Methodologies and approaches of territorial planning

ADEME

French Environment &
Energy Management Agency

INTERNATIONAL BENCHMARK

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Introduction

Since the 1990s local authorities have emerged as central actors in the debate and action on climate change. They can and must play a major role as «relays» to spur action in the fight against climate change.

In parallel with this development, international organisations, national institutions, not-for-profit bodies and local authorities themselves have adopted new tools to address the challenges of climate change. Numerous approaches to climate issues have been elaborated around the world, of various types and methodological content:

- ✔ from a simple broad climate strategy, without numerical commitments,
- ✔ to targeted methods and tools designed to achieve solid results to meet specific objectives,
- ✔ and published statements and commitments to reduce greenhouse gas (GHG) emissions in territorial entities,

they cover a broad spectrum.

In France as in its international action, ADEME has done much to build up energy and climate action at the territorial level, with the conception, elaboration and follow-up of the TCEP methodology, development and promotion of energy and climate tools for local authorities, active participation in the Covenant of Mayors scheme, and support for Cit'ergie, among others.

Created under the 2004 National Climate Plan, **Territorial Climate Energy Plans (TCEPs)** have been mandatory since late 2012 for local authorities in France with a population of over 50,000 (Grenelle II legislation). This planning methodology was devised by ADEME in liaison with local authorities in France, and is widely used around the country today. There are currently **450 mandatory TCEPs in place and 150 voluntary TCEPs** pursued in «project» territories (groups of rural municipalities, national parks, and small municipalities among others). The Energy Transition and Green Growth law of 2015 mandates extension of TCEPs, making them mandatory for inter-municipal entities of 20,000 people or more. New Climate Plans must also address air quality, and will be known as Territorial Climate Air Energy Plans (TCAEPs).

ADEME is a strategic partner in the talks held for the organisation of the United Nations Conference of Parties on climate change (COP21) to be held in Paris in 2015, with the prime objective of reaching a new international climate agreement that engages all parties, both North and South, and that will take effect in 2020.

France is also bringing to the table proposals on urban planning for the 3rd United Nations Conference on Housing and Sustainable Urban Development (Habitat III) to be convened in October 2016. ADEME is involved in the working groups formed to draw up international urban and territorial planning directives that will be introduced at this conference.

Focus on energy and climate planning initiatives around the world

Following this period of natural **«spontaneous generation» of methods and tools,** it is now time to acquire an overall view of approaches to energy and climate action around the globe. ADEME has drawn up a panorama of these approaches in countries around the world, to analyse the French TCEP scheme in relation to these initiatives, and especially in comparison with networks created to promote these approaches to local authorities.

Addressing the questions of ADEME's French and international partners, this overview also positions **energy and climate planning approaches and tools** in relation to each other, identifying differences and shared features, and possible opportunities for coordination. This comparative analysis will help local authorities identify the respective scopes and merits of various approaches.

I. Panorama of energy and climate planning approaches around the world

Panorama of energy and climate planning approaches around the world

1. Methodological scope

Some **60 energy and climate schemes** from different countries have been benchmarked in this study, and the methodological content delivered to local authorities under each approach analysed. This analysis is structured along two axes:

- ✔ Country approach[1]: listing of national schemes created by public authorities
- ✔ Network approach[2]: listing of initiatives put forward by other types of organisations – local authority networks, international bodies, NGOs, research institutions, international sources of funding – involved in climate issues that propose tools for local authorities.

The survey covers a very diverse range of schemes that have been defined and classified in **seven principal categories** as presented in the annexes to this report.

2. Results of the benchmark study

2.1. Major findings

Analysing the approaches by type, we make the following observations:

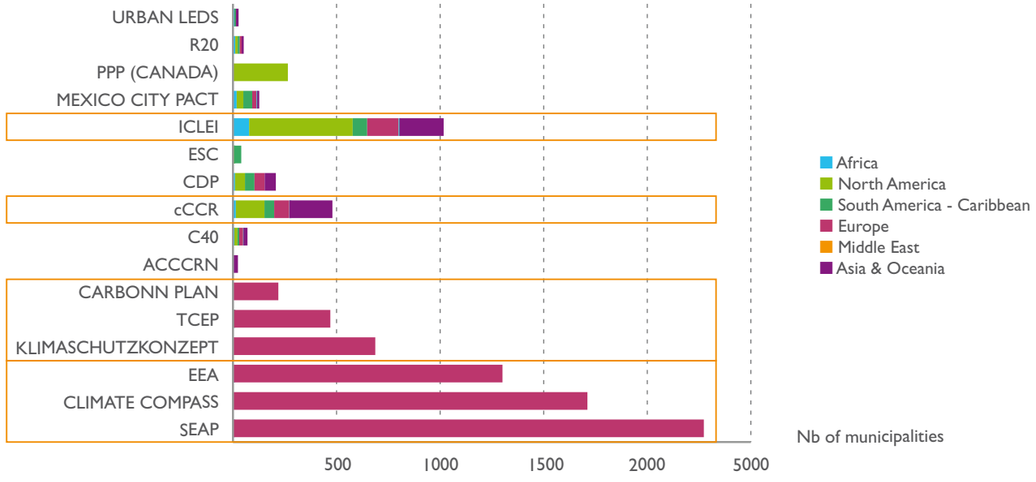
- ✔ A majority of States have adopted **a national climate strategy without developing a consolidated methodological to accompany local authorities.**
- ✔ to compensate for the lack of methodologies designed for the local level, **a number of international approaches developed by networks are used by local authorities** (sometimes strongly favoured at the national level as is the case in Luxembourg, for instance); these international approaches include Climate Compass, Sustainable Energy Action Plans (SEAPs), Regions of Climate Change (R20) tools, Urban Low Emissions Development Strategies (LEDS) and the Green Climate Cities programme.
- ✔ Some countries **have developed powerful methodological tools** at the national level specifically to assist their local authorites on climate issues.

In Europe: Three tools are used by a large number of municipalities in their respective countries: the French TCEP scheme, the German Klimaschutzkonzept, and the Climate Local plan for local authority reporting in the United Kingdom.

Outside of Europe: the International Council for Local Environment Initiative (ICLEI) is the predominant approach, in terms of the number of affiliated communities. The carbon*n* Cities Climate Registry platform (cCCR), founded by ICLEI with other partners, is also widely used.

1 30 Annex I countries that have ratified the Kyoto Protocol, representing close to 10% of global CO_2 emissions (based on 2012 figures from the International Energy Agency); 12 countries not bound by the protocol or Annex I countries that have not ratified the protocol, representing nearly 70% of global emissions.

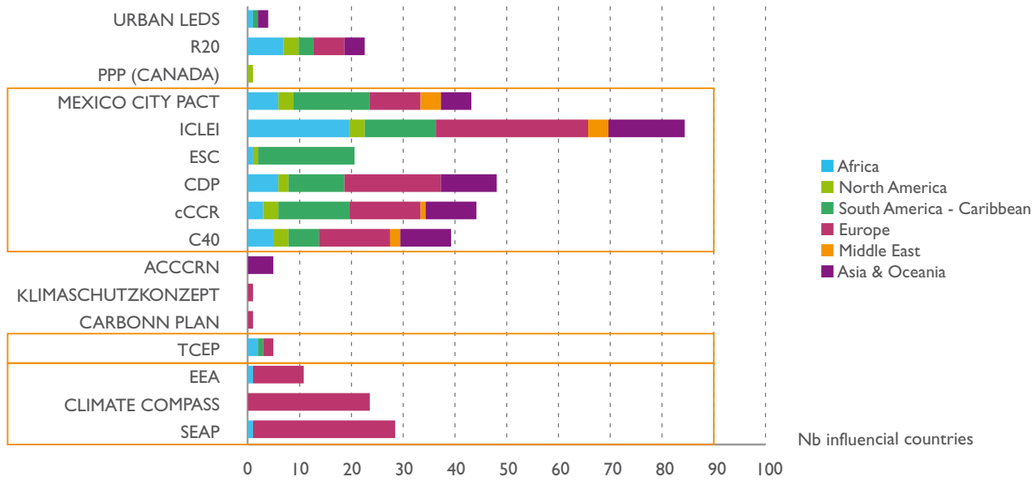
2 19 networks and institutions were studied, 6 with a worldwide scope, 4 targeting developing countries, 6 focusing on Europe, and one for each of the following 3 geographical zones: North America, Latin America, South-east Asia and the Pacific.



