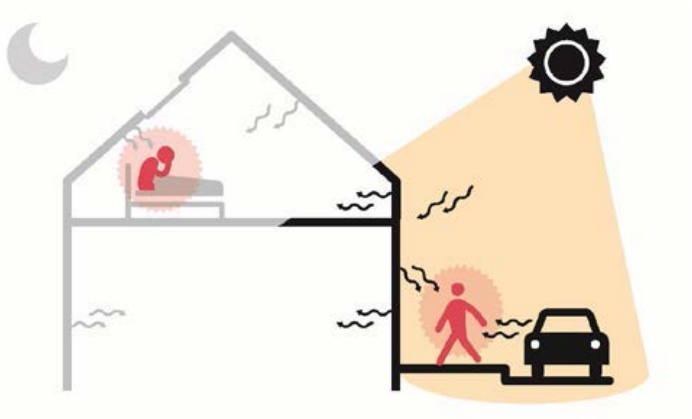
- Integrating climate change adaptation into ADEME's existing research programmes addressing mitigation and other environmental issues
  - Doctoral research programme
  - Buildings: « Bâtiments responsables »
  - Urban planning tools : « MODEVAL URBA »
  - Agriculture: GRAINE « Gérer, produire et valoriser les biomasses : une bioéconomie au service de la transition écologique et énergétique »
  - Social and human sciences: « Transitions écologiques, économiques et sociales »

- E.g. Cooling
  - The challenge: develop cooling techniques
    - **Zero or low greenhouse gas emissions;**
    - Low environmental impact (pollution, noise, anthropogenic heat)
  - in buildings (CLIMSOL, Clim du futur…), vehicles, urban areas

- Support to the Ministry's research programme (Gestion des Impacts du Changement Climatique, GICC)
  - Steering committee, scientific committee
  - Funding of projects

Example : Urban Cooling

- Analysis of the local Urban Heat Phenomenon: methodological developments funded by ADEME
  - 2 theses, DIACLIMAP research project
- Urban Cooling Solutions: Comparison of the
  - 2012 call for proposals « Evaluation of Urban cooling solutions »
  - 4 projects funded: Epicure, TERRACES, IFU, EVA
- 2017: Analysis of the state of the art and seminar
- 2019: Call for proposals, MODEVAL URBA programme



Facilitating the Development and Transfer of Knowledge

Example : Agriculture (1/2)

- Publication of the results of the Climator research project (2010)
  - INRA – ANR 2007-2010
  - Presentation of scientific knowledge on the impacts of climate change on French crops and identification of adaptation solutions

- Contribution to the AFClim foresight project (2012)
  - CEP – Centre Etudes et prospective, of the Ministry in charge of agriculture
  - Analysis of the possible climate change adaptation strategies for agriculture and forests in metropolitan France on the basis of 15 case studies

- Funding and expertise for the Climate Action Network publication « Climate Change Adaptation of agriculture – local experience » (2014)

  Réseau Action Climat « Adaptation de l'agriculture aux changements climatiques – Recueil d'expériences territoriales »
  - Synthesis of key knowledge on impacts and challenges, 5 case studies

Example: Agriculture (2/2)

Funding of regional projects ORACLE and Agriaccept

- Led by the regional chambers of agriculture (1st phase of ORACLE in Poitou-Charentes, 2012)
- Objective: local data on climate change and its impacts on the agriculture of the region, with a view to informing adaptation strategies.
- ORACLE : trends in observered climate change and agroclimatic in 6 regions
- Agriaccept : statistical climate change projections (eg. 2040) in 4 regions

European Project LIFE Agriadapt

- 2017 – 2020
- Financial support for the French participant, Solagro
- Development and application of a vulnerability analysis tool for agriculture

Agro-food value chains

- 2018-2019
- Threats and opportunities due to climate chance for the French agro-food chains? Development of a methodology and application with 3 French agro-food value chains.

Developing Know-How at the Local Level

ADEME's key messages

Impact Analysis
- Adopt a global approach
- Use participative methods

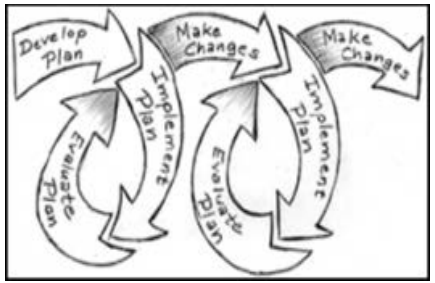
Choosing adaptation actions
- Combine different approaches
  - « grey », « green » and « soft » measures
  - sectorial and transversal
- Use multi-criteria evaluation methods

Planning
- Adjustment and Transformation
- Dynamic planning methods (e.g. Pathways)

Implementation
- Adaptive management
- Mainstreaming and Embedding

ZAC Luciline Rives de Seine, Rouen

Parc Ougadougou, Grenoble



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Impact Assessment Tool

Objective

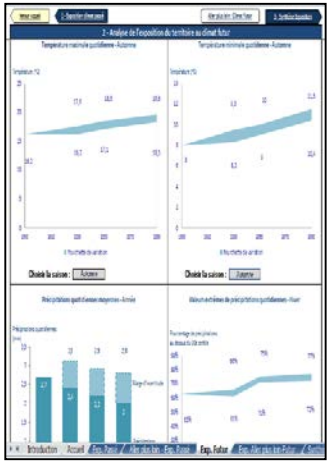
- identification of local priorities for climate change adaptation

