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# Climate assessment of local authority budgets

## Methodology guide

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Soutenu par



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The Institute for Climate Economics (**I4CE**) is a Paris-based think tank with expertise in economics and finance with the mission to support action against climate change. Through its applied research, the Institute contributes to the debate on climate-related policies. It also publishes research to support financial institutions, businesses and territories in the fight against climate change and that assists with the incorporation of climate issues into their activities and operations. **I4CE** is a registered non-profit organisation, founded by the French National Promotional Bank Caisse des Dépôts and the French Development Agency.



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# Contents

## CONTENTS

### 1. PRESENTATION OF THE BUDGET CLIMATE ASSESSMENT: USES AND LIMITATIONS

- A. Introduction: the budget climate assessment, a tool to build 3
- B. The budget climate assessment in a few words 3
- C. Why carry out an analysis of your budget's impact on the climate? 4
  - Local authorities have an important role to play in order to meet climate goals* 4
  - To provide quick ways of visualising climate issues during the important process of voting on the budget* 4
  - A tool that provides further co-benefits* 5
- D. Answers to frequently asked questions 5
- E. A method co-constructed by I4CE and 5 local authorities 6
  - The first climate assessment method designed for local authorities* 6
  - 2 methodology guides have been created: one on climate change mitigation, and the other on adapting to climate change* 7
- F. The limitations of a budget climate assessment 7
  - Limitations related to looking solely through a climate lens* 7
  - Limitations inherent to using a budgetary approach* 7
  - An assessment that does not aim at (nor permit) comparing local authorities* 7
  - A methodology that is intended to be expanded and improved year on year* 7

### 2. PROCESS: HOW TO ASSESS THE BUDGET OF A LOCAL AUTHORITY FROM A CLIMATE ANGLE?

- Preamble: take the approach to the top level of management 8
- Five principles 8
- Principle stages of analysis 9
- A. Defining the scope: including supplementary budgets and outsourced public service contracts in the scope of analysis 10
  - In practice: how to define the scope of analysis?* 11
    - 1. Choosing the budgets 11
    - 2. Format of budgetary lines 12
    - 3. Level of aggregation 12
    - 4. Threshold for analysis 12
    - 5. Consolidating the budget 12

### B. Mitigation methodology guide: general principles 14

- The climate categories: a five-colour palette* 14
- The decision tree* 15
- A benchmark: France's path to carbon neutrality* 16
- Practical guide to the budget mitigation analysis* 16
  - Overview of the process 17
  - Overview of the process: detailed stages to assess the budget from a climate perspective 18
  - Stage 1: reviewing budget lines by 'accounting reference' using M57 nomenclature 19
  - Stage 2: reviewing budget lines by 'budget function' using M57 nomenclature 20
  - Stage 3: Extrabudgetary information needed analysis 21
  - Stage 4: Reviewing the lines 21
  - Stage 5: Evaluating the lines 'to analyse' using the taxonomy 21
  - Stage 6: conducting supplementary cross-sectional analysis 26

### C. Adaptation methodology guide: general principles 27

### D. Results and follow-up to be given to the budget climate assessment 31

- The results of the budget climate assessment* 31
- Presenting the results 31
- Key points for presenting the results* 32
- Do 32
- Don't 32
- Repeat the exercise year on year* 32

## BIBLIOGRAPHY

33

# 1. Presentation of the budget climate assessment: uses and limitations

## A. Introduction: the budget climate assessment, a tool to build

The vote on the budget is a moment when a local authority or State clearly demonstrates its policy. This is an important opportunity for climate action. Votes are cast on expenditure that can have a positive impact on the climate if it represents measures for mitigation, or a negative role if it directly or indirectly supports the use of fossil energies. However, the impact of expenditure on the climate is not always easy to determine in advance. It therefore seems necessary to carry out a climate assessment of the budget in order to identify these impacts and support discussions that take place when the budget is being made and voted on each year.

The essential role of the budget-making process for climate action has recently been recognised by the French state, which in 2019 tasked the General Inspectorate of Finance (IGF) and the General Council for Ecology and Sustainable Development (CGEDD) with assessing the state budget from an environmental perspective (Alexandre *et al.*, 2019). The aim of this project was to look at each line of the budget through the lens of its impact on the climate, in order to clearly identify which expenditure items have a significant influence on emissions, both up and down. This report was completed in late 2019, and the Ministers of Public Action and Accounts, the Ecological Transition, and the Economy, represented by Gérald Darmanin, committed to making this environmental budget exercise happen on an ongoing basis from 2020. I4CE carried out a similar exercise in parallel, providing the first independent assessment of the state budget (Fetet, Perrier and Postic, 2019).

At the same time, several local authorities were thinking about how to determine the 'green share' of their budget in order to support their climate plan, commit to issuing green bonds, or in the interests of transparency and coherence. Some started to carry out such work internally, and showed an interest in sharing their findings with other local authorities and drawing on the expertise of I4CE in this area. Noting this interest in sharing knowledge and resources led to the idea of designing a shared framework for local authorities.

## B. The budget climate assessment in a few words

The aim of a budget climate assessment is to examine the **impact on the climate of all expenditure** included in the budget of a local authority. It consists of an analysis of the budget line by line, **based on a list – or taxonomy – of actions** that are rated highly favourable, favourable, neutral or unfavourable for the climate. The results provide a better understanding of the coherence of expenditure with reaching climate goals, so as to make enlightened budget decisions.

The current method co-constructed by I4CE and partners addresses climate issues. It could be extended to other environmental (or even social) concerns by experts in those fields.

### MITIGATION ISSUES

Fighting against climate change by cutting greenhouse gas emissions and increasing carbon storage

### ADAPTATION ISSUES

Adjusting to the current or expected climate and its consequences

*Side note: This budget climate assessment exercise must not be confused with other exercises that have different goals, namely:*

- Setting a 'carbon budget', or a limit on greenhouse gas emissions (in tonnes of CO<sub>2</sub>) in a region in a given timeframe;
- Setting a 'climate budget', or calculating the budget (in euros) that represents actions planned by a local authority solely as part of its climate policy.

This budget climate assessment exercise cannot be used to compare the efforts (or results) of different local authorities.

## C. Why carry out an analysis of your budget's impact on the climate?

### Local authorities have an important role to play in order to meet climate goals

The role played by local authorities will be key to meeting climate goals in France. With regard to climate change mitigation, *i.e.* reducing greenhouse gas (GHG) emissions, roughly 4 out of 5 elements of the French strategy require the engagement of territories due to the powers that are assigned to them (National Low-Carbon Strategy (SNBC), March 2020, Minister of the Ecological and Solidarity Transition), in the fields of construction, transport, urban planning and development. Likewise, many aspects of the French national climate change adaptation plan (PNACC) require the active involvement of local authorities.

### To provide quick ways of visualising climate issues during the important process of voting on the budget

Carrying out the actions set out in climate strategies (for example, the climate air and energy action plan (PCAET, *Plan Climat Air Energie Territorial*) and the regional scheme on sustainable development (SRADDET)) requires considerable expenditure for local authorities, both in investment and operations, at different points in the budget. However, some expenditure should be cut or transformed to be in line with climate objectives.

Creating and then voting on the budget are key milestones that clearly demonstrate the climate policy of a local authority. Carrying out an analysis of a budget's impact on the climate helps supplement budget debates with elements that enable the issues to be quickly understood. It is when decisions are being made on future expenditure that it is possible to ask questions and direct expenditure towards the climate transition as much as possible.

## HAVING A BUDGET CLIMATE ASSESSMENT ENABLES ELECTED REPRESENTATIVES AND LOCAL AUTHORITY SERVICES TO:



### Identify and understand

which expenditure is beneficial for the climate, and which has a negative impact



### Assess the alignment

of expenditure with climate goals



### Analyse opportunities

for redirecting expenditure in alignment with climate goals

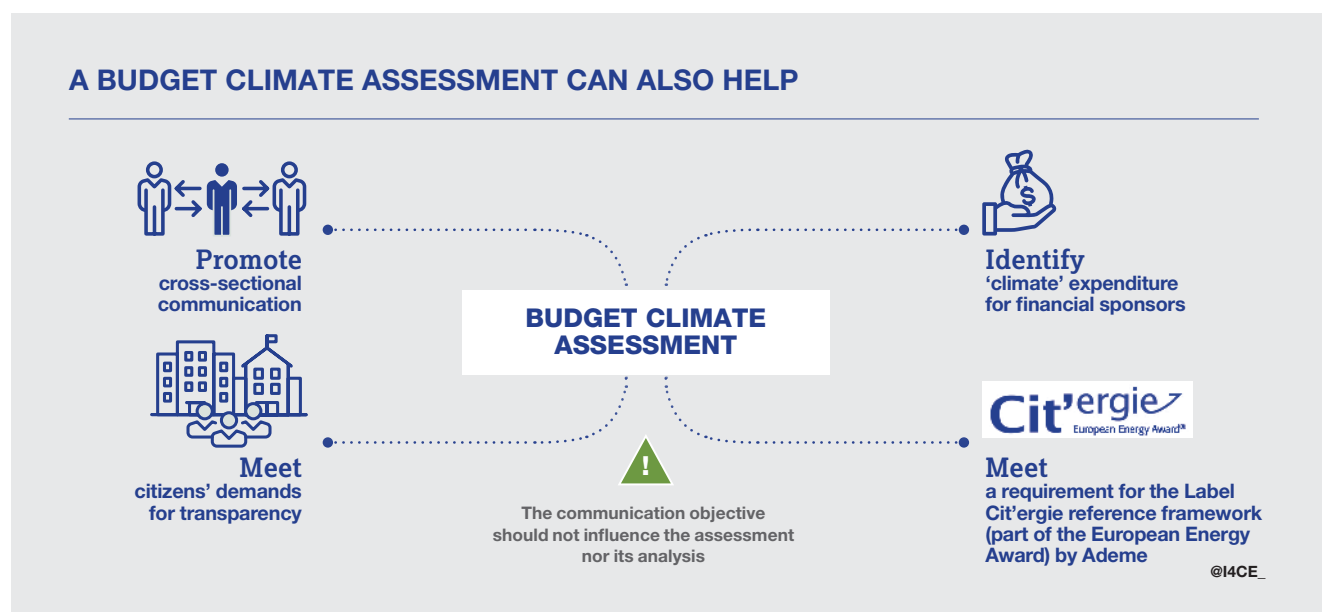


### Monitor developments

year on year

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## A tool that provides further co-benefits



The aim of this project is to establish a framework to assess the climate impact of local authority budgets that is transparent, public and widely shared across different networks in France, but also potentially on a European level, or even globally.

All expenditure included in the budget is closely examined from a climate perspective. Budgetary revenues are beyond the scope of this assessment. The assessment can be used

within other contexts, for example the Cit'ergie label or the Covenant of Mayors, which asks members to identify expenditure dedicated to action related to climate air and energy action plans (PCAET). It can also be helpful in initiating debate within the local authorities, among leadership, operations departments and elected representatives, when data is collected and categorised.

## D. Answers to frequently asked questions

### ZOOM 1

**This budget climate assessment exercise must not be confused with other exercises that have different goals, namely:**

- Setting a 'carbon budget', or a limit on greenhouse gas emissions (in tonnes of CO<sub>2</sub>) in a region in a given time-frame;
- Setting a 'climate budget', or calculating the budget (in euros) that represents actions planned by a local authority solely as part of its climate policy.

### ZOOM 2

**A method that can be extended to other environmental and social issues**

Currently, the method only assesses climate issues, which fall under I4CE's scope of expertise. Other sustainability challenges could be assessed in the same way, and I4CE encourages experts in those domains to propose variations of the method. At a minimum, local authorities can check that actions and expenditure that are favourable from a climate perspective do no harm in terms of other environmental and social concerns. This approach, called "do no harm", helps avoid policies with negative side-effects.

### ZOOM 3

**The ultimate objective of the exercise is not to work towards a fully 'green' budget.**

Some expenditure that supports other public policies will be 'neutral' from a climate perspective, but is no less necessary. Some expenditure that is unfavourable for the climate can only be reduced progressively. The objective is to improve the impact of the budget on the climate year on year through ensuring that actions and investments progressively eliminate expenditure with a negative impact on the climate wherever possible, and increase expenditure that supports the ecological transition and its efficacy.

### ZOOM 4

**A local authority's action is not just about its budget. Other tools are needed to guide public policy, such as:**

- Tracking indicators of the climate air and energy action plan (PCAET);
- Defining a 'carbon budget' for the local authority and its area and monitoring it;
- Calculating the GHG impact of structuring projects



## E. A method co-constructed by I4CE and 5 local authorities

The method presented in this guide is the result of a project carried out as a collaboration between I4CE, five local authorities, France Urbaine, and the French Mayors' Association (AMF). The local authorities associated with the project are: the European Métropole of Lille, the Métropole of Lyon, the Eurométropole of Strasbourg, the City of Paris and the City of Lille. France Urbaine and the AMF followed the project closely, with the idea of sharing the method more widely.

The project was jointly funded by EIT Climate-KIC, Ademe, our partner local authorities and I4CE.

### The first climate assessment method designed for local authorities

This study is the first, to our knowledge, to attempt to provide an aligned framework for assessing the budget of local authorities. There are however some studies on the national and international level in which we find a similar effort to categorise expenditure items according to their impact on the climate. Without being exhaustive, these include:

- the two state budget assessments that were conducted in 2019: 'A first 360-degree climate assessment of France's State budget' by I4CE (Fetet, Perrier and Postic, 2019), and the report entitled 'Green budgeting: proposition of a method', co-written by the General Inspectorate of Finance (IGF) and the General Council for Ecology and Sustainable Development (CGEDD) (Alexandre *et al.*, 2019).