Commitment by local authorities for each type of approach
Geographic breakdown of 16 approaches
(Source: I Care & Consult, 2014)

The survey shows that the **international approaches** like ICLEI and CDP **are present in all geographic zones studied while European approaches,** including the European Energy Award (eea), Climate Compass and SEAPs, are limited to the European continent.

The TCEP approach is the most ambitious national initiative in Europe, in terms of applications in other countries and presence outside of Europe.



Prevalence of approaches across geographical zones
(Source: I Care & Consult, 2014)

2.2 Regional spotlight

Europe

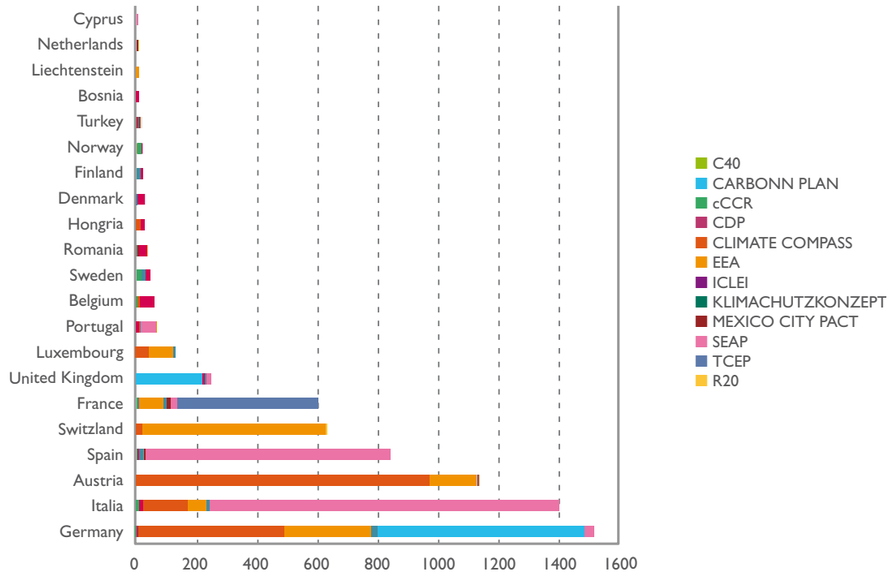
In all, 39 European countries were studied in the course of the survey, a set representing close to 13% of global GHG emissions. The findings show **that only local authorities in only a few European countries are engaged in climate planning,** and most countries number fewer than 100 municipalities with a commitment to climate action.

In several countries lacking a strong national methodology, many municipalities follow one of three European approaches: European Energy Awards in Switzerland; Climate Compass in Austria and Italy; SEAP in Italy and Spain.

Climate approaches are more uniform in countries with a consolidated methodology and/or network of local authorities such as France and the United Kingdom.

OTHER REMARKS

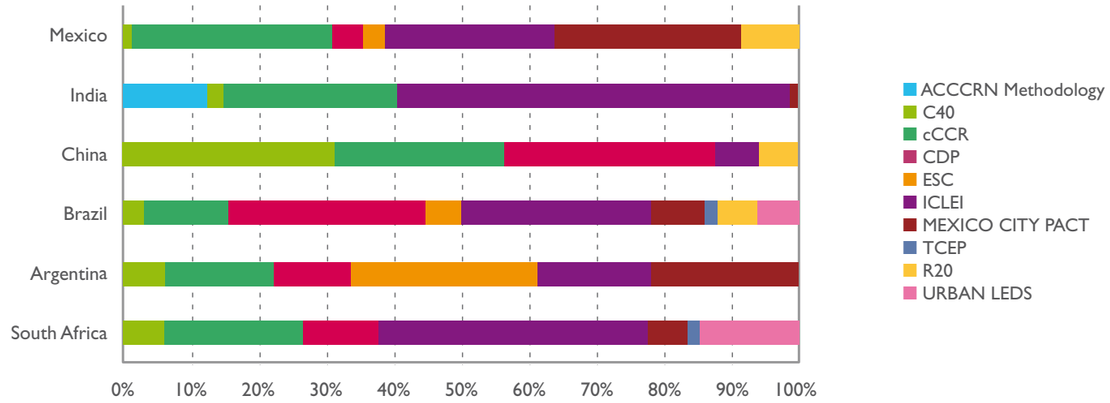
Many local authorities in Germany are engaged in the Klimaschutzkonzept, and at the same time frequently involved in other approaches such as eea and Climate Compass, revealing a particularly strong climate dynamic in German towns and cities. This may also be due to the fact that once an approach has been adopted by a local authority (GHG inventory, action plan, etc.) the marginal cost of joining another initiative is relatively low.



Prevalence of approaches in Europe
(Source: I Care & Consult, 2014)

Focus on major emerging economies and developing countries

Looking closely at six emerging economies – Mexico, India, China, Brazil, Argentina and South Africa – representing 37% of global emissions, we see that while measures to support local authorities exist in these countries, these national governments do not propose consolidated methodology for local climate action planning. **As a consequence there is some overlapping, and even «competition» between international schemes to be adopted as the reference approach at the local level.** We find both strong methodological schemes such as ICLEI and Urban Low Emission Development Strategies (LEDS), and also other types of initiatives such as platforms for exchange like cCCR and commitment statements such as the Mexico City Pact and C40 Cities Climate Leadership Group.

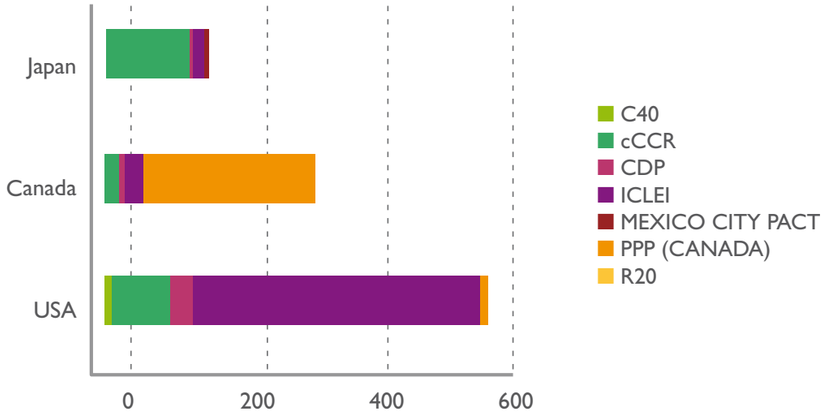


Prevalence of approaches in major emerging economies
(Source: I Care & Consult, 2014)

The survey also reveals that the international climate approaches are for the most part concentrated in these major emerging economies, **and few local authorities in developing countries are involved in structured climate action.** There are only 350 instances found in the 108 developing countries.

Major carbon emitting countries not signatory to the Kyoto Protocol

Three countries with high carbon emissions have not ratified the Kyoto Protocol, or have recently withdrawn their commitment. They are Japan, Canada and the United States, which together represent 22% of global GHG emissions. In these three countries the number of local authorities committed to climate action is low. Domestic networks however, appear to be strongly influential with local authorities; in particular the Climate Protection methodology of the Federation of Canadian Municipalities is well implanted in Canada, and the ICLEI network in the United States (where this network originated). Also in the United States, the Environmental Protection Agency (EPA) has instituted at the national level the Local Climate and Energy Program to help local governments (states and cities) carry out their climate action, notably supporting the elaboration of local action plans.



Prevalence of approaches in major carbon emitting countries outside of the Kyoto Protocol
(Source: I Care & Consult, 2014)

II. Comparative analysis

Comparative analysis

1. Methodological scope

Nine approaches (other than TCEP) were studied in greater detail by ADEME, because **their methodological content, scale of application and international influence were deemed to be particularly interesting.** These approaches include:

- ✔ climate planning methodologies that are certified specifically for this domain (for example, TCEP, SEAP, eea)
- ✔ and also, more broadly, approaches based on financial aspects and implementation (ESC, LC_2, R20),
- ✔ and networks that promote their own methodologies, or provide their members with a pre-existing set of methods and tools (for example, ICLEI).