Approach

- Use the existing knowledge base
- Global approach : qualitative analysis of **all** sectors of activity and climate parameters
- Guidelines on communicating the results and engaging the decision-makers

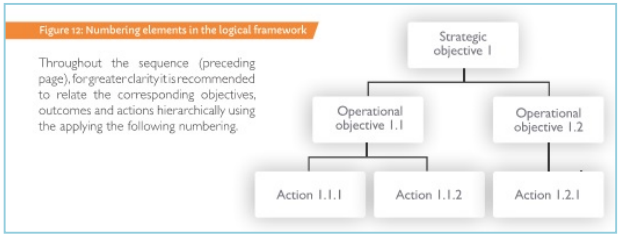
Methodology

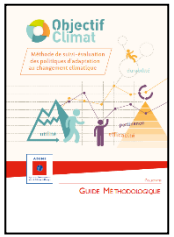
- Exposure to climate change
  - Observed and future trends and extremes : national climate change projections and natural disaster data
- Sensitivity to climate change

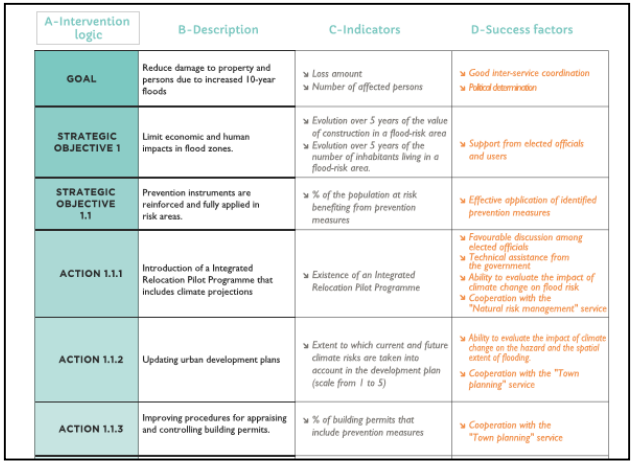


Planning, M & E Tool

- Objectives
  - design : strategy, action plan, monitoring and evaluation system
- Approaches
  - problem and solutions trees
  - logical framework
  - identifying success factors
  - monotoring
  - evaluation
- Current developments
  - Choosing the best adaptation actions
  - Planning the actions in time (pathways)



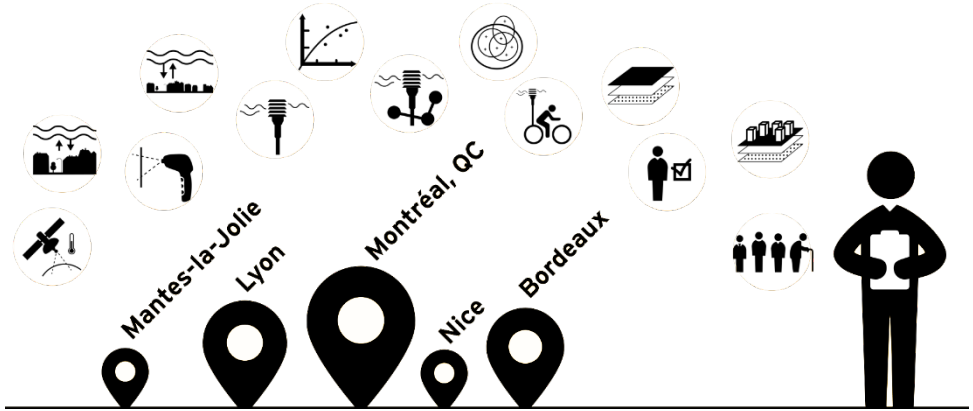




A-Intervention logic	B-Description	C-Indicators	D-Success factors
GOAL	Reduce damage to property and persons due to increased 10-year floods	↘ Loss amount ↘ Number of affected persons	↘ Good inter-service coordination ↘ Political determination
STRATEGIC OBJECTIVE 1	Limit economic and human impacts in flood zones.	↘ Evolution over 5 years of the value of construction in a flood-risk area ↘ Evolution over 5 years of the number of inhabitants living in a flood-risk area.	↘ Support from elected officials and users
STRATEGIC OBJECTIVE 1.1	Prevention instruments are reinforced and fully applied in risk areas.	↘ % of the population at risk benefiting from prevention measures	↘ Effective application of identified prevention measures
ACTION 1.1.1	Introduction of a Integrated Relocation Pilot Programme that includes climate projections	↘ Existence of an Integrated Relocation Pilot Programme	↘ Favourable discussion among elected officials ↘ Technical assistance from the government ↘ Ability to evaluate the impact of climate change on flood risk ↘ Cooperation with the "Natural risk management" service
ACTION 1.1.2	Updating urban development plans	↘ Extent to which current and future climate risks are taken into account in the development plan (scale from 1 to 5)	↘ Ability to evaluate the impact of climate change on the hazard and the spatial extent of flooding ↘ Cooperation with the "Town planning" service
ACTION 1.1.3	Improving procedures for appraising and controlling building permits.	↘ % of building permits that include prevention measures	↘ Cooperation with the "Town planning" service

Assessment methods

- Overview of existing assessment methods which local governments can use
  - Measurements
  - Models
  - Vulnerability analysis using local data
- 5 case studies



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