- in the financial sector: the European taxonomy project on sustainable investing (EU Technical Expert Group on sustainable finance, 2020b), published on December 18, 2019 by the European Council; the work of the Cicero institute entitled 'Shades of Green'; the taxonomy of the Climate Bond Initiative (CBI); and the French label, TEEC, which is largely based on the work of the CBI.
- on an international level: the Rio markers from 1992, then the 'Climate Public Expenditures and Institutional Reviews' (UNDP, 2015), launched by the United Nations environmental programme, which draw on the Rio markers. 'Public Expenditure and Financial Accountability' (PEFA), supported by the World Bank, the FMI, the European Commission and states, including France, also studies the interaction between public finance and climate deregulation.

All these studies are intended to categorise actions by their climate impact. However, none can be directly applied by local authorities to their own budgets. The financial taxonomies are focused on categorising economic activities. The European taxonomy, aiming at homogeneity on a European level, is sometimes required to stay general in nature, and states that criteria must be established in accordance with national contexts. None of these methods have been used to examine the expenditure of local authorities<sup>1</sup>.

These differences in scope, in terms of both geography and expenditure type, reveal the need to develop a method specifically for local authorities that is aligned with their needs, expertise, and resources. This method offers a framework that can be applied by French local authorities, inspired by the existing literature and taking into account the national context and the specificities of French budgets.

## A METHOD AND TAXONOMY OF ACTIONS THAT ARE COHERENT WITH EXISTING INITIATIVES



**'Green budgeting: proposition of a method' by the General Inspectorate of Finance (IGF) and the General Council for Ecology and Sustainable Development (CGEDD)** (Alexandre *et al.*, 2019): The structuring choices and taxonomy set out in the mitigation methodology guide and the choices in the adaptation method were made in alignment with the method proposed by IGF and CGEDD in their report submitted to the ministers of the Ecological and Solidarity Transition and of Economy and Finance in September 2019.



**EU taxonomy for sustainable activities** (EU Technical Expert Group on sustainable finance, 2020b): The 'favourable' and 'highly favourable' criteria for mitigation and the 'adapted/contributing' criteria for adaptation in the methodological framework presented here align with the 'mitigation' and 'adaptation' criteria in the European taxonomy for sustainable activities, adopted by the European Parliament in June 2020.



**Label Cit'ergie** (Ademe, 2018a): The French label Cit'ergie, managed by Ademe (an offshoot of the European Energy Award), rewards local authorities for implementing an ambitious climate air and energy policy. The label includes the criteria 'Fund and plan the Climate Air and Energy policy'. The budget climate assessment helps local authorities to meet this criteria.

<sup>1</sup> At the time of this method's publication, Agence France Locale is developing a taxonomy to identify environmental or social expenditure. However, the climate component seems less detailed than that which has been examined here, because AFL wishes to create an automatic process, based solely on the accounting references and functions of the accounts nomenclature.



## 2 methodology guides have been created: one on climate change mitigation, and the other on adapting to climate change

- **A methodology guide on mitigation issues:** assessing the impact of the actions of the local authority on greenhouse gas emissions and their eventual reduction.
- **A second guide, yet to be perfected, offers an initial approach for addressing the issues of climate change adaptation,** and still requires testing by local authorities and further elaboration.

Other environmental concerns (for example, biodiversity, water, and local pollution) have not been addressed, nor have social issues.

The chosen term is therefore that of a **'budget climate assessment' (BCA)** rather than **Green Budgeting**, which could lead to it being confused with assessments that integrate these other environmental or social issues.

## F. The limitations of a budget climate assessment

### Limitations related to looking solely through a climate lens

A budget climate assessment has several limitations. The first is related to the chosen scope, which exclusively deals with the climate (mitigation (robust methodology) and adaptation (exploratory methodology)). This means that the budget climate assessment does not provide any information on other environmental or social impacts, which are also vital elements for the ecological transition. It may therefore be useful, when presenting the results of the climate assessment, to remind people in parallel of efforts made by the local authority in these other areas. At a minimum, local authorities can check that actions and expenditure that are favourable from a climate perspective do no harm in terms of other environmental and social concerns. This approach, called "do no harm", helps avoid policies with negative side-effects (EU Technical Expert Group on sustainable finance, 2020b).

### Limitations inherent to using a budgetary approach

A second limitation is related to the tool used: the budget. Using the budget serves to highlight certain expenditure items, but remains blind to non-budgetary measures. Regulation, in particular, is a powerful tool for climate action that requires little or no expenditure on the part of the local authority. Again, it may be useful to supplement the results of the budget climate assessment with a list of extrabudgetary measures implemented by the local authority. This can be highlighted in the sustainable development report presented during budgetary debates. To monitor such measures, the local authority should implement other tools (such as the

indicators for monitoring climate air and energy action plans (PCAET)).

The other limitation of using the budget as a tool is that the structure of local authority budgets was not designed to be analysed from a climate angle. The French accounting and budgetary framework used for the budget lines do not contain the information required for this kind of analysis. This is why it is sometimes necessary to step away from the budget and investigate non-financial operational indicators in order to successfully categorise the expenditure item (see section 2B, 'Practical guide').

Another limitation of this approach is that it does not sufficiently highlight efforts to reduce energy consumption. For example, increasing electricity use, when the electricity has a renewable source, leads to an increased amount of favourable expenditure. Meanwhile, saving energy (effectively 'non-expenditure'), does not show up in a point-in-time analysis of the budget. This defect is partly limited by local authorities seeking budget efficiency and limiting expenditure in line with their needs. The risk of increasing electricity expenditure just to 'green' the budget seems slim. However, efforts made to reduce the energy consumption represented by certain expenditure items may contribute to reducing its 'greenness'. Such efforts should therefore be highlighted alongside the results of the budget assessment.

### An assessment that does not aim at (nor permit) comparing local authorities

This tool cannot be used to compare local authorities. The local competencies, organisation of budgets, outsourcing of public services, internal resources, and services provided vary too greatly from one local authority to another to be able to conduct a serious comparison. The aim of the budget climate assessment is not to be a tool for benchmarking local authorities.

### A methodology that is intended to be expanded and improved year on year

This assessment is intended to evolve as knowledge and technologies improve, and with use. The methodological principles presented in this report have been constructed out of debates from working groups, with an effort to achieve maximum objectivity. Some may be debated again when the tool is implemented operationally.

Debate, disagreement, and non-exhaustivity are inherent to the method and should nourish a collective awareness of the issues and help develop skills and knowledge for all parties, and especially decision-makers.

## 2. Process: how to assess the budget of a local authority from a climate angle?

### Preamble: take the approach to the top level of management

As is the case for creating the budget, **conducting a budget climate analysis requires** certain information to be collected from different departments. It is therefore highly recommended that the approach be carried out at the top level of management. Where they exist, it is recommended that the approach be strongly articulated and co-owned by the finance or management control departments, and the environment department. This will enable the budget analysis to be both effective and pertinent.

**I4CE recommends that the department of finance, budget or management control coordinates or co-coordinates the budget climate assessment.** This department starts the assessment and it will ratify the results of the assessment in current and future budgets. They are responsible for the architecture of the budget and accounts, bringing together the needs and achievements of each department in the local authority. It is therefore crucial that the assessment is led by the finance department.

Climate issues are important for all the departments in a local authority and are relatively complex. The expertise of the environmental department, where one exists, or any other department that deals with the climate policy (by default, the General Services Department), is therefore crucial to best grasp the impacts, big or small, that a budget item may have on the climate.

**Strong articulation and co-ownership by the Finance and Climate Policy departments will make the analysis as effective and pertinent as it can be.**

### Five principles

While carrying out the budget climate assessment, it may be appropriate to keep in mind some simple principles to improve the quality of the process and the final result. In view of the current literature related to this assessment, such as the principles used by certain public finance institutions<sup>2</sup>, agreement was reached on the following principles:

- 1. Principle of parsimony:** implementing the method must not excessively slow down the budgetary procedure - whether during the construction, execution or evaluation phase. Human and technical resources must be mobilised in light of the importance of the subject matter.
- 2. Principle of transparency:** clear and appropriate information must be available on the method used and the reasoning behind the categorisation process.
- 3. Principle of good faith:** categorising expenditure from a climate perspective can become very difficult, so we have adopted a principle of good faith. This means using available information to categorise expenditure honestly, while accepting a tiny but irreducible part of logic or intuition.
- 4. Principle of prudence:** when information appears too limited to judge the impact on the climate as significant, expenditure items are considered undefined.
- 5. Principle of the burden of proof:** this methodology is neither exhaustive nor infallible. It is possible that some favourable or unfavourable actions have been omitted, or that new technologies quickly emerge in the future. To retain flexibility, it seems useful for a local authority to be able to assign an action to a category without it corresponding to the table, on the condition that the local authority is able to justify the decision. In other words, there must be evidence that the action in question is favourable from a climate perspective. This evidence must of course respect the principles of transparency, prudence and good faith mentioned previously.

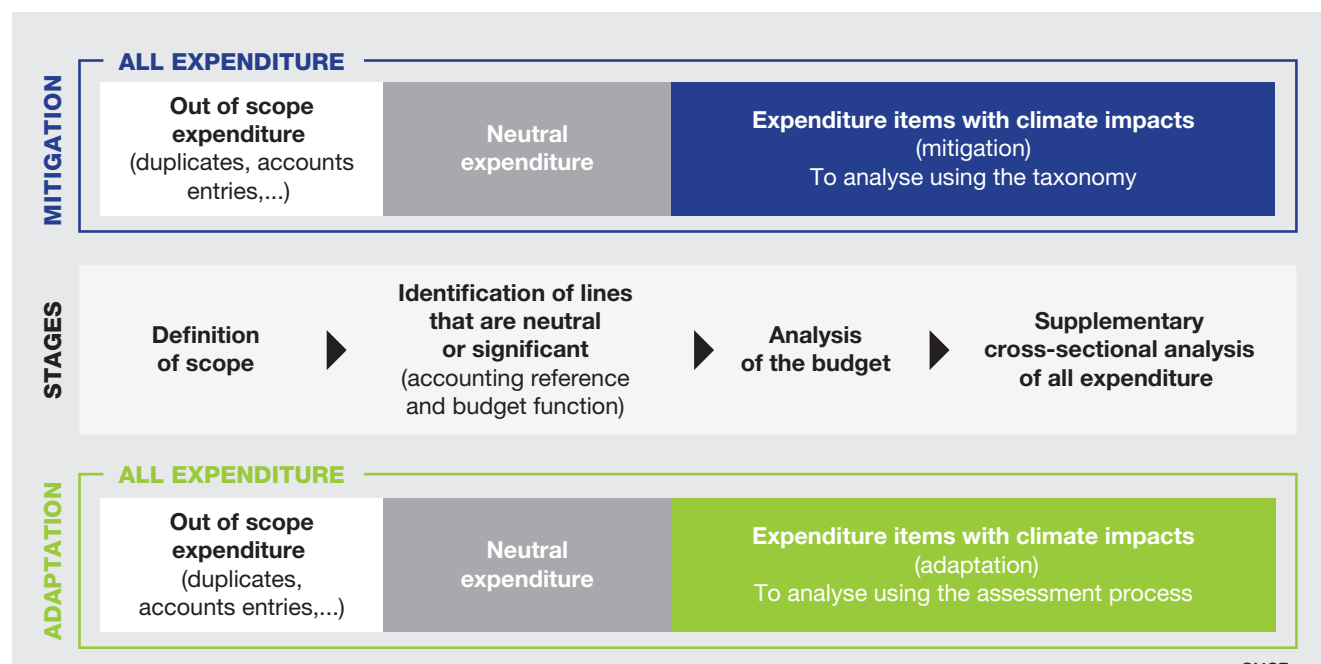
<sup>2</sup> The Green Bond Principles used by the French Development Agency (AFD) and the European Investment Bank (EIB) in their bond issues

## Principle stages of analysis

Several steps are necessary to assess the budget of a local authority through the lens of climate issues. These steps

are summarised in the diagram below and outlined in the paragraphs that follow.

### OVERALL PROCESS SHOWING THE PRINCIPLE STAGES OF THE BUDGET CLIMATE ASSESSMENT



2 methodology guides have been co-created to report on the budget's impacts on the climate: (i) mitigation and (ii) adaptation.

Both the mitigation and adaptation methodologies involve several stages that are necessary to carry out the budget climate assessment.

First, the scope of the analysis must be defined. Subsection 2.A, 'Defining the scope', sets out the expenditure items that are to be included and those that are out of scope.

The second Stage is the core of the budget analysis. It is a matter of identifying expenditure items 'with climate impacts' and expenditure items that are described as 'neutral'. Then, the expenditure items 'with climate impacts' are to be analysed in depth, most often by analysing supplementary information in addition to budgetary or financial data.

Lastly, to check that nothing has been omitted, a supplementary cross-sectional analysis is carried out on all expenditure using a detailed keyword search that is described at the end of this guide.

## A. Defining the scope: including supplementary budgets and outsourced public service contracts in the scope of analysis

To understand how the local authority impacts climate across all of its activities, special attention should be paid to analysing the main budget, supplementary budgets and outsourced public service delegation contracts, **so as to cover all real expenditure**. The scope includes both **investment expenditure and operational expenditure**. The assessment can be carried out on the administrative account, and/or on the upcoming budget.

*NB:* Revenue could be included in the analysis but as yet has not been processed, since local authorities have little flexibility with regard to their income.

Local authority expenditure is spread across multiple budgets. There is a main budget, which charts a great number of expenditure items. There may also be supplementary budgets for certain departments, such as water management for example. In 2014, 20% of capital expenditure within communes happened through supplementary budgets (Inspectorate General of Finances, 2016). Furthermore, certain responsibilities are sometimes delegated to providers as a public service delegation contract, or conducted via intermediaries like intercommunal bodies. In that case, those entities, public service providers or bodies, have their own detailed budget.

The objective of a budget climate assessment is to provide comprehensive information by reviewing all of the expenditure items in the budget. If possible, all the budgetary accounts voted by the local authority should be included in the analysis, plus the budgetary accounts of any legal entities taking on one of the competencies of the local authority, like outsourced public service providers or bodies linked to the local authority.