All of these approaches (methodologies and networks) were examined in relation to the TCEP methodology developed by ADEME.

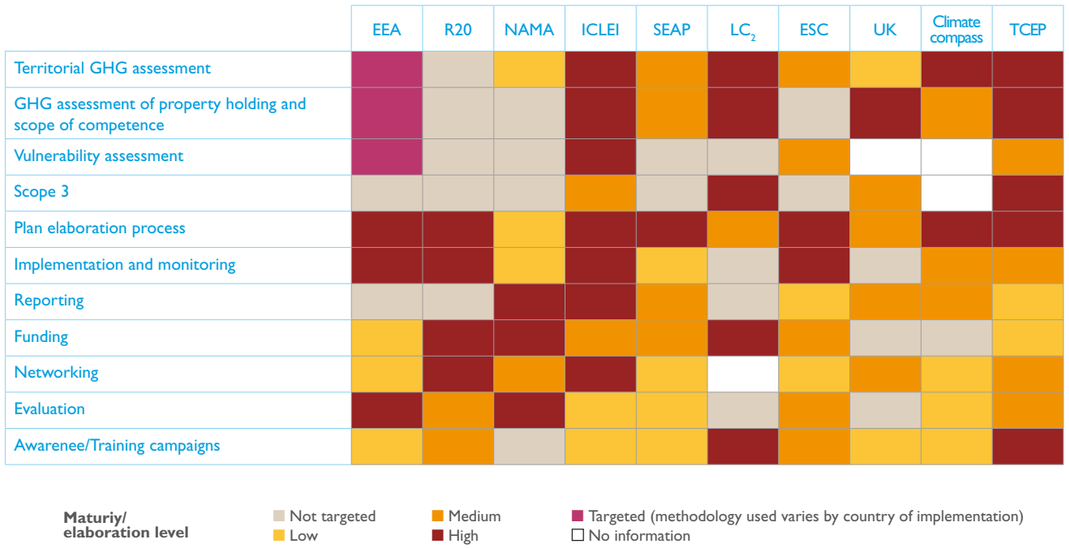
Plan climat Énergie Territorial (PCET)	ADEME	ADEME	The French Territorial Climate and Energy Plan methodology (TCEP) is a sustainable development project for territories. Its purpose is to help local authorities undertake climate mitigation and adaptation actions. Introduced by the National Climate Plan and taken up by the French Grenelle laws, the TCEP is a commitment framework for the French territories. This method has also been used by local authorities outside of France.
Climate Compass	THE CLIMATE COMPASS	Climate Alliance	Climate Compass is a method initially developed and managed by the Climate Alliance. This method was under revision during the conduction of this study.
Sustainable Energy Action Plans (SEAP)	Convention des Maires	Covenant of Mayors	The SEAP is a method developed as part of the Covenant of Mayors, a voluntary movement of local and regional authorities which commit to reduce their emissions. The conditions for local authorities to join this network are to adopt ambitious climate targets and to elaborate a greenhouse gas inventory as well as an operational energy action plan.
Emerging Sustainable Cities (ESC)		Inter-American Development Bank (IADB)	ESC is a method developed by the IABD which addresses primarily the Latin-American and Caribbean countries. The approach aims to support local authorities in their climate actions from A to Z, from initial data gathering to evaluation. Through a simplified analysis of the situation, ESC seeks to engage quickly in implementation without waiting for the results of a long and complex inventory.
Study case United Kingdom		DECC[1], DEFRA[2], Climate Local	In the United Kingdom, commitments and actions in the area of energy and climate change are managed at different levels: DECC deals with climate mitigation and GHG inventory issues, DEFRA deals with adaptation issues. The Climate Local initiative is in charge of energy and climate planning at local level.
Forum European Energy Awards (EEA)	european energy award	The Forum European Energy Award e.V.	EEA is a quality management and certification system for climate and energy actions of municipalities and regions. This structuring approach focused on continuous improvement is based on a catalog of 79 climate and energy measures, a strong governance system and the integration of energy and climate issues in the different policy areas of the local authorities.
Regions of Climate Action (R20)	R20	R20	R20 is a non-profit organization focused on the operational implementation of action plans and on project financing. As part of its activities, R20 connects project developers with financiers, uses innovative financing mechanisms such as third-party financing and supports feasibility studies.
ICLEI	ICLEI Local Governments for Sustainability	ICLEI	ICLEI is an international network of local authorities which offers networking services as well as reference materials and sustainable urban planning tools in the area of energy and climate change. ICLEI develops its own methods (eg GPC) but also references other tools or methods used worldwide. Since 1995, ICLEI is an observer organization to the United Nations Framework Convention on Climate Change (UNFCCC). ICLEI acts as Focal point of Local Governments and Municipal Authorities (LGMA) constituency to coordinate the local government observers at UNFCCC intergovernmental climate negotiations.
Low Carbon Livable Cities (LC_2)	WORLD BANK GROUP	The World Bank	LC_2 is a framework designed for local authorities in developing countries and managed by the World Bank. This toolbox aims to strengthen local authorities' capacity in the areas of strategic planning and investment by providing different services and methods: a greenhouse gas inventory method (GPC), planification and modelling tools, trainings and assistance to access funding…
Nationally Appropriate Mitigation Actions (NAMA)		UNFCCC	The NAMA scheme is an international voluntary and declarative mechanism through which developing countries can register their mitigation actions and search for funding. Initiatives implemented by local authorities as part of their energy and climate plans can be declared by national bodies as NAMAs, thus giving access to international financing mechanisms as part of the Green Fund. However, the NAMA scheme is not, strictly speaking, a method for local authority energy and climate planning.

1 Department of Energy & Climate Change
2 Department for Environment, Food & Rural Affairs

This comparative analysis was based on a study of methodological content, notably the principles and tools proposed at each stage of climate planning. The approaches were assessed against the yardstick of the main action phases of climate planning as defined and presented in the annexes to this document.

2. Major findings

The table below illustrates the stages that are emphasised by each of the approaches studied, and their degree of maturity.



Comparison of methodologies by action stages
(Source: I Care & Consult, 2015)

Generally initiatives tend to be grouped in two poles; either method-based (ICLEI, eea, Covenant of Mayors) or focused on implementation and financing (ESC, LC_2, R20):

- ✔ **Focus on method (audit, elaboration of action plan):** these include the SEAP method, Climate Compass, Climate Local, eea and ICLEI. The eea method stands out from the others for its robust monitoring and evaluation practices in particular. In these initiatives **the project owners are mainly institutional actors** – Covenant of Mayors, Climate Local, Nationally Appropriate Mitigation Actions (NAMAs) **and NGOs** (ICLEI, Climate Compass). The eea approach has a rather different structure: the method is consolidated at the European level, and sponsored by a referent body in each Member State of the European Energy Award Forum (Austria, France, Germany, Italy, Lichtenstein, Luxemburg and Switzerland).
- ✔ **Focus on financing and implementation:** while it is not surprising that ESC and LC_2 are the approaches that focus the most intently on these aspects, they are not the exclusive prerogative of financial institutions, as seen with the R20 initiative emanating from a not-for-profit environmental group.

Special cases: Methodologies developed in the United Kingdom, and NAMAs are somewhat different from other initiatives. There is no truly integrated method and centralised approach for local authorities in the UK. Instead climate planning is carried out on a voluntary basis using tools from various organisations, depending on the stage: Department of Energy & Climate Change (DECC) for the GHG assessment, Department for Environment, Food and Rural Affairs (Defra) for adaptation, Climate Local for implementation, etc. The NAMAs scheme is more institutional, at the State level, and each country reports emission reduction action in its territory in order to gain access to funding.

3. International toolbox

Resources available to local authorities

1… to ensure good climate action governance at the territorial scale

The TCEP method

This method proposes instances of cross-cutting governance, ensuring continual exchange between different municipal departments. This oversight of the TCEP method introduces **a cross-sectoral and cross-disciplinary culture** in municipal governments, which is sometimes new and novel in developing countries, and creates dialogue between actors by breaking down walls between departments and projects. It also opens up a dialogue between actors in the territory and outside partners from the beginning of the audit phase.

