



# Analysis of levers and Barriers to the implementation of adaptation STRategies to ClimaTe change

- The urban and local authorities case -

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## CONTEXT:

The scientific literature on barriers and levers to the implementation of adaptation strategies to climate change is quickly growing. Indeed, the evolution of climate variables and the changes in the intensity, duration and frequency of extreme events are pushing policy makers to question their ability to adjust urban areas to these new conditions.

Therefore, a wide range of adaptation options is available, but the barriers to their implementation are not all known and take many forms, ranging from cognitive obstacles to economic or organizational ones. In this emerging research theme, the humanities and social sciences are contributing to increase scientific knowledge and to support decision-making with new methodological and conceptual elements.

## One of the innovations: the Representativeness Weighted Indicator (RWI).

To assess the representativeness of the topics from interviews and arrange them according to their importance, the RWI was constructed for each topic from two key factors: the number of interlocutors who referred to the topic (F1) and the number of the different communities in which at least one speaker mentioned the topic (F2). The RWI is the product of these two factors divided by the number of local authorities (10):

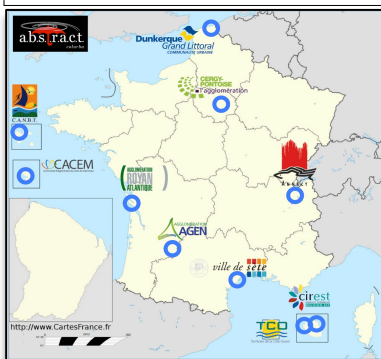
$$RWI_{(F1,F2)} = F1 * F2 / 10.$$

## OBJECTIVES:

Explore the decision-making process and the organizational dynamics underlying the implementation of adaptation strategies to climate change, based on a field study of ten French local authorities. The research aims to:

- Identify priority local socio-economic issues linked with climate change impacts;
- Identify economic, organizational and cognitive levers and barriers to the implementation of adaptation strategies;
- Identify the possible tools and/or the schemes used to implement adaptation;
- Assess the levers in consultation with stakeholders to highlight the decision-making process regarding local climate policy.

## Local authorities chosen

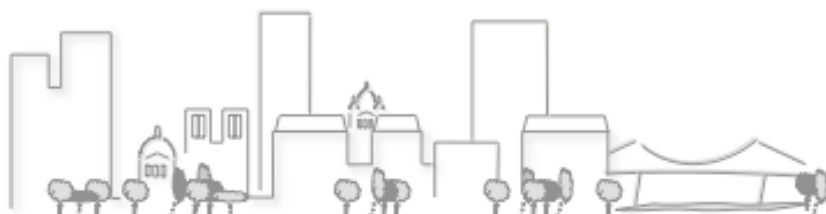


## APPROACH AND METHODOLOGY:

The project was co-built with all stakeholders and is based on 110 respondents (66 interviews, 35 workshop participants) using qualitative and lexicometric analysis.

**Selection criteria of local authorities:** 1) Actively Engaged in a Territorial Climate Energy Plan; 2) "Intermediate" size (ranging from 30,000 to 500,000 inhabitants with a regional influence and a intermediation role at territorial scale); 3) Diversity of issues (geographical, structure, socio-economic).

**Case studies and participating local authority\*:** Ville d'Annecy; Communauté Urbaine de Dunkerque; Cergy-Pontoise Agglomération; Ville de Sète; CA Royan Atlantique; Agen Agglomération; Communauté Intercommunale Réunion Est; Territoire Côte Ouest (Réunion); CA Centre de la Martinique; CA Nord Basse Terre \* (Guadeloupe).



## KEY RESULTS

### What social representation for which adaptation strategies?

The public territorial action in adaptation to climate change is not limited to actions explicitly linked to this concept: stakeholders consider an action to be part of an adaptation strategy according to the local contexts and their own interpretation. Adaptation strategies are transversal to the climatic issues of all kinds, both through a "hard" dimension (protection, planning) and a "soft" dimension (awareness, change in behaviour/practices).

### Which tools to implement adaptation?

Due to growing budget constraints, the local authorities are looking for expertise and economic and financial tools to help their decision-making processes in the implementation of adaptation strategies to climate change. Among the existing tools, SCOT and PLU are cited as powerful territorial transformation tools supporting the implementation of adaptation strategies.

### What barriers and levers to adaptation?

Barriers and levers appear at several scales (local State services, territory scale, local stakeholders and authorities) and are of different types (technical, related to available resources, governance, awareness or internal organization). Some barriers noted in the field turn out to be levers. For example, awareness to climate issues from stakeholders, noted in deficit, is recognized as an important lever to boost the development of adaptation strategies. The regulatory requirements are sometimes perceived as inappropriate to local contexts but allow in other cases to expedite the implementation of actions. Within the local authorities, the partitioning of services, pointed as a strong barrier, can be lifted by the introduction of a more horizontal organization.

Barriers ( <i>observed</i> )		Levers ( <i>potentials</i> )
Reduction of State allocations (12,8) Lack of resources at the community scale (4,8) Lack of human resources (4,2) Lack of financial resources (3,5)	Resource	Influence of the financial argument (20,7)
Inadequate regulatory requirement (8,0) Burden of administrative processes (6,3) Withdrawal of State expertise (4,0) Heterogeneity of the territory (0,9)	Technique	Regulatory requirement as a driver (13,5) Influence of the size of the local authority (4,2) Private sector as a source of innovation (2,4)
Competences overlap between local authorities (10,4) Low priority given to climate policies (9,6) Influence of the electorate mandates (5,4) Inadequate temporalities (4,8) Focus on economic policies (4,2) Territorial reorganisation (4,0) Defense of local interests (3,6)	Governance	The intercommunality as an optimal scale of governance (27,0) The intercommunality as a territorial driver (7,8) Influence of the local associations (7,7) Take into consideration the civil society (6,6) Support of the local institutional actors (5,0) Territorial reorganisation as an empowerment (2,4)
Lack of awareness from internal local authority (9,9) Lack of mobilisation from elected representatives (7,2) Lack of awareness from elected representatives (6,6) Burden of habits (6,3)	Awareness	Awareness of climate issues from elected representatives (27,0) Awareness of climate issues from internal local authority (13,5) Local authority as a driver of awareness to climate issues (4,2) Awareness of climate issues from territorial actors (2,8)
Lack of motivation and work overload (4,9) Lack of ownership of the actions (4,2) Compartmentalization of services (3,6) Communication difficulties (3,5) Lack of access to data (1,6) Lack of expertise (0,9)	Organisational	Communication and information sharing (22,0) Improve a transversal organisation (17,6) Improve a systemic approach (12,0) Ownership of the actions (11,2) Stimulate motivation by labels (7,8) Improve the internal cohesion (5,4) Stimulate Internal motivation and exemplarity (4,8) Optimise the administrative structure (4,5)

**Barriers and levers to climate change adaptation ranked by type and their RWI, indicated in parenthesis and ranging between 0 and 66.**