However, in practice, the scope will be determined by the tension between exhaustivity and feasibility. The analysis must take account of the constraints faced by local authorities regarding the information and time available, and the expertise present internally. Being as exhaustive as possible is preferable in order to obtain more comprehensive results, but it may be difficult in practice for a local authority to examine all of its supplementary budgets. Doing so may represent a number of lines that is too great for analysis. Analysis may also be too difficult if non-financial data on supplementary budgets is unavailable. In such cases, the local authority can carry out the analysis within a reduced scope, either by using only the main budget, or by omitting certain supplementary budgets. However, it seems necessary to include at a minimum the budgets for transport, heat networks, territorial development, and waste (see subsection 2.A.5, 'Choosing the budgets').

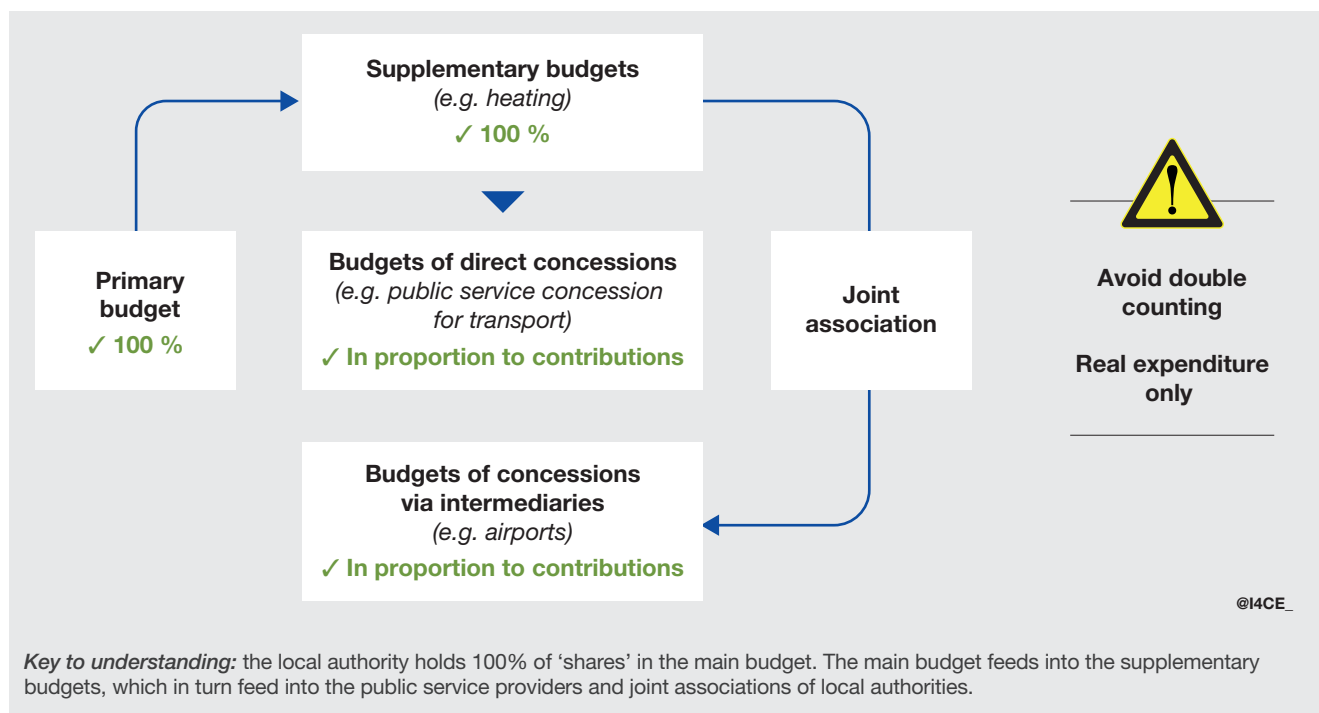
In the event that the local authority assigns some of its responsibilities to a legal entity whose activity is not confined to that local authority (for example, a joint association of local authorities), only part of the budget is included, in proportion to the financial contributions of the local authority in the governing body. In the case of a local semi-public company (Société d'économie mixte locale (SEML)), the proportion of the budget included is also set by the local authority's financial contributions.

If processing time is a constraint, it is possible to consider applying a minimum threshold to remove expenditure of low amounts from the analysis (see subsection 2.A.4, 'Threshold for analysis'). For the biggest local authorities, budgetary expenditure may represent several tens of thousands of items. If the local authority judges the processing time to be prohibitive, it is possible to use a threshold below which expenditure will not be analysed. The advantage is that by excluding a large number of low-cost expenditures, the processing time will be greatly reduced. The chosen threshold must however be low enough to retain a significant share of the budget for analysis - in the range of 80% to 90%. The final 'keyword' analysis will allow certain low-cost expenditures to be categorised as favourable or unfavourable. The remaining unanalysed amounts will be categorised as undefined by default.

Care will be taken with regard to re-billings across budgets to avoid double counting (see subsection 2.A.5, 'Consolidating the budget').

**In summary, the analysis should have the broadest scope possible, including the main budget, supplementary budgets, and public service concessions (see diagram below). The chosen scope must be clearly articulated from the beginning of the analysis and when results are shared, setting out the budgets to be examined and, where necessary, the threshold where analysis stops. It is also important to justify omissions from the scope of analysis, and to make omissions in good faith, so as to not solely or disproportionately omit budget items that are unfavourable for the climate.** If an exhaustive analysis is not possible, priority will be given to examining the main budget, as well as the areas of transport, heat networks, territorial development and waste (whether these are found in the main budget, supplementary budgets, or public service concessions). With regard to the coverage of expenditure items, a minimum threshold will be used to remove low-cost expenditures while maintaining a satisfactory level of analysis (for example the 80/20 rule).

### DIAGRAM ILLUSTRATING THE DIFFERENT MOVEMENTS BETWEEN BUDGETS WITHIN A COLLECTIVITY



### In practice: how to define the scope of analysis?

#### 1. Choosing the budgets

The first Stage of the analysis consists of defining the budgets to be included in the analysis. Ideally, all budgets that correspond to the exercising of local authority competencies should be examined, including the budgets of public service

concessions and joint associations of local authorities. However, due to feasibility constraints (such as time available or data accessibility), the scope may be reduced. At a minimum, the budgets for transport, heat networks, territorial development and waste should be included, as these are the activities with a big impact on the climate.

The scope must be clearly articulated in all publications that share the results of the analysis.

### WHICH BUDGETS ARE YOU INCLUDING IN THE ANALYSIS? WHICH BUDGETS ARE YOU CHOOSING TO OMIT, AND WHY?

<b>The main budget</b> (including public companies)	<input type="checkbox"/> In full <input type="checkbox"/> In part If in part, specify which parts are omitted and why
<b>Supplementary budgets</b>	<input type="checkbox"/> All <input type="checkbox"/> Some <input type="checkbox"/> None If some or none, specify which and why
<b>Public service concessions and/or contributions to joint associations of local authorities</b>	<input type="checkbox"/> All <input type="checkbox"/> Some <input type="checkbox"/> None If some or none, specify which and why

Note: For further information on the impacts of the different choices, you can refer to the explanatory table in the technical appendix on mitigation.

### EXAMPLE OF THE SCOPE CHOSEN FOR THE CONSOLIDATED BUDGET

Primary budget	Supplementary budgets	Public service concessions	Indirect shares held by the local authority
Primary budget (specify the public companies held by the local authority)	Water and sanitation	Swimming pools	Airport
	Contract catering	Urban transport	
	District heating		

Key: **in blue**: included in the analysis; **in white**: out of the scope of the analysis. It is useful to specify the reasons why these budgets have not been included.

Key to understanding: included in the analysis are (in blue): the main budget, the supplementary budgets of contract catering and district heating, expenditure linked to the public service provider responsible for urban transport.



## 2. Format of budgetary lines

The methodology is based on the 'M57' French budgetary and accounting framework. Tables are available that allow you to switch from one nomenclature to another<sup>3</sup>.

To carry out a budget climate assessment, it is important to cross-check:

- the accounting reference,
- and the budgetary function of the corresponding expenditure item.

These two pieces of information combined can provide valuable insights to identify the impacts of the expenditure item on the climate.

For example, in the table below, the 'construction' accounting reference shows us that the first line is concerned by climate issues linked to 'construction'. In the second line, it is the function 'Accommodation and school canteen' that enables us to link the line to climate impacts related to 'food'. Details for carrying out this cross-checking are provided in the methodology guides on mitigation and adaptation.

Accounting reference code	Accounting reference name (what the entry is)	Budgetary function code	Budgetary function (what the entry is for)	Climate impact related to:
2313	Construction	313	Theatres	<b>Construction</b>
6042	Procurement of services	251	Accommodation and school canteen	<b>Food</b>

This table uses M57 nomenclature. The codes associated with the accounting references and budgetary functions may differ depending on the nomenclature used by the local authority.

## 3. Level of aggregation

Before carrying out the analysis, the level of detail needed to categorise expenditure lines should be defined. The right level of aggregation depends on the size of the local authority and the nomenclatures used.

As a general rule, the more detailed the aggregation, the more precise the analysis will be. At a minimum, it is necessary to work at a level of detail that shows the accounting reference and budgetary function of expenditure items so as to be able

to categorise them. The level of detail can then depend on the functions involved: certain sectors, such as territorial development operations or transport, may require going to the level of operations/projects.

- What nomenclature(s) do you use, and at what level of nomenclature do you work to categorise expenditure?
- Are the accounting reference and budgetary function of expenditure items shown at this level?

### EXAMPLE: ANALYSING TO THE LEVEL OF THE OPERATION/DESTINATION OF THE BUDGETARY FUNCTION

Committee	Sub-committee	Programme	Operation
Territorial influence and attractiveness	Culture	Developing the culture policy	Museum pass

In what follows, the term 'budget line' is used to refer to lines of expenditure that include the accounting reference and budgetary function, at the level of aggregation chosen by the local authority.

## 4. Threshold for analysis

Processing all the lines of expenditure provides a precise picture of the budget, but it can be very time consuming. To speed up the analysis, we can consider using a threshold below which expenditure is not analysed. The threshold should however be sufficiently low to ensure that the majority of the budget is analysed - in the range of 80% to 90%. The remaining expenditure items will be categorised as undefined by default.

To set this threshold, it may be useful to answer the following questions:

- What is the minimum threshold you are thinking of? (in euros)

- What percentage of the budget will be analysed using this threshold?
- How many lines of expenditure will be analysed?

## 5. Consolidating the budget

When the scope of analysis includes several budgets, double counting must be avoided between the primary local authority budget and its supplementary budgets. The same care must be taken in the event that public service provider budgets are analysed. Financial expenditure linked to the return of capital (loans) must be excluded from the analysis for this reason.

The chosen budget must be in real expenditure. It is therefore necessary to omit chapters of the accounting framework that simply track accounting operations, such as the depreciation of equipment.

<sup>3</sup> <https://www.collectivites-locales.gouv.fr/referentiel-budgetaire-et-comptable-m57>

### AVOIDING DOUBLE COUNTING AND WORKING IN REAL EXPENDITURE

Using budgetary texts for the climate assessment creates two challenges for the non-specialist: avoiding double counting and working in real expenditure. These pitfalls deserve mention in order to facilitate the work of those who are not budget experts. This is all the more important since these challenges are easily overcome once they have been identified.

**The first risk** is that of duplicates. If several budgets are included in the analysis, duplicates should be deleted during the consolidation stage. For example, if the analysis is being carried out on the main budget and several supplementary budgets, certain expenditure items in the main budget will feed into the supplementary budgets. These amounts will be counted twice if all expenditure in the main budget and all expenditure in the supplementary budgets is counted.

In practice, the task of deleting duplicates is carried out when the budgets are consolidated. Where nomenclature M57 is used, certain items must be removed from the budget being analysed. For example, salaries paid to the local authority by supplementary budgets, which represent expenses in the following categories:

- 6215 Staff appointed by the local authority
- 6216 Staff appointed by the local GFP (an inter-municipal grouping with its own tax revenue)
- 6217 Staff appointed by the GFP member commune
- 6218 Other external staff

**The second risk** is that of confusing accounting or financial processing expenditures with real expenditure. To include only real expenditure, it is necessary to omit entries which simply track accounting operations, such as the amortization of equipment. The return of capital is also out of scope.

To work solely in terms of real expenditure, the following expenditure chapters should be excluded:

- Chapter 040 'Transfer-order operations between sections'
- Chapter 041 'Assets operations'
- Chapter 042 'Accounting transfer operations between sections'
- Chapter 043 'Accounting operations within the operations section'
- Chapter 014 'Financial products mitigation' (grouping accounts 701249, 70389, 70619, 7068129, 739, 7419, 74869, 748719, 748729, 749) that corresponds to repayments or refunds should be removed from the analysis.

Details on such entries are provided in the decree of December 23, 2019 on the M57 budgetary and accounting framework (*Annexe n°2 'Tome budgétaire', page 31*).



## B. Mitigation methodology guide: general principles

### The climate categories: a five-colour palette

Expenditure items are classified into five categories according to their impact on the climate:

- **Highly favourable:** This expenditure is compatible with a carbon-neutral world. It provides a significant reduction in emissions compared to existing alternatives, or captures greenhouse gases. It involves a structural change in the way we produce or consume.

*Examples: energy retrofit of buildings, installation of wind turbines, purchase of electric busses or company cars that emit fewer than 50gCO<sub>2</sub>/km.*

- **Quite favourable:** This expenditure reduces emissions in the short term, but the reduction is insufficient to put the area on the path to carbon neutrality. This category notably includes equipment and infrastructure that present a risk of carbon lock-in in the long term.