Other approaches

Likewise, the **Covenant of Mayors** places special importance on governance, and insists that cities be committed at the highest level. An institutional analysis is designed to assess the maturity of the organisation and pinpoint needs in terms of institutional adaptation. The **eea** approach is also exemplary in this respect: this methodology is based on solid support for the method in each country where it is used. It requires that a working group be formed within the local government to take responsibility for implementation of the scheme. This working group is made up of all the stakeholders active in energy and climate domains.

2… to draw up the climate audit and action plan for the local authority

The TCEP method

The methodological content related to audit procedures and to elaboration of an action plan is one of the strong points of the TCEP approach. As experience with transposing TCEP to other countries has shown, the essential added value of the French methodology at the local level lies in **robust GHG accounting tools,** joint consideration of adaptation and mitigation issues, and construction of an action plan through stakeholder workshops. This consultative approach helps reinforce the capacities of local actors and bolsters cross-cutting integration of actors to better address energy and climate in public policy.

Other approaches

Looking at other approaches, the survey shows that certain networks and methodologies are very strongly positioned in the international context. This is the case for **ICLEI, eea** and the Covenant of Mayors. These methodologies, although globally less elaborate than the TCEP method (notably for Scope 3[1], and the consideration of the entire life cycle when calculating emission factors), are nonetheless sophisticated, and designed with international dissemination in view, making them easily accessible and readily appropriated locally. For the elaboration of an action plan, some initiatives – **ICLEI, World Bank** – propose a toolbox that local authorities can use as they need. Others, such as **Emerging Sustainable Cities (ESC)** target strategic priorities and sectors for intervention by the city, and rank them by priority according to the importance of the topic for citizens, the cost of the action, or inaction, and environmental costs, before outlining measures to be implemented. In the **eea** method the action plan is built up from an initial audit of the local authority's energy and climate policy, and is based on a catalogue of 79 measures that help the eea advisor, the local authority's internal working group and other stakeholders devise an action plan that matches the local potential and is suited to the specific features of the territory.

In some approaches **(R20, ESC and LC_2)**, the diagnostic phase is not the main focus. Some initiatives

1 The Scope 3 is one of three levels of emissions that may be included in a GHG inventory. It corresponds to the called «indirect» emissions, such as the emissions from the extraction of materials purchased by the inventory target or the transport-related emissions of employees and visitors.

rely on existing assessments **(R20)** or conduct a simplified audit **(ESC)** in order to rapidly move to concrete action. Other approaches use previously developed and recognised methods (Global Protocol for Community-Scale GHG Emission Inventories, **GPC**) for **LC_2**.

3… to implement and follow through on the climate action plan

The TCEP method

Implementation of the TCEP process in France is supported by a **strong national regulatory framework** with binding obligations, and by robust territorial accompanying action by ADEME in the form of tools, technical assistance, subsidies, training and awareness campaigns. In most countries in the world, and in particular in developing countries, the absence of a stringent regulatory framework leads to failure to successfully implement measures that may have been decided.

Other approaches

The **R20, ESC and LC_2** methodologies are interesting for their initiatives to provide assistance for project development. Some of the schemes, less focused on diagnostics, emphasise the action phase, in particular implementation of mature and cost-effective technologies. These schemes – **R20, LC_2** – generally favour large-scale projects.

Elements pertaining to follow-up and monitoring of the action plan are also good practices worth noting. The **eea** methodology, for example, includes sophisticated monitoring tools designed to evaluate the quality of the action undertaken by the local authority. In addition, follow-up by an **eea** advisor reinforces the process within the local authority and ensures continuity and improvement over time. Under the ***Climate Local*** initiative in the United Kingdom the participating local authorities are asked to submit an annual progress report on the implementation of their action plans; a reporting and monitoring tool is proposed to this end. The ESC scheme involves citizens in the monitoring and evaluation of the approach.

4… to evaluate and publish reports on climate action

The TCEP method

In France ADEME accompanies the development of tools specifically tailored to TCEP evaluation, notably a **methodological handbook** drawn up at the national level. There are at present no practical evaluation tools formalised for dissemination to local authorities.

Other approaches

The **eea method** is the benchmark in terms of evaluation, with a well honed action evaluation method base on quality management and certification of energy and climate action by local authorities. Evaluation is conducted throughout the process, from the initial audit to certification if possible, with intermediary internal audits by the eea advisor, and external audits every four years. Every measure in the catalogue is given a maximum number of points, on a graduated scale applied to three aspects of the measure: decision, implementation, outcomes.

Certain initiatives have acquired high visibility and credibility in recent years for their external reporting action. This is the case for **CDP** and the **carbonn Cities Climate Registry** (cCCR) that have built strategic partnerships with other actors and methods. These initiatives gather data on a large number of schemes pursued by local authorities and complement climate planning initiatives by providing a shared framework for publication of findings. For example, the **cCCR** developed by **ICLEI** claims to be the largest database on local and subnational climate action. As of today 504 local governments have communicated their data to this platform, giving a total record of some 5,000 climate measures. The National Action Zone for Climate Action (NAZCA) is a portal for actors other than States, launched at the UN Climate Conference in Lima in 2014. More than 3,700 commitments are now registered with this platform, including some 500 made by local authorities (cities, regional entities), in addition to companies and investors. The proliferation of platforms points to the need for transparency and comparability of the different initiatives.

5… to finance climate action projects undertaken by local authorities

The TCEP method

In France TCEP action is accompanied by financial mechanisms and subsidies, in particular for **buildings**, including energy and thermal renovation, and energy-efficient construction. As an example, from 2009 to 2013 the Fonds Chaleur administered by ADEME provided financial aid to close to 4,000 projects to support renewable energy for heating in multi-family housing, in local authority buildings and in corporate premises, representing funding of €1.12 billion for heat production totalling 1.4 million tonnes oil equivalent (toe). During the same period the Fonds Déchets provided support for waste treatment and reduction in many communities and companies, with a budget of €943 million.

Other approaches

The survey reveals a number of interesting approaches to financing.

- ✔ For example the R20 initiative: **financial aid during initial project stages**, e.g. prefeasibility studies, is crucial, and the absence thereof often hinders project completion.
- ✔ The R20 and Green Finance Network initiatives **use databases** to connect project initiator to investors.
- ✔ The LC_2 approach builds municipal creditworthiness to improve **access to financing;** the Covenant of Mayors provides easier access to European funds.
- ✔ **Innovation financing models:** R20 uses third-party financing, LC_2 bundles the financial needs of different cities.

The International Lighting Efficiency Finance Facility (iLEF) is an example of an innovative mechanism tested by LC_2. This mechanism finances LED installations for urban lighting in several cities, with a cumulative investment in excess of $1 million. Capital costs and interest will in theory be recovered through savings achieved with greater energy efficiency. The **Cities Climate Finance Leadership Alliance** was created in September 2014 to stimulate investment in cities, with the participation of 21 partners (French Development Agency, World Bank, UN Habitat, Bank of America, Bank of West Africa, etc.). Via this alliance the World Bank and its partners hope to provide support for transactions and to conduct feasibility studies.

6… to ramp up local authority expertise on climate matters

The TCEP method

An essential factor in the success of the TCEP methodology is the scope of internal and external expertise mobilised. The supporting action supplied by ADEME, in the form of training tailored to different levels of local actors, has enabled local authorities in France to **boost their competence** on climate issues and has facilitated access to networking tools to encourage exchange of good practices and know-how.

Other approaches

The **eea** method proposes an advisor to accompany local authorities and provides a methodological framework to reinforce in-house capacities. Other methods propose training programmes as part of their action to accompany municipalities. The **World Bank,** for example, dispenses «operational» training sessions for cities aimed at improving their creditworthiness. **ICLEI** offers exchange of good practices between local authorities via its network, and frequently organises and/or attends workshops and conferences.

III. Climate planning approaches:
six summary case studies

1. TCEP - Territorial Climate Energy Plan

1. General description

As defined by ADEME «a Territorial Climate Energy Plan (TCEP) is a territorial project for sustainable development aimed **at mitigating climate change and adapting the territory.** The desired outcome is a resilient and robust territory, adapted to circumstances, for the benefit of its population and activities».

Instituted under the National Climate Plan and reiterated by the Grenelle legislation, the TCEP constitutes a framework for commitments made by territorial entities. It is now **mandatory for local authorities with a population of 50,000** or more. But as basins of employment and activity are a more appropriate scale for TCEPs, so-called «project territorities» are also encouraged to adopt a TCEP, on a voluntary basis.

Implementation of a climate plan comprises several stages:

- ✔ **Prefiguration:** the local authority prepares its internal organisation, calibrates the project, engages ongoing consultation with stakeholders.
- ✔ **Audit and mobilisation:** ADEME has developed diagnostic tools to assist local authorities, including carbon assessment for the territory and for local authority properties, competency assessment, and climate vulnerability assessment.
- ✔ **CEP conception:** the authority sets quantitative targets and draws up an action plan, at several levels.
- ✔ **TCEP implementation:** this phase is the operational application of the decisions made earlier.

Communication, monitoring and evaluation measures are pursued throughout the TCEP process.

ADEME also ensures the work of guiding and overseeing TCEP scheme, piloting the network of TCEP task officers, organising national and regional conferences, etc. The Resources Centre comprises a TCEP observatory allowing local authorities to report on the advancement of their plans[1].

1 http://www.pcet-ademe.fr/

2. Characteristics

Objectives

The TCEP establishes two objectives to be reached in a fixed time frame:

- **mitigate and reduce GHG emissions** to limit the impact of climate change in the territory;
- **adapt the territory** in order to limit its vulnerability to climate change.

This methodology is intended to help France meet its national energy and climate commitments for 2020 and to meet Factor 4 objectives by 2050.

Construction phases under this approach

	Territorial GHG assessment
	GHG assessment of property holdings and scope of competence
	Vulnerability assessment
	Scope 3
	Plan elaboration process
	Implementation and monitoring
	Reporting
	Funding
	Networking
	Evaluation
	Awareness / Training campaigns

Degree of maturity / elaboration — Not targeted | Low | Medium | High

Sector(s) covered

The TCEP is seen as a cross-cutting planning tool for public policy, and therefore aims to involve all sectors with impacts on the climate, or that are affected by the climate, i.e. transport, waste and discharges, forests and biodiversity, energy consumption and production, agriculture, soil use, industry.

Method originator / owner(s)

This method is developed and supported by the French Energy and Environment Agency (ADEME).

Typological category

- ☐ International methodology for national use
- ☐ National climate strategy without accompaniment at the local level
- ☐ National climate strategy with local ambitions
- ☐ National climate strategy with local methodology
- ☒ Methodology developed nationally for local implementation
- ☐ International methodology for local use

Forms of adoption

- ☒ Voluntary
- ☒ Regulatory
- ☒ Access free of charge

Targeted climate action

☒ Mitigation ☒ Adaptation

Targeted geographic area

- France.
- Seven instances of TCEP transposed in an international context

3. Strategic analysis: SWOT grid[3] for the methodology

Strengths

- **A method that has been successfully applied** nationally for several years now.
- **Bottom-up process:** discussion with volunteer local authorities prior to establishing regulatory obligations.
- **Internationally recognised sturdy diagnostic tools,** in particular for GHG accounting (under Scope 3).
- **A cross-cutting conception** that integrates actors, and breaks down barriers between projects, public policy and government departments.
- **A consultation process** that has achieved recognition in France and abroad favours dialogue between local government departments and actors in the territory.
- **Strong territorial support action** by ADEME, providing tools, technical assistance, subsidies, training and awareness campaigns.
- **Increasing network connections** via TCEP colloquia and regional networks.
- **Methodology transposed** to economic development planning for territories at all levels of development and in all geographic zones.

Weaknesses

- **A steadily expanding adaptation** segment, with tools from ADEME and field testing; this segment is still less mature than the mitigation segment.
- **Few TCEPs have included construction** of both ex ante and ex post evaluation tools. No tool formally developed at the national level.
- **The territorial scope of the TCEP** is not mandatory.
- **Methodology focusing** more on planning than on implementation: difficult to launch new action
- **Reporting covers TCEP progressio**n but does not include quantitative data on local authorities' objectives, their contribution to national and regional targets, nor information on fulfilment of goals.
- **The time frame for implementation** – is longer than politicians' terms of office – and the technical approach of this methodology make it sometimes hard to mobilise elected officials.
- **The complexity of the carbon assessment tool,** its cumbersomeness and the French characteristic of the emission factors database make it hard to adapt for international users.

Opportunities

- **Consolidated feedback** on the first generation of TCEPs provides a basis for recommendations to improve the experience of the second generation of users.
- **Energy transition legislation of 2015** now in place reinforces the strategic position of the TCEP and some of its methodological features (air quality for instance).
- **Expanding socioeconomic** analysis of TCEPs
- **Mobilise territorial entities in the run-up to COP21**, and ADEME's decision to showcase the TCEP tools and the role of cities in fighting climate change.
- **The movement in favour of positive energy** and green growth in territories (PEGGT) offers a new terrain for operational implementation of TCEPs. The Energy Transition legislation includes plans for 200 PEGGT field tests in 2017.
- **ADEME and the French Development Agency (AFD) are resolved to use their complementary skills** and approaches to reinforce the TCEP methodology internationally.

Threats

- **The GHG accounting tool is in competition** with other methodologies, GHG and GPC, that are more widely disseminated and followed internationally.
- **Little information on the TCEP** initiative is available in English or languages other than French.
- **The force and reputation of networks** that have been prominent on the international scene for a number of years, and are making inroads in France.
- **Some interesting experiments** with TCEP methods have been conducted in other countries, but have not all demonstrated their effectiveness for spurring operational climate action.

4. Method transposed outside of Europe: TCEP in the state of Minas Gerais in Brazil

Minas Gerais is a microcosm of Brazil: third-ranking area in the country by economic power, it generates 9% of GDP, but is marked by starkly unequal conditions between the industrial and well integrated southern region, and the poorer rural North, comparable to the Nordeste on the scale of Brazil as a whole.

The Minas Gerais Energy Climate Plan (Plano de Energia e Mudanças Climáticas de Minas Gerais - PEMC) was developed through tripartite cooperation between the Nord Pas-de-Calais region in France, ADEME and the Brazilian State Environment Foundation (Fundação Estadual do Meio Ambiente - FEAM). The state of Minas Gerais and the French region signed a cooperation agreement in 2009 The French Development Agency is also a participant in this project via cofinancing for the creation of a platform to increase awareness and communicate with the municipalities in Minas Gerais.

The PEMC was finalised in January 2015, giving rise to a full energy/climate audit for Minas Gerais, and **participative elaboration of an action plan for a low carbon economy.** Two strong points in this transposition are the creation of cross-cutting oversight instances, and institutional and territorial workshops, **building awareness among actors and enabling concrete** public policy commitments.

Despite a change of political leadership in the local government in 2014, and the absence of binding obligations for the elaboration of a climate plan, the PEMC scheme has received strong political support and ongoing government involvement in implementation. Governor Fernando Pimentel has created a policy committee to oversee the development and implementation of TCEP action (Minas Gerais Official Journal, 13 August 2015). FEAM also hopes to develop a climate and energy observatory on the model of French observatories in coming months, in cooperation with ADEME.

In parallel, the AFD has set up in early 2015 a line of financing with the local development bank of Minas Gerais (BDMG), which objective is to support municipal investments in projects with joint benefits on climate change (an articulation with the implementation of the PEMC is sought).

3 Strengths, weaknesses, opportunities, threats (AFOM en français ; Atouts, faiblesses, opportunités et menaces).

11. European Energy Awards

1. General description

The European Energy Award (eea), based on the Cité de l'Energie scheme in Switzerland and the e5 scheme in Austria, is a quality label launched in 2003. The label constitutes **a quality management system and certification of the energy and climate action undertaken by local authorities (municipalities, groups of municipalities, metropolitan areas), with a catalogue of 79 measures used in all participating countries.** This methodology requires payment of licencing fees, and ensures uniform application of certification criteria. Close to 1,300 local authorities in Europe participate in the scheme, and half of them have received certification.