*Examples: purchase of gas-powered busses.*

- **Neutral:** This expenditure does not have a significant impact on emissions or on capturing greenhouse gases. It therefore does not actively contribute to climate change,

nor does it help reduce GHG emissions, and can continue to exist in a carbon-neutral world

*Examples: social benefits, cultural expenditure (except expenditures in construction, retrofitting, energy, travel and food).*

- **Unfavourable:** This expenditure is incompatible with the goal of carbon neutrality because it makes a significant contribution to greenhouse gas emissions. Some of these expenditure items can be justified in the short term by other objectives (such as social justice, or adaptation to climate change). However, the goal of carbon neutrality means this expenditure will progressively need to be transformed to reduce its climate impact.

*Examples: fossil fuel expenditure, payments to airports, purchase of company cars that emit more than 50 gCO<sub>2</sub>/km.*

- **Undefined:** The aim of this category is to gather all expenditure that theoretically has an impact on the climate, either favourable or unfavourable, totally or partially, that cannot be categorised due to a lack of information or data. The need for information may make it necessary to break the expenditure item down, introduce and track indicators, or design an ad hoc method. Giving this expenditure a distinct category serves to show all the lines of the budget that are important from a climate perspective, and should be used to improve the analysis for the following years.



Having two 'favourable' categories makes it possible to distinguish between different levels of progress. To use transport as an example, a fleet of busses powered by natural gas reduces emissions compared to individual transport, but the busses still emit CO<sub>2</sub>. If the local authority switches to public transport that is entirely carbon-neutral, powered by renewable gas, renewable hydrogen or electricity, this represents significant progress towards a type of mobility that is compatible with France's journey to carbon neutrality. Having two categories of favourable expenditure enables this type of progression to be highlighted within the budget climate assessment.

The climate assessment is based solely on the positive or negative impact of measures in terms of emissions. Neither the intention behind the expenditure, nor its stated objective, are the important factor here. This is different from other approaches, such as the Rio markers, developed by the Organisation for Economic Co-operation and Development (OECD) (UNDP Governance of Climate Change Finance Team, 2015) or the Green Budgeting mission by IGF-CGEDD (Alexandre *et al.*, 2019). Judging the impact rather than the intention means a broader methodological approach. In addition to all the measures that are intended to reduce emissions, there are many that have a significant impact but which were introduced with a different main objective. We can cite, for example, cutting down on animal products for animal welfare or health reasons, or encouraging active mobility to reduce local pollution such as fine particles and

improve health. These two measures provide a significant reduction in emissions despite this not being their primary goal.

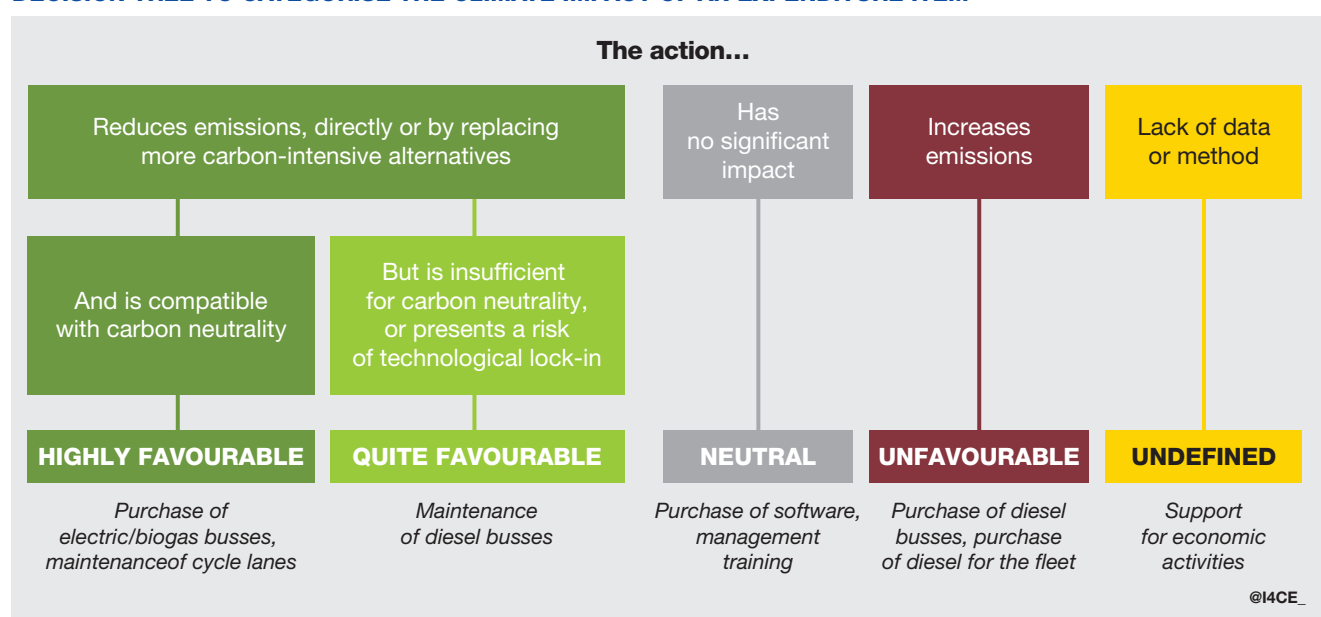
The method proposed here is not intended to define indicators of avoided emissions, abatement costs, or the effectiveness of measures in terms of reductions in greenhouse gas emissions. Such assessments are in fact extremely complicated to carry out, and are highly dependent on the local context and details specific to implementation. Such calculations may be useful for refining the analysis of expenditure items that have strategic importance, once they have been identified through the climate assessment of the entire budget using this method. By carrying out this assessment, local authorities can analyse their entire budget in as little time and with as limited resources as possible, and iterate on the analysis year on year.

### The decision tree

The category of an expenditure item can be determined by answering a short sequence of questions, using a 'decision tree'. This tree makes it possible to guarantee some level of homogeneity and coherence when categorising the different lines in the budget. The decision tree also has an external use: communication. The tree helps people to quickly understand how categorisation decisions have been made.

The decision tree proposed for the budget climate assessment is shown below:

### DECISION TREE TO CATEGORISE THE CLIMATE IMPACT OF AN EXPENDITURE ITEM



The decision tree highlights that an expenditure item is favourable if it replaces a more carbon-intensive alternative. This is the case for electric cars. Manufacturing electric cars emits GHG, but the overall result is more favourable than combustion-powered cars over their entire life cycle.

However, an action causing a high level of emissions cannot automatically be categorised as neutral on the pretext that no less carbon-intensive alternatives are available. This is the case, for example, for air travel. Despite there being no current alternative to long-haul flights, encouraging flying is unfavourable because of the high level of emissions. For the purposes of achieving carbon neutrality, some activities will need to be reduced or transformed if there is no existing alternative.

The decision tree is useful for providing a feel for the rating system, but it is relatively generic and does not allow all expenditure items to be rated. For certain expenditure items, the answers are easy, such as the design and implementation of a climate plan, or encouraging non-motorised transport. However, for many expenditure items, the questions raised by the decision tree are more difficult to answer, and responses can only be given after a close analysis of the issues, the technological or organisational options available, and their impacts on the climate.

This in-depth analysis is all the more important since the answers are sometimes counterintuitive, and run counter to widely held ideas. For example, eating a more organic and local diet is often associated with having a favourable effect on the climate. Yet there is very little, or no effect on carbon emissions. A different factor has a more significant impact on carbon emissions: whether a dish contains animal products or not determines the carbon emissions of food provided by a local authority.

This in-depth analysis is at the core of the mitigation methodology guide for the budget climate assessment. It is presented in the subsection entitled 'practical guide', which sets out the process for analysing the impact of expenditure on climate change mitigation.

### A benchmark: France's path to carbon neutrality

Expenditure items are categorised in relation to France's path to carbon neutrality (Ministry of the Ecological and Solidarity Transition, 2020). The assessment enables the local authority to evaluate its budget in view of what needs to be implemented in French territories to achieve carbon neutrality by 2050. The various elements of this path are evaluated by drawing on existing studies; first and foremost the French national low-carbon strategy (Stratégie nationale bas carbone (SNBC)<sup>4</sup>), as well as the multi-year energy

programme (Programmation pluriannuelle de l'énergie (PPE)), reports by France Stratégie and the High Council on Climate (Haut Conseil pour le Climat (HCC)), scientific publications, and reports by think-tanks and consulting firms.

The intention of the budget climate assessment proposed in this guide is not to assess progress in implementing the climate air and energy action plans (PCAET) that have been or are being published by communes and intercommunal bodies (Etablissement public de coopération intercommunale (EPCI)). For the assessment to be relevant, each local authority should develop its own indicators in alignment with its objectives and the action it has planned to implement.

By assessing the path to carbon neutrality the budget climate assessment complements the strategic tools implemented locally, in particular the climate plans and PCAET established by collectivities. It can feed into the climate plan by providing an external perspective on the measures taken, with a high level of detail on the impacts on climate. In return, the PCAET supplements the budget climate assessment because it includes impacts other than climate, such as social, sanitary or environmental impacts, and helps further emphasise the measures that involve low expenditure for the local authority but are nevertheless important for action, such as regulation. It is especially interesting, when communicating the results of the budget climate assessment, to systematically relate the findings to the goals and actions of the PCAET (see subsection 2.D, 'Results and follow-up to be given to the budget climate assessment').

It can therefore be useful to compare the results of the budget climate assessment with PCAET indicators, and to establish the link between the expenditure items identified for their impact on the climate and local authority action to improve them. The transformation of a local authority budget to a 'carbon neutral' budget will happen progressively. Currently, all budgets (public and private) still include a significant proportion of expenditure that is unfavourable for the climate. What is important, and what this exercise is intended to work towards, is ensuring that all unfavourable expenditure items are identified, and that actions are implemented to reduce them at a pace that is coherent with a path to carbon neutrality.

### Practical guide to the budget mitigation analysis

The aim of this section is to provide a practical guide for analysing mitigation in a local authority budget. At each stage, the main information is summarised, and more detailed information is available in the technical appendix on mitigation (in French only).

4 Ministry of the Ecological and Solidarity Transition, national low-carbon strategy, December 2018, revised in 2020

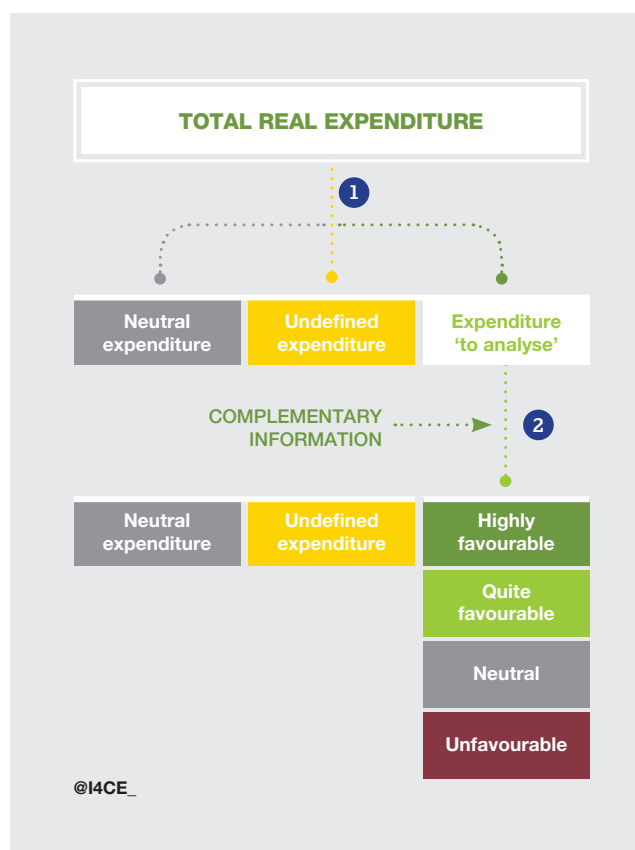
### Overview of the process

The aim of this method is to be pragmatic and minimise analysis times by using accounting nomenclature where possible in order to reduce the number of lines requiring complementary information to be gathered from different departments. To do so, it

① **identifies expenditure** as ‘neutral’, ‘undefined’, or ‘to analyse’, across all accounts entries, and ② **provides a detailed, turnkey taxonomy of actions**. Lines categorised as ‘to analyse’ can then be rated according to their climate impact - highly favourable, favourable, neutral or unfavourable. We encourage you to conduct this analysis internally to make the different departments as aware of climate issues as possible.