The eea methodology places energy and climate action by local authorities in a framework of ongoing improvement, in terms of organisation (decision process, policy design, guidance and evaluation) as well as in terms of qualitative and quantitative results. Work by the participating **authorities is structured in-house** via working groups and meetings, and **accompanied by an eea advisor** in order to elaborate an initial cross-sectoral audit, draw up an action plan based on the audit, and monitor the quality of public policy. The certification process, when successful, leads to a four-year certification that recognises achievement relative to the potential of each authority, as a function of their internal competencies, and the scope of intervention.

Energy, climate and vulnerability assessments are not mandatorily prescribed under the eea scheme, but they are strongly recommended, and evaluated by the catalogue of measures. Local authorities are free to choose their accounting method, and these therefore differ between authorities and/or States.

The action plan is built on an initial audit of the authority's energy and climate policy conducted by the eea advisor. This assessment surveys work that has already been accomplished, with what level of commitment and resources (deliberations, budget, designated team, etc.) and in what ways (organisational measuring emphasising cross-cutting intervention), and with what qualitative and quantitative results. With this assessment in hand the advisor can propose qualitative and quantitative objectives and a timetable for implementation. The designated team within the local authority then prepares an action plan for the coming four years.

Before committing to the eea process, the local authority must:

- ✔ **Obtain prior approval from the national/federal** eea organisation, and formally deliberate on participation in the scheme.
- ✔ **Pay annual fees for use of the method** (in France, €0.005 per inhabitant).
- ✔ **Form an in-house working group** in charge of programme implementation.

2. Characteristics

Objectives

- Promote rational energy use and development of renewable energy **going beyond national targets.**
- Ensure that climate issues **remain on the local political agenda** with a view to ongoing improvement.
- Lobby local elected officials, **make their action to combat climate change more visible** and encourage emulation of best practices.

Method originator / owner(s)

eea is a registered trademark in Europe and the method is sponsored by a correspondent structure in each country that belongs to the Forum European Energy Award e.V (Austria, France, Germany, Italy, Lichtenstein, Luxemburg and Switzerland).

Typological category

- ☐ International methodology for national use
- ☐ National climate strategy without accompaniment at the local level
- ☐ National climate strategy with local ambitions
- ☐ National climate strategy with local methodology
- ☐ Methodology developed nationally for local implementation
- ☒ International methodology for local use

123 Construction phases under this approach

	Territorial GHG assessment
	GHG assessment of property holdings and scope of competence
	Vulnerability assessment
	Scope 3
	Plan elaboration process
	Implementation and monitoring
	Reporting
	Funding
	Networking
	Evaluation
	Awareness / Training campaigns

Degree of maturity / elaboration

Not targeted · Low · Medium · High

Targeted but without prescribed methodology

Forms of adoption

- ☒ Voluntary
- ☐ Regulatory
- ☐ Access free of charge

Targeted climate action

☒ Mitigation ☒ Adaptation

Sector(s) covered

Six areas are covered in the initial assessment: internal organisation; local authority properties; mobility; energy, water supply, sanitation; land use planning and territorial development; communication and cooperation.

Targeted geographic area

Member countries: Austria, France, Germany, Italy, Lichtenstein, Luxemburg, Monaco, Switzerland

Pilot countries: Hungary, Morocco, Romania, Ukraine

3. Strategic analysis: SWOT grid for the methodology

Strengths

- **Emphasis on cross-cutting action** and internal organisation in the local authority, two factors for successful energy–climate strategies
- **Information shared in-house,** designation of a dedicated team, annual steering committee meeting, accompanying support from the eea advisor are constraints that ensure that the local authority maintains priority focus on this issue.
- **Striving for excellence:** «properties and service» measures are not well publicised, unlike the territorial focus aimed at exceeding regulatory obligations.
- **Ensures ongoing qualitative and quantitative evaluation** of the action undertaken.
- **Certification granted for only four years,** inciting authorities to pursue their focus on climate issues.
- **Catalogue of measures adapted** in each country, and progressively more stringent, to establish ongoing improvement.
- **Gives visibility and credibility** to public action by the municipality.

Weaknesses

- **Need for a technically competent national or regional body** to adapt the method to the specificities of the country or region
- **Need for national and/or regional funding to ensure the program's implementation** (national or regional organization, training of advisors, network facilitation)
- **Catalog of measures common to all countries** with limited possibilities of adaptation to the specific context or needs of the local authorities

Opportunities

- **Quality recognised by the European Commission** for SEAP implementation, could be automatically acquired in the future.
- **In most European countries** there is a trend to group municipalities, in order to pool human and technical resources.
- **The scheme gives national structures the latitude** to adapt the catalogue to their institutional framework, opening the way to broad dissemination throughout Europe and in neighbouring countries.
- **Measures addressing air quality**, the circular economy and financing are expected to included in the catalogue when it is next updated.
- **Potential complementarity** with mandatory TCEP Cit'ergie is already recognised as a scheme that can be used to structure and implement a TCEP.

Threats

- **Budget restrictions** make it difficult for local authorities to engage in structuring action regarding housing, transport, etc.
- **This scheme could be extended t**o all authorities in a country on the condition that political and institutional backing is strong at all levels of government.

4. Articulation between the Cit'ergie programme and the TCEP methodology in France

Cit'ergie® is the French name for the European Energy Award® (eea). ADEME promotes this label at the national level, and is already strongly involved in the approach and methodology underpinning the Territorial Climate Energy Plans (TCEPs). Cit'ergie is conceived as as **an operational tool to support local authorities in elaborating a TCEP.** The scheme builds effective management of energy and climate policies, and brings coordination and consistency to local action, supporting the construction of a TCEP. Cit'ergie contains elements to take the articulation with other planning tools even farther, as the label also offers support for elaboration of an Agenda 21 plan, and assistance to local authorities to meet their commitments under the Covenant of Mayors.

5. Method transposed outside of Europe: Jiha Tinou programme in Morocco

The Jiha Tinou programme is a territorial strategy devised by the Moroccan Agency for the Development of Renewable Energy and Energy Efficiency (ADEREE). The aim is to meet national renewable energy and energy efficiency targets: cut energy consumption by 12% by 2020, recourse to renewable electricity for 42% of power (14% solar, 14% wind, 14% hydroelectricity).

Jiha Tinou is based on an adaptation of the eea methodology, with financial support from ADEME, Swiss and German cooperation aid (REPIC and GIZ funds respectively).

The project will run for eight years (2012-2020), with an initial phase (2012-2014) of testing in three municipalities; Agadir, Oujda and Chefchaouen. During this pilot phase the eea tools were adapted to the context in Morocco. As an example, software used in Europe (EnerCoach in Switzerland and Luxemburg, Patrimonia and EnerConso in France) formed the basis of an energy accounting tool suitable for Morocco, devised in Agadir and entitled «Local authority energy management performance chart». The eea catalogue of energy planning measures, the evaluation grid and the French Espaces Info Energie model were also adapted to local circumstances.

In the pilot phase action focused primarily on public and street lighting projects, with surveys of lighting equipment and more efficient energy use in lighting installations.

III. SEAP Covenant of Mayors

1. General description

The Covenant of Mayors is a voluntary movement launched in 2008 by local and regional authorities that pledge to **reduce their CO_2 emissions by at least 20% from 1990 levels** (or the closest year for which data exist). The pact is above all a political engagement intended to demonstrate the local authorities' determination to fight climate change, without requiring members to meet this objective in order to stay in the group.

In October 2015, the Covenant of Mayors merged with Mayors Adapt to address the mitigation and adaptation aspects. Launched in 2014, the Mayors Adapt has 150 signatories in 23 countries representing 30 million people in the first year.