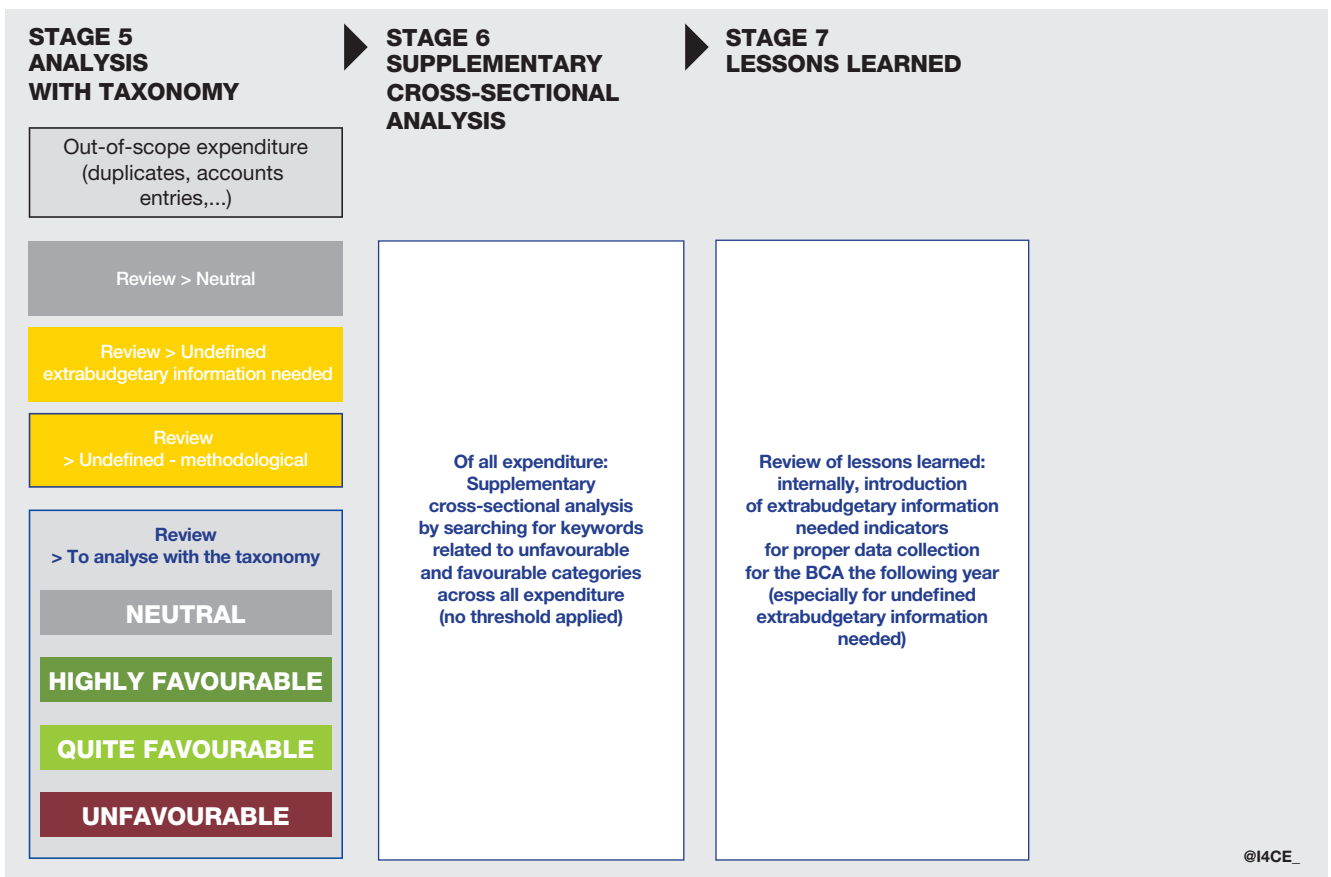
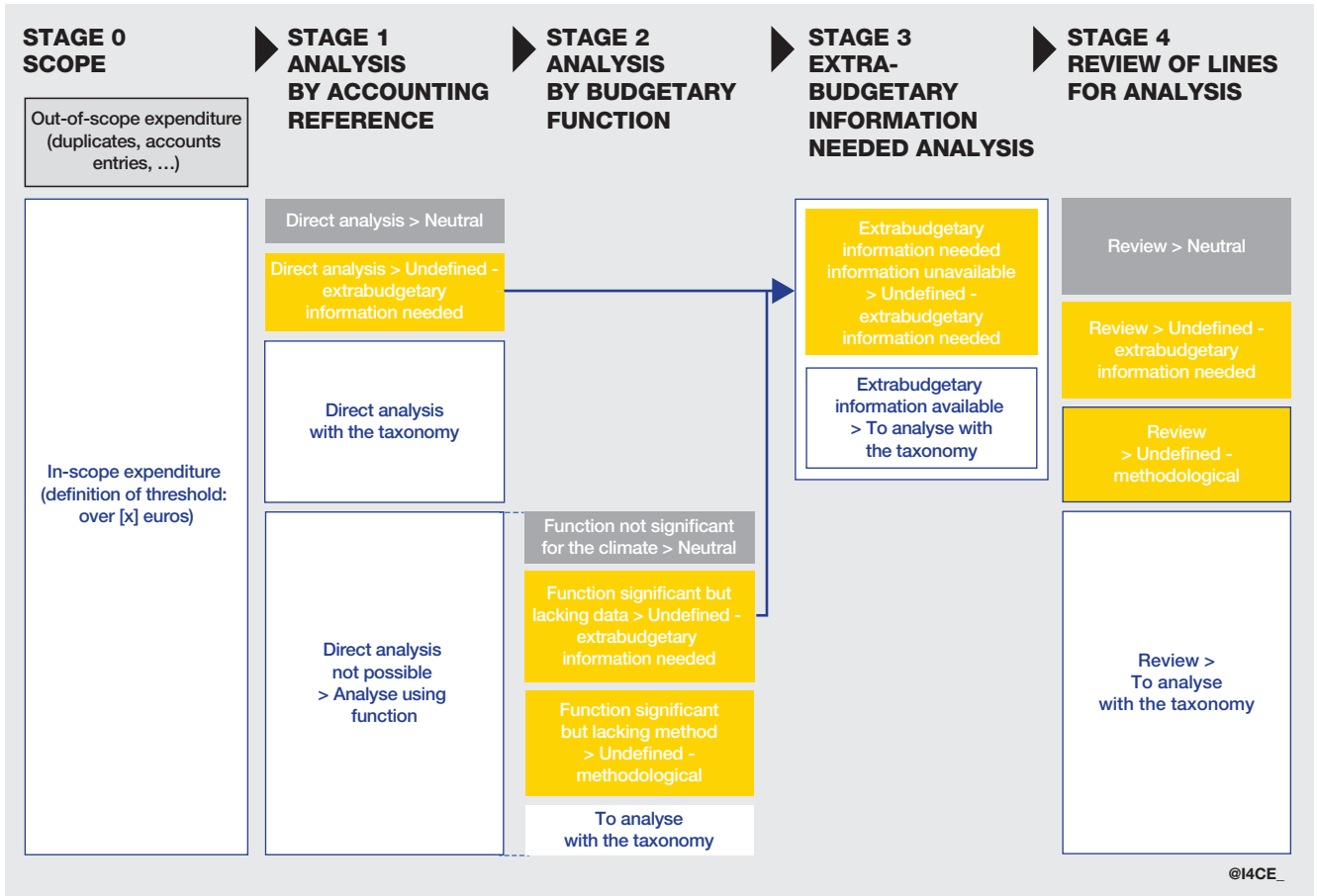
**In the completed assessment, each line of expenditure is qualified in terms of its compatibility with the goal to achieve carbon neutrality by 2050.**

Expenditure items are separated into the 4 categories (see above), depending on their compatibility with the French national low-carbon strategy guidelines. Expenditure items can also be ‘undefined’, when they likely have a significant impact on the climate but the information needed to rate them is unavailable at the time of the assessment. The impact of ‘undefined’ expenditure items will be rated over time, driving continuous improvement of the analysis year on year.



## Overview of the process: detailed stages to assess the budget from a climate perspective

The stages of the process below are described in the subsections that follow.



Once the scope of the budget assessment has been defined, and to optimise analysis times, some budget lines can immediately be identified as 'neutral' or 'undefined'. The 'neutral' lines do not require any additional analysis. The first Stage thus consists of identifying budget lines as 'neutral', 'undefined' or 'to analyse', and reduces the number of budget lines to be analysed to complete the budget climate assessment.

The first categorisation is carried out in two stages:

1. An examination of the budget by 'accounting reference' using the French M57 nomenclature (Stage 1);
2. A examination of the budget by function using M57 nomenclature (Stage 2).

This first round of categorisation is an opportunity to assess lines that are:

- 'Neutral' expenditure, for which no further analysis will be carried out;

- 'Undefined' expenditure, which represents expenditure that may be significant but for which analysis requires either gathering extrabudgetary information needed information in order to use the taxonomy table, or an extension to the method to be able to categorise the expenditure item. Where extrabudgetary information needed information is missing, the local authority can either choose to categorise the expenditure item as 'undefined' in the final results, or to carry out the additional analysis needed to be able to categorise it as 'highly favourable', 'quite favourable', 'neutral' or 'unfavourable' (Stage 3);
- Expenditure 'to analyse', which should be analysed in detail using the taxonomy table to carry out the assessment.

To summarise, the accounting reference is more important than the function when direct analysis by accounting reference is possible. Where it is not possible to analyse the line by accounting reference, the remaining budget lines will be categorised by the function. This takes place following the matrix below:

Stage 1 - Examination by accounting reference	Stage 2 - Examination by function		
	Neutral	Undefined	To analyse
Out of scope			
Neutral			
Undefined			
To analyse using the taxonomy			
Analysis impossible -> Stage 2 - Analyse using function reference	Neutral	Undefined	To analyse using the taxonomy

### Stage 1: reviewing budget lines by 'accounting reference' using M57 nomenclature

Certain lines can quickly be set aside by examining the budget by accounting reference. These lines can immediately be categorised as 'out of scope', 'neutral', or 'undefined'.

The accounting references in M57 nomenclature have been classified in the first tab of the 'Climate analysis' Excel spreadsheet, 'Stage 1 – Analysis by accounting reference'. Further details are available in the technical appendix on mitigation.

#### ► 'Out of scope' lines

These are all the lines that correspond to revenues, as well as lines that correspond to accounts entries and not 'real' expenditure included in the budget.

The list of headings corresponding to these budget lines is available in the technical appendix and in the Excel tool.

#### ► 'Neutral' lines

During the examination of the budget by 'accounting reference', some lines can immediately be categorised as 'neutral'. This means that they do not have a significant impact on the climate. These lines are listed in the technical appendix on mitigation and in the Excel tool.

#### ► 'Undefined' lines

These lines are categorised as 'undefined extrabudgetary information needed'. If an in-depth analysis is carried out, these expenditure items could be categorised using the taxonomy and analysis keys (to be defined). However, such analysis requires gathering specific information and establishing analysis keys using the information available. As a consequence, it has been decided to categorise this expenditure as 'undefined extrabudgetary information needed' in the current methodology.



### Staff costs

See the methodology's taxonomy: staff costs are categorised as undefined extrabudgetary information needed, **except staff costs that are specifically identified as significant for climate**. The list of headings corresponding to these budget lines is available in the technical appendix and in the Excel tool.

### Purchases and study costs

Purchases are categorised as undefined extrabudgetary information needed, except the lines that may be linked to the methodology's taxonomy and identified as 'to analyse'.

The list of headings corresponding to these budget lines is available in the technical appendix and in the Excel tool.

#### ► Principle of the 'burden of proof'

An expenditure item identified as 'neutral' or 'undefined' by its accounting reference can be rated as 'favourable' or 'unfavourable' if the local authority can justify its reasons for doing so. This is the principle of the 'burden of proof' explained in more detail in box 2, 'Five principles'.

#### ► Lines 'to analyse'

Certain accounting references correspond to lines that are essential to analyse during the budget climate assessment. These accounting references correspond to expenditure that is important for reducing emissions within the local authority and the local authority area. These budget lines are categorised as 'to analyse'.

**The accounting references listed in the relevant section of the technical appendix on mitigation must be identified during this first Stage as 'to analyse' and be analysed in detail** using the taxonomy of actions. Such lines should be analysed regardless of the functions they are attached to. These categories of expenditure require a cross-cutting analysis across the entire budget.

### Stage 2: reviewing budget lines by 'budget function' using M57 nomenclature

**Only the lines that could not be analysed directly by accounting reference are processed during this stage.**

The functions of a local authority budget using M57 nomenclature (communes and intercommunal bodies (EPCI)) can be divided into three broad categories:

- functions that have a direct bearing on climate issues in the local authority (environment, transport);
- functions that are significant from a climate perspective, but less directly analysable using the taxonomy table (general services, development);
- functions relating to public policies and having less leverage on climate change mitigation (culture, health and social action).

The functions are categorised in the second tab of the 'Climate analysis' Excel spreadsheet, 'Stage 2 - analysis by function'.

#### ► Functions to analyse that have a direct bearing on climate issues in the local authority:

The 'Environment' and 'Transport' functions relate directly to actions identified as 'significant for climate' in the methodology's taxonomy table. All budget lines in all subchapters of these functions should be analysed using the taxonomy table, except those identified as 'neutral' or 'undefined' during the first Stage of analysis (by accounting reference).

**The list of functions and sub-functions corresponding to these budget lines is available in the technical appendix on mitigation and in the Excel tool.**

#### ► Functions relating to actions that are significant from a climate perspective, but less directly analysable using the taxonomy table

The 'General services', 'Housing and Territory Planning' and 'Economic action' functions have some subchapters or articles that relate to actions that are significant from a climate perspective.

Such actions can sometimes be analysed directly using the taxonomy table. In that case they are identified as 'to analyse'. As is the case for the first category of functions that can be analysed directly, budget lines identified as 'neutral' or 'undefined' when examined by accounting reference can be excluded from this analysis.

Sometimes analysing the actions requires additional information to be gathered from different departments. When this is the case, the budget lines are identified as 'undefined - additional analysis required' during this first stage. Depending on the importance of these actions for the climate air and energy action plan, and the availability of the required information, the local authority may decide to carry out the analysis, or not. If the local authority does decide to carry out the analysis, it will be necessary to collect the supplementary information from departments in order to use the taxonomy table and determine the proportion of the expenditure that can be rated as highly favourable, favourable, neutral or unfavourable from a climate perspective. Using 'studies costs' as an example, it is necessary to look in more depth at which studies focus on areas such as decarbonising buildings, mobility, or food, for example, and inversely which studies relate to projects that may be considered unfavourable from a climate perspective. If the local authority decides not to carry out this supplementary analysis in the first instance, the expenditure items will be categorised as 'undefined'. In the final results, expenditure categorised as undefined provides a way to identify expenditure items that are potentially significant for the climate but for which additional analysis is required, so as to refine the climate assessment in the coming years.



Lastly, the analysis of actions in certain budget lines involves climate issues that are not yet addressed in the methodological framework. This is the case, for example, for issues around soil artificialization and cultural events. During this first Stage these lines will be categorised as 'undefined - methodology extension required'. No analysis will be carried out on these lines.

**The list of functions and sub-functions that correspond to these budget lines is available in the technical appendix on mitigation and in the Excel tool.**

► **Functions relating to public policies having less leverage on climate change mitigation**

'Security', 'Education, professional training and apprenticeships', 'Culture, social life, youth and leisure' and 'Health and social action' all relate to public policies with less leverage on climate change mitigation (apart from professional training).

These functions can be analysed more quickly. Apart from the budget lines identified as being 'to analyse' when examining the budget by accounting reference, expenditure items corresponding to these functions can immediately be categorised as 'neutral'.

What should be analysed is energy expenditure (notably, the heating of buildings), fuel expenditure, construction and renovation, and food, captured in the first Stage of analysis (by accounting reference).

There are two exceptions:

- Professional training expenditure: professional training plays an important role in ensuring that professionals in relevant sectors are trained in the new technologies and techniques that help reduce emissions, such as for the energy retrofit of buildings. The methodology could be extended in the future to include such training courses. At present, they are categorised as 'undefined - pending methodology extension'.
- Accommodation and school canteen expenditure: the meals served in school canteens can provide leverage for reducing emissions in a local authority area. Local authorities should take care to analyse this expenditure using the taxonomy table.

**The list of functions and sub-functions corresponding to these budget lines is available in the technical appendix on mitigation and in the Excel tool.**

► **Principle of the 'burden of proof'**

In the same way as for the accounting reference, an expenditure item identified as 'neutral' or 'undefined' by its budgetary function can be categorised as 'favourable' or 'unfavourable' if the local authority can justify it. This is the principle of the burden of proof (see part 2, 'Five principles').

**Stage 3: Extrabudgetary information needed analysis**

The lines identified as 'undefined - extrabudgetary information needed' in stages 1 and 2 are analysed here. If the local authority wishes, these lines can be analysed using the taxonomy by gathering extrabudgetary information needed information that is not found in the budget data.

If the extrabudgetary information needed data is unavailable, these lines will remain in the category of 'undefined - extrabudgetary information needed'.

This Stage is particularly important for improving the budget climate assessment year on year.

**Stage 4: Reviewing the lines**

This Stage is an opportunity to review lines categorised as 'out of scope', 'neutral', and 'undefined'.

The expenditure items 'to analyse' will be examined in the following stages (stages 5, 6 and 7) (see diagram of the overall process).

**Stage 5: Evaluating the lines 'to analyse' using the taxonomy**

Assigning colours to the budgetary expenditure items quickly raised specific questions. How should expenditure that encourages organic canteens, gas-powered vehicles, or building new homes be categorised? These questions and many others led to numerous debates among project stakeholders, and the same questions were often raised within different local authorities.

The present method was created out of these debates. For each of the issues encountered, we have listed the different points of view, identified their advantages and disadvantages, and recorded the methodological choice. These debates and decisions constitute the core of the budget climate assessment method.

This section lists the debates that took place and the option that was chosen. The same structure has been used for each issue in order to make the choices clear and facilitate reading. It starts with a reminder of the controversies around the issue, then lists the different options (*i.e.* the colour choices) and their advantages and disadvantages, before deciding on one of the available options.

The debates have been clustered into broader groups. Basically, we can distinguish:

#### 9 climate issues sorted by sector

1. Building: construction, energy retrofit, renovation (not concerning energy only)
2. Transport infrastructure (except roads): air, public transport infrastructures, and waterways
3. Vehicle purchase and maintenance
4. Roads: construction, maintenance, repurposing, and operation
5. Food
6. Waste
7. Purchase of energy, infrastructure and energy networks
8. IT and new technologies (equipment, software and associated infrastructures)
9. Parks and green spaces

#### 6 cross-sectional climate issues

1. Staff expenditure
2. Business trip costs
3. Climate tax payments
4. Subsidy provision
5. Public procurement and sustainable purchases
6. Carbon offsetting

For each of these issues, the options are clearly presented in the following table. More comprehensive information on the decisions, and the debates and arguments that influenced them, is provided in the technical appendix on mitigation.

The following framework provides general guidance that is as precise as possible, and can be adapted by each local authority. The diversity of local authorities, in terms of their competencies, resources, internal expertise and the information at their disposal, may make it necessary to adapt the methodology using indicators and proxies, while remaining true to the spirit of the assessment.

#### SUMMARY TABLE OF THE TAXONOMY

Action	Option chosen
Building	<p><b>The construction of new buildings:</b> investments made in the construction of new buildings are neutral, except if they surpass the requirements of the regulatory standard Environmental regulation 2020 (RE2020), once it comes into effect, or the standard defined by the local authority using a table of stringent requirements. All expenditure related to the construction project will then be rated as highly favourable.</p> <p>For new buildings that were designed prior to 2020 and meet the requirements of the RE2020 regulations, the high level of energy efficiency was voluntary and should therefore be highlighted. For these buildings, the proportion of construction expenditure representing additional costs beyond thermal regulation 2012 (RT2012) can be categorised as quite favourable (approximately 10% for collective housing and 16% for detached dwellings). The rest of expenditure is neutral.</p> <p><b>Energy retrofit of buildings:</b> For energy retrofits, we suggest a total cost approach, <i>i.e.</i> counting the entire expenditure as 'highly favourable', in the manner of IGF-CGEDD in the Green Budgeting report.</p> <p><b>Global renovation of buildings, not concerning energy:</b> For total renovations (<i>i.e.</i> not just an energy retrofit), using a 'climate share' would seem justified. In the absence of data, a share of 15% 'highly favourable' can be used, with the rest of expenditure being counted as neutral. This share conforms to that used by all existing studies in France, namely the IGF-CGEDD report (Alexandre <i>et al.</i>, 2019), Landscape of climate finance in France (Hadrien Hainaut, Ledez and Cochran, 2019), and the French State's budgetary document ('Jaune budgétaire') on funding the ecological transition (Ministry for budget, 2019) prepared by the Ministry of the Ecological and Solidarity Transition as part of the finance act.</p>
Transport infrastructures (except roads)	<p><b>Air:</b> Infrastructures, investments and maintenance related to air travel is considered unfavourable.</p> <p><b>Infrastructures for public transport (except roads) and electric rail transport:</b> Infrastructures, investments and maintenance related to public transport and electric rail transport are considered highly favourable.</p> <p><b>Waterways:</b> Infrastructure, investments and maintenance for the river network are considered quite favourable.</p>

## SUMMARY TABLE OF THE TAXONOMY

Action	Option chosen
Vehicle purchase and maintenance	<b>Purchase</b>  <b>Passenger cars and light duty vehicles:</b> Purchase is 'highly favourable' if the vehicle emits fewer than 50 g CO <sub>2</sub> /km (in accordance with the NEDC standard), otherwise 'unfavourable'.  For heavy goods vehicles and speciality vehicles: it is the type of motor that defines the climate category. Purchase is: <ul style="list-style-type: none"> <li>• 'Highly favourable' for electric motors</li> <li>• 'Quite favourable' for gas and hybrid motors</li> <li>• 'Unfavourable' for diesel or petrol motors</li> </ul> <b>Two wheels:</b> The purchase of a two-wheeled vehicle with an electric motor (bike or scooter) or no motor is considered 'highly favourable'. The purchase of fossil fuel motors (petrol, diesel or gas) is considered 'unfavourable'.  <b>Public transport:</b> The purchase of public transport emitting 50 gCO <sub>2</sub> /passenger.km or fewer is judged 'highly favourable'. The purchase of public transport powered by gas or with a hybrid motor is categorised as 'quite favourable'. The purchase of public transport powered by diesel or petrol and exceeding the threshold of 50gCO <sub>2</sub> /passenger.km is categorised as 'unfavourable' (when information is missing, all public transport vehicles powered by diesel or petrol are unfavourable by default).  <b>Maintenance costs</b>  <b>Cars, heavy goods vehicles or two-wheeled vehicles:</b> The impact is judged as 'neutral', except when the maintenance cost is specifically for low-carbon vehicles (see the threshold of 50 gCO <sub>2</sub> /km). Then it is categorised as 'highly favourable'.  <b>Public transport:</b> Maintenance costs are categorised as highly favourable if the vehicle emits fewer than 50 gCO <sub>2</sub> /p.km (which automatically includes electrical- and green hydrogen-powered vehicles), else they are categorised as 'quite favourable', considering modal shift impacts.
	<b>Roads</b>  <b>Road building:</b> Investments for soft mobility and public transport are counted as 'highly favourable', and investment expenditure for new roads for motor vehicles is considered 'unfavourable'. In the case of mixed roadways, expenditure is to be divided in proportion to the surface area assigned to each mode of transport.  <b>Road maintenance:</b> The chosen option is to categorise the maintenance of the lanes used by cars as neutral, and the maintenance of cycle lanes, public transport lanes and pavements as 'highly favourable'.  In practice, the categorisation of road expenditure may be based on the expenditure associated with each mode of transport. Failing that, it may be estimated from the proportion of the road's surface area assigned to each mode of transport.  <b>Repurposing roads:</b> Expenditure for repurposing roads in order to make spaces reserved for soft mobility is considered 'highly favourable'. The existing share of roads dedicated to cars is 'neutral', the idea being that roads for private vehicles are not intended to disappear in a carbon-neutral world.  <b>Operating roads:</b> This expenditure is categorised as 'neutral', except when it helps to decarbonise transport (road signs, street furniture such as bike stands, signage for pedestrians, and so on), then considered 'highly favourable'. If this process is too time consuming, it seems satisfactory to categorise all operating expenditure as neutral by default, if the costs in question are low.
	<b>Food</b>  It is recommended to count vegetarian meals as 'highly favourable', and other meals as 'neutral'. If the local authority wants to go further, it can analyse the content of non-vegetarian meals.
	<b>Waste</b>  <b>Waste management is categorised in proportion to waste treatment methods</b>  <b>'Highly favourable':</b> Prevention and reduction at source: reuse of materials through materials recovery; sorting; reuse of organic material (methanization, compost).  <b>'Quite favourable':</b> Energy recovery.  <b>'Neutral':</b> Treatment of asbestos and special waste (batteries, electronics, paint...).  <b>'Unfavourable':</b> Landfill and incineration (except energy recovery), fuel related to waste collection.

## SUMMARY TABLE OF THE TAXONOMY

Action	Option chosen
Purchase of energy	<p><b>Electricity:</b> The chosen option is to categorise electricity expenditure as 'neutral', except for contracts that guarantee a renewable source, then categorised 'highly favourable'. This choice has the advantage of retaining the incentive to move away from fossil fuels while being highly coherent with our classification. It also incites local authorities to re-examine their contract in order to guarantee a carbon-free primary energy source for electricity use. The electricity used for fuel is counted with the purchase of electricity in general.</p> <p><b>Gas:</b> The use of natural fossil gas is categorised as 'unfavourable'.</p> <p><b>Renewable gas</b> is categorised as 'highly favourable'.</p> <p><b>Fossil energies, except natural gas:</b> Broadly speaking, the purchase of fossil fuels is counted as 'unfavourable': petrol, diesel, LPG, crude oil and coal. The proportion of agrofuel incorporated into any fossil fuel (E5, E10, diesel) is categorised as 'undefined'.</p> <p><b>Agrofuels:</b> Agrofuels are categorised as 'undefined'. The debates on agrofuels do not yet appear to have been settled in the scientific literature. The European Commission seems conscious of the issues linked to the changes in land use, introducing a cap of 7% on first generation biofuels in transport.</p> <p><b>Hydrogen:</b> Hydrogen infrastructure development is categorised as 'quite favourable', with the idea being that it currently still relies on carbon, but can help to develop a useful channel for the energy transition. This reasoning is similar to that used to categorise natural gas. The consumption of renewable hydrogen is 'highly favourable', and fossil hydrogen is 'unfavourable'.</p>
Investments in energy infrastructures	<p><b>Infrastructures for the production of renewable electricity</b> Investment or operational expenditure for the production of renewable electricity is categorised as 'highly favourable'.</p> <p><b>Infrastructures for the production of renewable gas and agrofuels</b> Investment or operational expenditure for the production of renewable gas is categorised as 'highly favourable' for the climate, if the inputs are biowaste and sewage sludge, or are listed in part A of appendix IX of the 2018/2001 European directive. Investment or operational expenditure for the production of agrofuels is categorised as 'undefined', in alignment with the classification of agrofuels expenditure.</p> <p><b>Electricity and gas networks</b> Expenditure on extending and maintaining transport and distribution networks for electricity and gas are considered 'neutral' by default. If it is demonstrated that the expenditures are directly related to linking up renewable electricity generation facilities or injecting renewable gas into the network, they are assimilated to installations for the production of renewable energy and are therefore categorised as 'highly favourable'.</p> <p><b>Heating and cooling networks</b> Expenditure on the construction, extension and maintenance of heating and cooling networks depends on the energy mix that the heating network operates on. These expenditures must therefore be divided into several parts where appropriate, in proportion to the energy mix (fossil energies ('unfavourable'), renewable energies ('highly favourable') and energy recovery of heat released for example during waste incineration ('quite favourable')).</p>
Expenditure to maintain buildings and infrastructures (except roads)	<p>The proportion of expenditure on maintenance that helps decarbonise the energy mix or enables energy savings is categorised as 'quite favourable'. According to the principle of the burden of proof, the local authority will have to demonstrate these energy savings or the decarbonisation of the energy mix. Only the part of the expenditure that corresponds to actions allowing energy savings will be counted as 'quite favourable'. The remaining share of the expenditure is categorised as 'neutral', and all other expenditure on maintenance and the maintenance of infrastructures (except roads) is categorised as 'neutral'.</p>
Staff expenditure	<p>Staff expenditure is categorised as 'undefined', except where the job is directly related to implementing the energy or climate policy of the local authority, in which case it is categorised as 'highly favourable'.</p> <p>Training costs and expenses are counted as staff expenditure.</p>