The signatories of the Covenant of Mayors must submit three «key» documents in a standard format, for validation by the Joint Research Centre. These are

- ✔ **a Baseline Emissions Inventory (BEI)** established for the territory one year into the process, **and an Sustainable Energy Action Plan (SEAP).** This plan outlines measures to be taken by the local authority in a time frame of three to five years;
- ✔ an action report established two years after submission of the SEAP, for monitoring, e**valuation and verification purposes.**

Local authorities are free to choose the measures they will apply to attain their objectives. The methodological framework is intentionally flexible, to be adaptable to local circumstances and encourage broad participation in the movement. To date, over 6,500 localities in 50 countries have signed the Covenant, and 4,143 action plans have been submitted. The movement extends beyond the limits of the European Neighbourhood Policy, to countries as far away as Bangladesh, Kazakhstan and New Zealand.

The backing of the European Commission is a key factor in dissemination of the method. In particular, the Commission funds programmes to assist cities and towns in Europe and in neighbouring countries in setting up a SEAP. This methodology can be coupled with other approaches, but problems of compatibility often make this difficult.

In October 2015, in the lead-up to COP 21, the Covenant of Mayors will institute **a new framework for commitments up to 2030** to reinforce action by participating local authorities. As of this writing the new Covenant outlines three strategic directions: strengthening the role of cities in the 2030 Covenant; coordinating local initiatives to be consistent, and speak with one voice; exporting the European model.

Finally, during the COP21 in December 2015, the Covenant of Mayors will announce its deployment worldwide - Covenant Global - including in very short term in the Sub-Saharan African countries by adapting the objectives and integrating those of the United Nations Sustainable Energy for All (in 2030: universal access to energy, doubling the rate of improvement in energy efficiency, doubling the share of renewables in the energy mix).

2. Characteristics

Objectives

- **Exceed EU targets for** to reduce CO_2 emissions by 20% from 1990 levels.
- **Give visibility to local elected officials** who pledge to fight climate change.
- **Demonstrate the capacity for action held by local authorities** and promote a subsidiarity system.

Method originator / owner(s)

The Directorate General for International Cooperation and Development of the European Commission, European Commission and the Directorate General for Energy, method developed by the Joint Research Centre.

Typological category

- ☐ International methodology for national use
- ☐ National climate strategy without accompaniment at the local level
- ☐ National climate strategy with local ambitions
- ☐ National climate strategy with local methodology
- ☐ Methodology developed nationally for local implementation
- ☒ International methodology for local use

Construction phases under this approach

	Territorial GHG assessment
	GHG assessment of property holdings and scope of competence
	Vulnerability assessment
	Scope 3
	Plan elaboration process
	Implementation and monitoring
	Reporting
	Funding
	Networking
	Evaluation
	Awareness / Training campaigns

Degree of maturity / elaboration — Not targeted | Low | Medium | High

Forms of adoption

- ☒ Voluntary
- ☐ Regulatory
- ☒ Access free of charge

Targeted climate action

☒ Mitigation ☒ Adaptation

Sector(s) covered

All energy-related emissions sectors (excluding industry), primarily buildings and construction, appliances, installations and urban transport.

Targeted geographic area

European Union and countries of the European Neighbourhood Policy

3. Strategic analysis: SWOT grid for the methodology

Strengths

- **By networking cities a community** can be created, commitments bolstered and exchange of information, feedback and experience encouraged.
- **Allows local authorities** to send a strong signal regarding their political commitment to the fight against climate change.
- **Establishes legitimacy and attracts** potential investors.
- **Joint measures and action plans** to exploit economies of scale.
- **The method includes some prescribed measures,** but remains flexible to some degree, facilitating adoption by a large number of participants.
- **Coordinated with European financial aid** and funding to outline operational solutions for implementation.

Weaknesses

- **Many local authorities have pledged** commitment but have not adopted an SEAP.
- **For the moment local authorities subject** to national regulatory requirements must submit a separate file to participate in this scheme.
- **The Covenant of Mayors scheme** focuses on planning and methodological contributions, but has little to offer in terms of project financing and operational implementation.

Opportunities

- **Automatic analysis of the grid** and recourse to «facilitators» as the first filter in the evaluation process.
- **There is a trend to harmonisation** between initiatives, or steps to establish equivalences between schemes.
- **The Covenant of Mayors** has elicited interest in many countries, notably in countries where there is no national framework for climate action.

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Threats

- **In some countries the SEAP under the Covenant of Mayors is added to other regulatory** or pre-existing climate action measures, without harmonisation of methodologies, notably for inventory and reporting. Local officials thus find themselves obliged to follow multiple methods and submit multiple reports.

4. Method transposed outside of Europe: the CES-MED programme

The CES-MED programme is financed by the European Neighbourhood and Partnership Instrument (ENPI) The instrument was created on 1 January 2007, and constitutes **the main source of funding for the 17 partner countries** (ten Mediterranean countries and six Eastern European countries, plus Russia).

One of the major tasks of the CES-MED project **is to help local and national authorities prepare SEAPs.** In 2014 a programme was set up to support cities joining the Covenant of Mayors, accompanying a total of 18 towns and cities (three in each of six countries) in the Maghreb and Mashreq regions in preparing their emissions inventory and action plan. Since these beginnings other cities have joined the project.

Specific methodology was developed for cities in South countries, to take the issues and challenges of this region into consideration.

IV. ICLEI

1. General description

ICLEI is a global network of towns, cities, territories and metropolitan areas committed to sustainable urban development. The network was set up in 1990 in the wake of the World Congress of Local Governments, and has since grown to include 12 mega-cities, 100 super-cities, and 900 urban territories in 84 countries.

ICLEI's strong points are a robust methodology coupled with a highly visible and active network. ICLEI has developed its own methods, e.g. the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC), but also lists other tools and methods used around the world.

ICLEI is in effect a platform that offers a broad selection of tools and resources to members. Initially known as the International Council for Local Environmental Initiatives, ICLEI emerged from the Cities for Climate Protection (tm) (CCP) scheme. This scheme, created in 1993, follows five stages:

- ✔ 1. Conduct baseline emissions inventory and assessment of climate impacts
- ✔ 2. Setting objectives
- ✔ 3. Develop an action plan (that must be adopted by the city government)
- ✔ 4. Implement the action plan
- ✔ 5. Monitor and evaluate outcomes

ICLEI has recently updated and modernised its methods, based on its 20 years of experience. This new approach comprises three main phases: 1) Analyse, 2) Act, 3) Accelerate. Each phase is divided into three stages, further subdivided into three substages each. All in all there are 27 stages, now being tested in 37 cities in various countries, via the Urban LEDS programme financed by the European Union.

One of the strengths of ICLEI is that it is very active in the international sphere. ICLEI takes part in talks under the UN Framework Convention on Climate Change (UNFCCC). Since 1995 the network has had the status **of observer at UNFCCC** proceedings, and is the Designated Contact Point for local authorities and their coordination in intergovernmental climate negotiations.

2. Characteristics

Objectives

The ICLEI network proposes three types of service to its members:

- In its capacity as an association of local governments, ICLEI connects decision makers and their organisations at the global level, to adopt joint positions at important events and to share information on their successful practices.
- As a resources centre and platform ICLEI supports and accelerates the transition to sustainable urban policies by its members.
- As a technical agency ICLEI offers expertise, tools, authoritative knowledge, training and advice to its clients. In this instance the ICLEI network teams act as outside service providers to local authorities that are members of the network.

Method originator / owner(s)

The network is the work of the international NGO of the same name. Among the major institutional backers who contribute to operation of the network is the German Federal Ministry for Economic Cooperation and Development (BMZ) and EU.

ICLEI is a network of local authorities: members pay dues calculated on the basis of their population and economic status of their country. The network organises and deploys a team of project officers, and technical teams capable of providing services to local authorities.