## SUMMARY TABLE OF THE TAXONOMY

Action	Option chosen
<b>Staff travel expenses</b>	We recommend identifying the modes of transport used by agents and categorising them following a simple grid: combustion-powered vehicles and planes are 'unfavourable' as they emit CO <sub>2</sub> ; gas-powered cars are 'quite favourable'; and electric cars, bioNGV, rail travel and motorless travel are 'highly favourable'. This system is intuitive and enables the efforts of local authorities to be recognised if they encourage employees to travel using low-carbon modes of transport.
<b>Tax payments</b>	The payment of a tax that helps to reduce emissions (carbon tax, axle tax) is 'unfavourable' because the tax pertains to carbon-heavy expenditure. (Inversely, revenue from these taxes would be assessed as 'highly favourable' for the climate because the incentive is to reduce carbon-heavy expenditure.) The payment of non-climate taxes is 'neutral'.
<b>Subsidies provision</b>	Subsidies and grants that have a clear impact on carbon emissions can be categorised using the decision tree. The number of subsidies and grants and the lack of information on their use may justify categorising subsidies and grants as 'undefined' by default, unless detailed information exists that allows them to be put in another category. This choice stems from a principle of precaution when dealing with missing information, and the range of possible uses of a subsidy or grant. At the same time it sends a signal to try to collect more information concerning the impact subsidies and grants have on the climate.
<b>Expenditure on new information and communication technologies (IT expenditure)</b>	For IT expenditure, it has been decided to count the purchase of IT equipment as 'unfavourable', except where qualitative criteria (described in the technical appendix on mitigation) have been respected allowing it to be considered as 'quite favourable'. Maintenance costs and software purchases are 'neutral'. Infrastructure expenditure is 'undefined'.
<b>Public procurement and sustainable purchases</b>	Sustainable procurement policies can change the colour of a budget line or reduce the amount of a line (whether favourable or unfavourable). Sustainable procurement is not favourable by default. We recommend filtering procurements through this method like any other expenditure item, and to categorise them as 'undefined' if they do not correspond to any of the taxonomy in the taxonomy. However, certain impacts of a sustainable procurement policy may remain invisible. It would therefore seem useful for local authorities to supplement the budget climate assessment with information on their actions for sustainable procurement, and more specifically the proportion of procurement that is covered by a climate clause.
<b>Carbon offsetting</b>	We recommend maintaining a distinction between the amount of the carbon offset (e.g. buying carbon credits), which is counted as 'highly favourable' if detailed criteria are met, otherwise 'neutral', and the rest of the expenditure, which in theory will be 'unfavourable' because there is offsetting.
<b>Parks and green spaces</b>	Investment and maintenance related to areas planted with trees are considered 'highly favourable'. The rest is considered 'neutral' (except expenditure on fuel, staff costs, and so on, which should be rated according to the relevant issue described above).

### Stage 6: conducting supplementary cross-sectional analysis

Certain expenditure items can slip under the radar of a budget climate assessment. In particular, using a minimum threshold to analyse expenditure runs the risk of omitting certain low-cost expenditure items that may have a significant impact on emissions.

In order to limit this threshold effect, it may be useful to complete the previous Stage with a cross-sectional analysis. The aim of this supplementary process is to identify expenditure items that deserve special attention, especially

those that fall under the threshold. This list helps to limit the threshold effect, whatever the threshold is, by ensuring that the most obvious cases are not omitted, even if their cost is low.

At a minimum, this cross-sectional analysis can be based on a keyword search of the expenditure item names. This keyword search reveals certain lines which then need to be analysed using the same analysis framework as the previous stage. We are listing here a number of keywords that we think are important to search for, along with examples of lines identified as favourable or unfavourable for the climate.

#### ► Keywords often associated with *favourable* expenditure:

Keyword	Example of expenditure item
Tram	Acquisition of new tram units
Bike	Installation of bike stands and shelters
Renovation	Public assistance for the rental network in favour of urban renewal Support for the renovation of EHPAD retirement homes to BBC level (French renovation label)
Green spaces	Subsidies to a zoo to create and maintain green spaces
Sustainable development	Expenditure for a service for education on sustainable development

#### ► Keywords often associated with *unfavourable* expenditure:

Keyword	Example of expenditure item
Airport; air; aviation	Triennial contract with the local airport
Travel	Travel costs for the department for international relations
Heating oil; heating; fuel; petrol; diesel	Purchase of heating oil for heating an administrative centre
Vehicles; fleet	Acquisition of heavy duty vehicles and equipment for drainage
Investment property	Heat inefficient rentals
Travel with a carbon footprint: taxi; plane; expense report; travel order	Flight ticket for a colleague



## C. Adaptation methodology guide: general principles

### A preliminary method to analyse the implications of the budget on climate change adaptation

The method suggested here focuses on **evaluating the extent to which the local authority is addressing adaptation**.

- 1 Which local authority expenditures are known to be significant for adaptation?
- 2 Which expenditures in the budget should be covered or better covered by adaptation policies or measures?
- 3 Does planned expenditure actually take into account current and future risks linked to climate change?

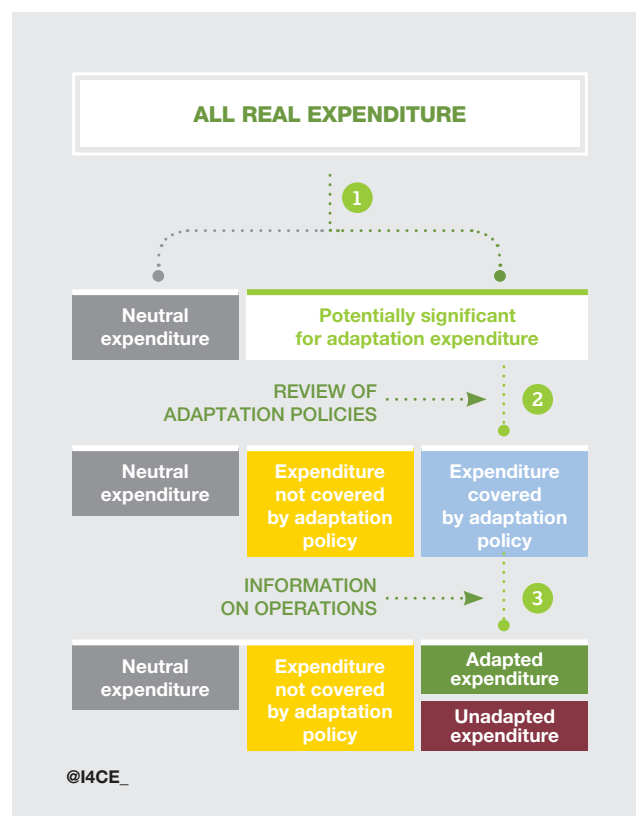
It aims at sharing **principles and using a common language to give each local authority the opportunity to investigate** its own expenditure, in its own context in terms of vulnerability and strategic choices, in order to address its particular adaptation needs. In many cases, taking adaptation into account is a matter of **considering climate risks during the process of defining and structuring projects** (regardless of their function or objective) rather than launching specific initiatives for adaptation.

Carrying out this analysis helps clarify where work still needs to be done and better manage action for adaptation.

However these guidelines do not aim at:

- Evaluating the share of the budget or identifying expenditure leading to actions that are vulnerable to the consequences of climate change;
- Measuring the effectiveness (i.e the extent to which the goal has been met) and the efficiency (i.e. the relationship between the results obtained and the resources used) of levers for adaptation used by the local authority;
- Measuring if expenditure in favour of adaptation is sufficient or insufficient to adapt to climate change.

To do this, the process offers a 3-Stage protocol that is summarised in the diagram above. The first Stage consists of identifying expenditure items for which analysis is useful and necessary in view of climate change adaptation objectives, and setting aside expenditure items that are neutral from the perspective of these objectives.

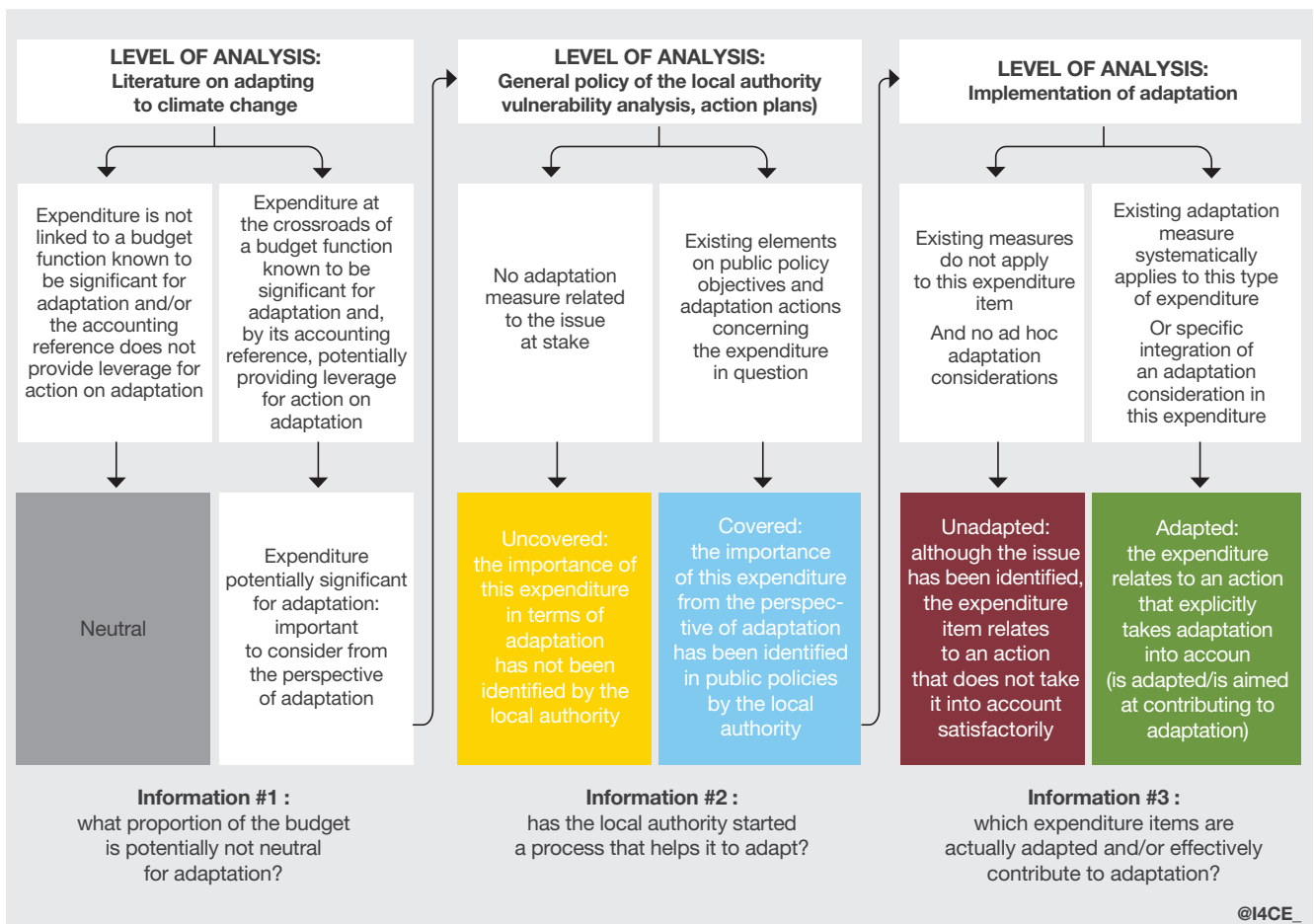


The second Stage assesses whether the expenditure item being analysed is covered by the local public policy measures in favour of adaptation. The third Stage consists of stating whether the action related to this expenditure item has effectively been adapted (new dimensions or criteria have been integrated and/or essential features have been modified). This last Stage is different from the previous Stage in that it checks that the public policy measures identified in Stage 2 have actually been implemented, in the specific case of the expenditure item in question<sup>5</sup>.

<sup>5</sup> This distinction is necessary in practice: development expenditure could potentially for example be covered by adaptation measures in the form of recommendations in a local urban development plan (Plan local d'urbanisme (PLU)) but not have been adapted if the recommendations were not followed.



### ONE PROCESS, THREE STAGES, THREE QUESTIONS ANSWERED



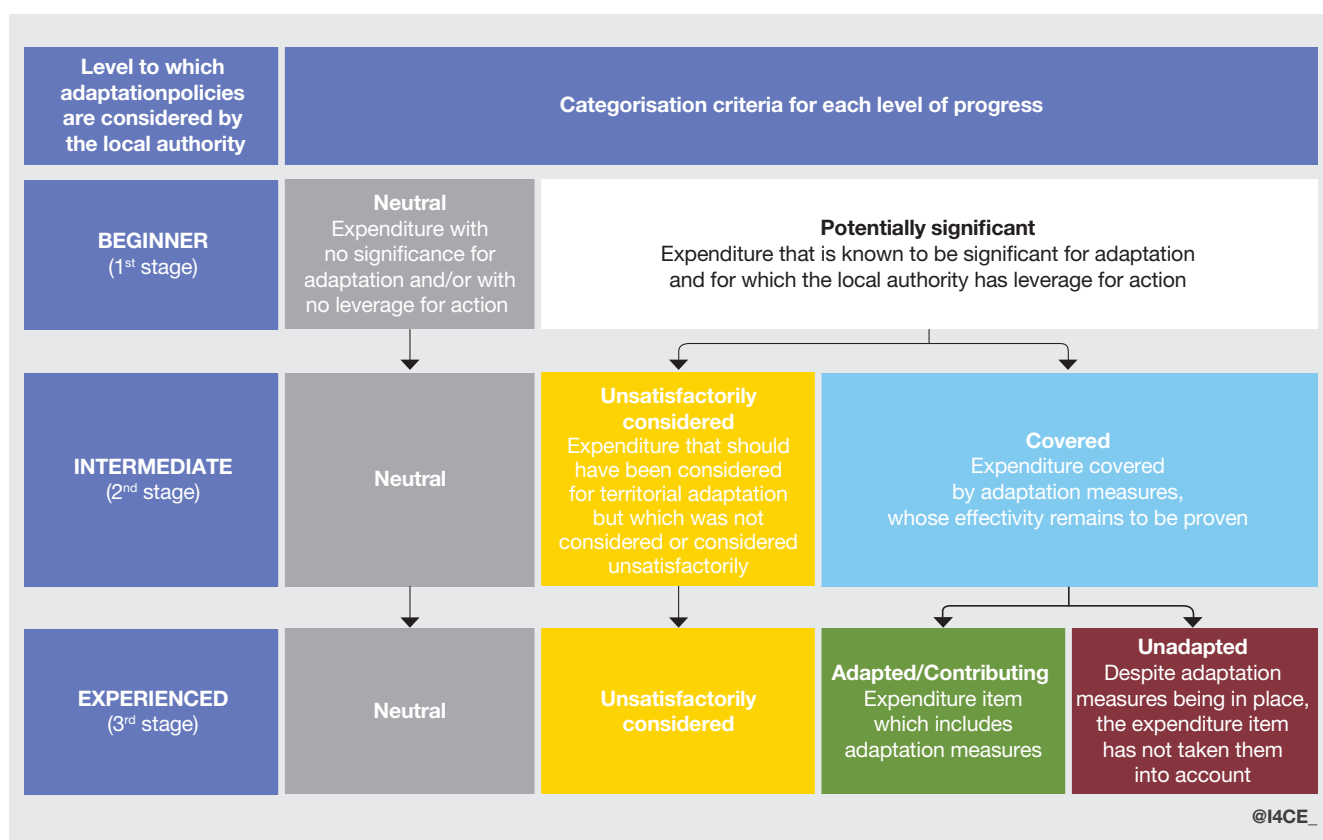
\* Understand by 'expenditure item' an action, public policy, or project led by the local authority that the expenditure item relates to.

**The focus of this analysis is on assessing the adaptation process the local authority is engaged in.** It does not assess the results obtained when the leverage points identified by the local authority have been activated.

The question of how effective actions are, and their impact on adapting the local authority, is difficult to examine at the level of the budget assessment. Analysing the budget line by line makes it difficult to get an overview of the general coherence of the choices that have been made. This question can be studied more easily at the level of the design and steering of public policies and projects. Analysing the effectiveness of actions and the real impact they have on adapting the local authority therefore exceeds the scope of this assessment and overlaps with questions concerning the evaluation of public policies.

This is the **main limitation of this approach** in comparison with an impact analysis. This method does not lead to a conclusion on the compatibility between the local authority budget and a world impacted by climate change. It does not tell us about how adapted the local authority is: which climate change pathways is it prepared for, how far ahead is it adapted for?

To summarise, 3 progress levels tell us more about how far the approach to adaptation adopted by the local authority has been implemented. If the local authority is at level 1, 'beginner', it has not yet implemented adaptation measures to cover certain expenditure items. If the local authority is at level 2, 'intermediate', then it has implemented adaptation measures but is not yet in a position to determine how effective these measures are with regard to planned projects and expenditure. If the local authority is at level 3, 'experienced', then in addition to having implemented adaptation measures it is capable of knowing if they have been genuinely applied and respected. Each level has different categories which are summarised here:



Using this process, adaptation expenditures are divided into **five categories**, shown here with examples:

Analysis categories: The expenditure is...			What does it mean?	Examples
Neutral			The expenditure is not important for adaptation and/or is not associated with known leverage on adaptation.	<ul style="list-style-type: none"> <li>• <i>Tax payment (justification: no leverage on adaptation)</i></li> <li>• <i>Building a waste sorting facility (justification: no significant adaptation issue)</i></li> </ul>
Potentially significant for adaptation	Adaptation unsatisfactorily considered*		The expenditure is important to consider for adapting the local community and area, but the local authority has not considered it as such, or unsatisfactorily. The local authority should implement measures to change its practices and strategy.	<i>No integration of adaptation criteria for new buildings or housing (justification: no adaptation measure for an issue)</i>
Potentially significant for adaptation	Covered by adaptation measures**		The expenditure is potentially covered by adaptation measures: <ul style="list-style-type: none"> <li>• <b>1<sup>st</sup> case:</b> expenditure is potentially covered by adaptation measures but it is not yet possible to demonstrate how the measure actually applies to this specific expenditure.</li> <li>• <b>2<sup>nd</sup> case:</b> evidence must be gathered to show that the adaptation issue at stake has been addressed elsewhere.</li> </ul>	<b>1<sup>st</sup> case:</b> <i>Vegetalisation recommendation, but the project [x] has not yet set forth how it will include it.</i> <b>2<sup>nd</sup> case:</b> <i>The vegetalisation has not been included in project [x] because it was integrated into project [y] in the same space.</i>

Analysis categories: The expenditure is...			What does it mean?	Examples
Potentially significant for adaptation	Covered by adaptation measures**	Not effectively adapted	Adaptation actions are planned by the local authority to mobilise the leverage associated with this type of expenditure but it is not the case for the expenditure item in question.	<i>Vegetalisation recommendation but not respected within the development project</i>
Potentially significant for adaptation	Covered by adaptation measures**	Adapted/ Contributing to adaptation	Adaptation measures in the local authority are planned to mobilise the leverage associated with this type of expenditure and have <b>effectively</b> been activated for the expenditure item in question.	Vegetalisation recommendation respected within the development project

\* Expenditure cannot normally be yellow several years in a row. Once it has been identified, if not adapted, it becomes brown - meaning that the process is not moving in the right direction.

\*\* A specific expenditure that is adapted contributes to the general adaptation of the local authority.

The methodology appendix on Adaptation outlines the questions to ask at each stage of this analysis, and gives examples of how to apply the assessment method.

## D. Results and follow-up to be given to the budget climate assessment

### The results of the budget climate assessment

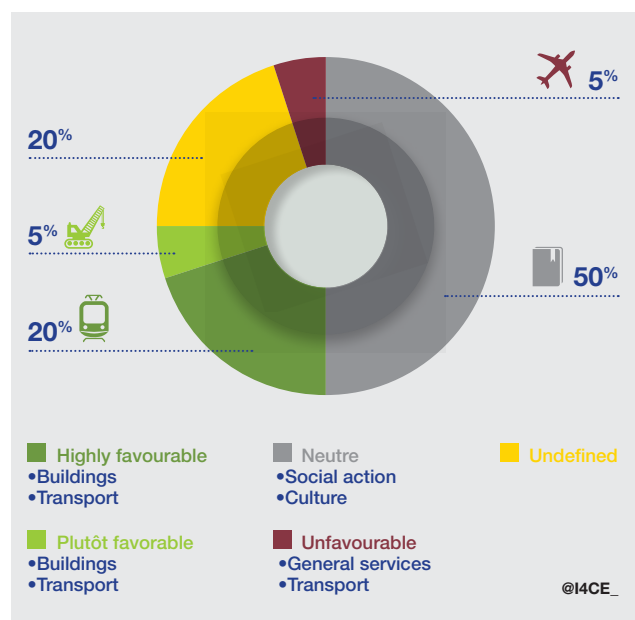
#### Presenting the results

To ensure that the results of the evaluation inform budget decisions, **it is advisable to present the results** to committees, or even **append the results to the preliminary budget**. This will enable informed discussion before the vote on the budget takes place. **An aggregated presentation** means you can see which are the most important topics in terms of climate challenges to be discussed during budgetary decision-making.

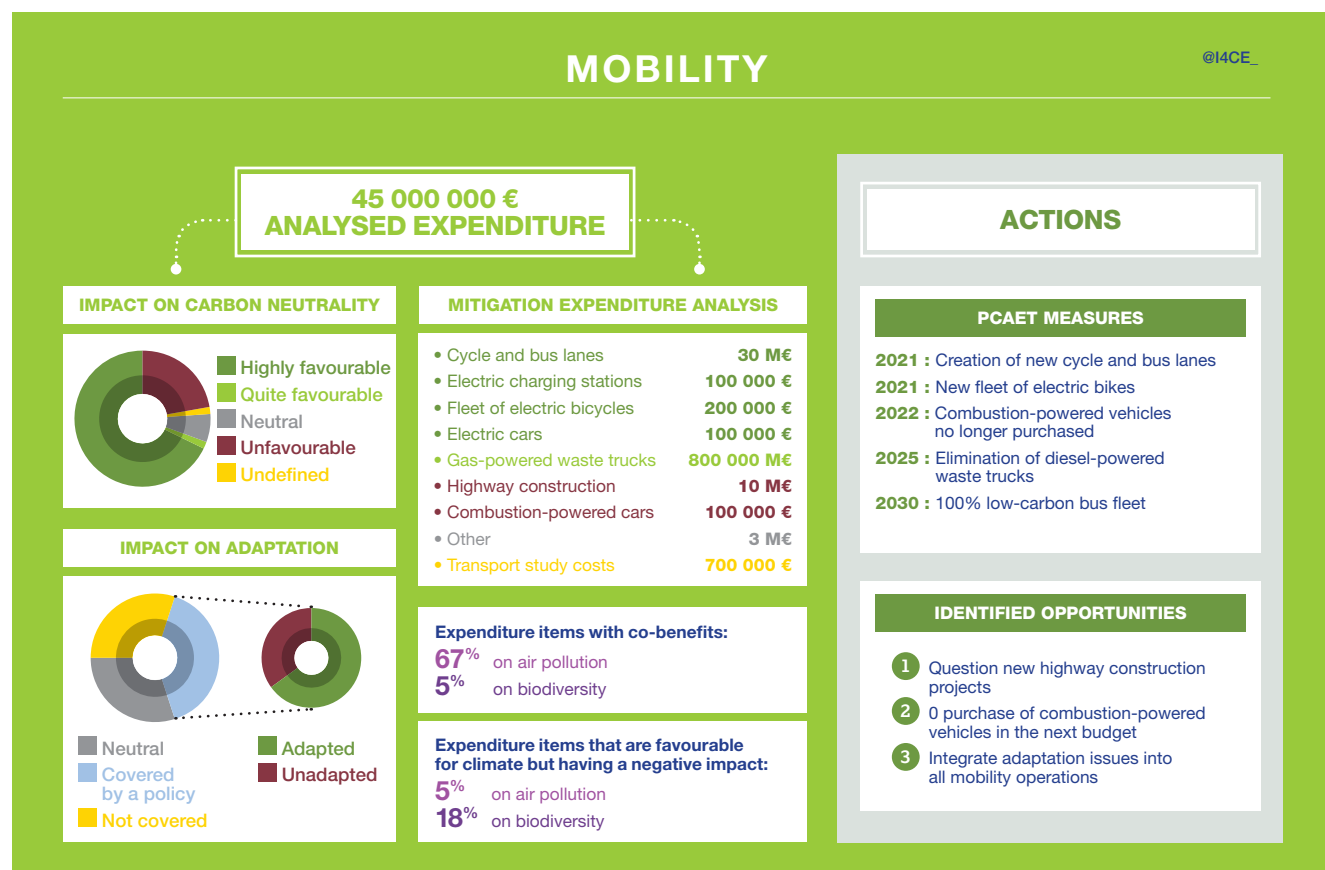
#### Identifying and analysing the scope for progress:

**Presenting results by theme or by committee helps identify existing opportunities** and thus helps inform budgetary decision-making. The results are detailed and can be supplemented with directions on how to use the opportunities that have been identified to improve the impact of the budget on the climate. The results can also be compared to climate air and energy action plan (PCAET) objectives as a reminder of current or planned actions that will contribute to improving the impact of the budget.

### OVERALL IMPACT OF THE BUDGET ON MITIGATION (A FICTIONAL EXAMPLE)



### FICTIONAL EXAMPLE OF A DASHBOARD BY THEME



Expenditure items do not all have the same potential to become 'greener'. It is sometimes easier to make an unfavourable expenditure item favourable than it is to turn a neutral expenditure item into a budgetary driver that is favourable for mitigating climate change. To give an example, the purchase of combustion-powered vehicles is unfavourable if they emit more than 50 gCO<sub>2</sub>/km, but if the vehicles emit fewer than 50 gCO<sub>2</sub>/km, the purchase becomes favourable. On the contrary, for a neutral expenditure item, in the domain of cultural events for example, it is sometimes harder to demonstrate the potential to become favourable. A first step therefore is to identify how much progress each of the unfavourable and neutral expenditure items can make.

The local authorities can attempt to indicate, for the main unfavourable and neutral expenditure items, how much progress is possible and how much has already been planned. This identifies points of leverage for progress, presents ideas for new measures, and provides a dynamic analysis of the budget.

### Key points for presenting the results

#### Do

**Specify the budgets that are included in the chosen scope for analysis:** To avoid biasing interpretation of the analysis, it is necessary to clearly state which budgets were analysed and which expenditures were not included in the scope that was chosen for the analysis.

**Analyse the different environmental criteria separately to be in a position to understand the issues:** For the evaluation to fulfil its purpose as a source of information, results involving different environmental challenges must be presented separately, so as to respect the pluralistic nature of environmental issues. For example, road maintenance is considered neutral from the perspective of climate change mitigation, and could be adapted to climate change with special actions. It is however important to make checks to ensure that expenditure that is favourable for one issue does not have a negative impact on other environmental issues, following the principle of 'do no harm', formulated by the European Commission in the framework of its taxonomy.

#### Don't

**Compare the results of different local authorities:** local authorities do not all have the same competencies. The scope for outsourced public service delegation contracts is flexible. So comparing the results of the budget climate assessment of one local authority with those of another is not possible. The only possible comparison is temporal: the budget climate assessment should enable **the same budget, unchanged in scope, to be compared year on year**. This makes it possible to measure the efforts undertaken by the local authority.

### Repeat the exercise year on year

The category of 'undefined' expenditure is special because over time it should shrink and, ideally, disappear. This category includes expenditure items whose impact on the climate is currently difficult to measure. These expenditure items should however be more closely analysed in order to categorise them. It is, by definition, a temporary category.

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