Typological category

- ☒ International methodology for national use
- ☐ National climate strategy without accompaniment at the local level
- ☐ National climate strategy with local ambitions
- ☐ National climate strategy with local methodology
- ☐ Methodology developed nationally for local implementation
- ☒ International methodology for local use

Construction phases under this approach

	Territorial GHG assessment
	GHG assessment of property holdings and scope of competence
	Vulnerability assessment
	Scope 3
	Plan elaboration process
	Implementation and monitoring
	Reporting
	Funding
	Networking
	Evaluation
	Awareness / Training campaigns

Degree of maturity / elaboration: Not targeted · Low · Medium · High

Forms of adoption

- ☒ Voluntary
- ☐ Regulatory
- ☐ Access free of charge

Sector(s) covered

The ICLEI network is positioned as a cross-cutting organisation; members choose to develop urban policies, according to their priorities, grouped in the following themes, or agendas: Sustainable City; Resilient City (adaptation); BiodiverCity; Low-carbon City; Resource-efficient and Productive City; Smart City; Ecomobile City; Sustainable Local Economy and Procurement; Healthy, Happy and Inclusive Communities; Sustainable City-Region Cooperation.

Targeted climate action

- ☒ Mitigation ☒ Adaptation

Targeted geographic area

Global

3. Strategic analysis: SWOT grid for the methodology

Strengths

- **A network of international scope connecting local authorities** and municipalities of all sizes, present on all continents.
- **Very rich palette of services, offering a range of highly developed and detailed tools;** the network has the capacity to furnish dedicated expertise services to its members.
- **Members of the network are free** to choose services according to their needs.
- **Strong capacity to bring together** and unite initiatives, resource platforms to gather and exploit information, current news, best practices.
- **Comprehensive service offer addressing** all concerns of municipalities involved in a process to improve their sustainable development policies.

Weaknesses

- **Methodological content is not always very precise.** The interface for accessing tools is not always clear.
- **There is a risk that member authorities** may expend efforts on mastering tools that do not correspond to their needs.

Opportunities

- **The cost of participating in the network** is relatively affordable, so that many local authorities, including in developing countries, can join.
- **The network seeks to be a global reference for all stages** of assistance to local authorities for environmental and sustainable development issues.
- **ICLEI does not purport to propose a method** for elaborating local action, but is rather a clearinghouse that centralises methods and other networks.

Threats

- **It is possible to join the network without necessarily having active policies in place;** this jeopardises the credibility of the label and the network's reputation.

4. Carbon*n* Climate Registry (cCR)

Carbon*n* Climate Registry (cCR) was launched on the World Summit of Mayors on Climate in Mexico, November 2010. The registry was developed with ICLEI's support and is one of the tools promoted by the network. It aims to be a global **solution to issues of measures, reporting and verification (MRV) of the climate action of local governments.** It allows them to report publicly and regularly about the development of their local climate actions via an online platform, including:

- ✔ Commitments to reduce greenhouse gases (GHG),
- ✔ Emissions inventory,
- ✔ Mitigation of climate change / adaptation actions.

The results obtained are used in the Local Government Climate Roadmap, which plays a key role in raising **awareness of local governments in global climate negotiations.**

Today, 524 cities and regions participate to the cCR, representing 14% of the global urban population and GHG emissions reduction commitments estimated at one thousand billons of tones by 2020.

V. R20: Region of climate action

1. General description

Regions of Climate Action (R20) is a not-for-profit environmental organisation founded in 2010 by former California governor Arnold Schwarzenegger, with support from the United Nations. R20 is a coalition of subnational governments, private enterprises, international organisations, NGOs, academic institutions and financial establishments.

Its mission is to help subnational governments develop emissions reduction programmes and/or adaptation projects, by linking regions, technology and financial resources. In practice there are very few adaptation projects in the R20 portfolio. The network has 560 members.

R20 projects are identified, developed and implemented in five phases.

- ✔ **Phase 1: Initial mission** Current status assessment of the region covered by the low-carbon economy development plan and projects.
- ✔ **Phase 2: Project Evaluation** R20 focuses on projects previously identified by local authorities. This initiative gives priority to proven technologies that are economically viable and capable of bringing rapid gains. Adaptation projects are not covered.
- ✔ **Phase 3: Project development plan R20** draws up the appropriate budget, ensures financing and other necessary resources, and works with members to establish the project development plan.
- ✔ **Phase 4: Submission to the R20 Green Finance Network** The final plan is submitted to the appropriate members of the Green Finance Network (GFN) that is composed of over 100 global and regional financial institutions. R20 helps identify the most relevant institutions for each project.
- ✔ **Phase 5: Project implementation and evaluation** When financing has been secured, the project is started up and monitored over time to ensure that the outcomes are consistent with the initial objectives.

R20 is not a political or lobbying group, nor a forum for exchange of good practices. It focuses its attention on **operational implementation** of action plans and on project financing. R20 provides analyses and due diligence on projects to the GFN institutions to facilitate evaluation of opportunities by investors. R20 also works with commercial partners to put pre-investment instruments into place to finance the preliminary studies requested by investors.

In the R20 business model, there **are no membership fees** for local authorities. R20's services are remunerated on a contractual basis subject to attaining the two objectives mentioned above. R20 is considering shifting to remuneration by a commission on completed projects calculated as a percent of financing secured.

2. Characteristics

Objectives

R20 aims to build up a flow of effective energy–climate projects, to connect project owners, technology suppliers and financers, and remove obstacles that block project financing and implementation.

Method originator / owner(s)

R20: Not-for-profit organisation founded in 2010 by Arnold Schwarzenegger.

Typological category

- ☐ International methodology for national use
- ☐ National climate strategy without accompaniment at the local level
- ☐ National climate strategy with local ambitions
- ☐ National climate strategy with local methodology
- ☐ Methodology developed nationally for local implementation
- ☒ International methodology for local use

Construction phases under this approach

	Territorial GHG assessment
	GHG assessment of property holdings and scope of competence
	Vulnerability assessment
	Scope 3
	Plan elaboration process
	Implementation and monitoring
	Reporting
	Funding
	Networking
	Evaluation
	Awareness / Training campaigns

Degree of maturity / elaboration — Not targeted | Low | Medium | High

Forms of adoption

- ☒ Voluntary
- ☐ Regulatory
- ☒ Access free of charge

Targeted climate action

☒ Mitigation ☐ Adaptation

Sector(s) covered

Priority issues: public transport, energy efficiency in buildings, LED lighting, PV energy, wind energy, micro hydropower, energy recovery from waste

Targeted geographic area

World, particularly developing countries

3. Strategic analysis: SWOT grid for the methodology

Strengths

- **Solid network of partners** with nine offices around the world.
- **Focused on action,** not simply policy debates, knowledge sharing or lobbying. R20 intentionally steers clear of theoretical approaches involving audits and planning, and favours a pragmatic approach.
- **It brings concrete responses** to major stumbling blocks that hinder implementation, in terms of project design, technology choices, financing.
- **Experiments with and sets up innovative forms** of financing.
- **Relies on recognised technologies** that will attract financing from sources of funding.
- **Offers aid for initial project stages,** notably feasibility studies, that are crucial for the deployment of low carbon technologies.

Weaknesses

- **Is little concerned with other stage**s of energy–climate planning in territories.
- **Is still reticent to finance** work on reproducibility in other territories.
- **At present only five or six principal investors** finance projects.
- **Focuses on a limited number of technologies,** mainly those that will produce rapid results.
- **Once projects are financed,** R20 is no longer involved in accompanying local authorities (beyond the scope of their intervention).

Opportunities

- **Fills a major market gap, the access to financing.** Addresses the need for intermediaries between project owners and financers.
- **A high volume of financing is required** to attain the climate objectives set by State governments.
- **An increasing number of mitigation** technologies are seen as more and more profitable by investors.
- **The network is considering a new business model** based on a commission applied to completed projects and the third-party financing.

Threats

- **Global shortfall of financing for climate projects,** and competition with other priorities for local authorities.
- **Political uncertainty regarding adoption** of an ambitious international framework for climate objectives.
- **Public budgets that are increasingly** restricted, and absence of solvability for some local authorities, particularly in developing countries.

4. Development of operational projects in Africa, e.g. Burundi, Mali.

R20 puts a prime emphasis on promoting renewable energy technology. Exploiting its network of local partners, **R20 helps launch decentralised and centralised energy production projects.**

In Gitega, the second largest city in Burundi, R20 and local partner CIRID have installed two solar ovens in a local bakery. This **energy project includes a social aspect: the bakery employs women in fragile circumstances,** giving them training in entrepreneurial practices and marketing, with the aim of ensuring long-term commercial stability for the bakery.

R20 is working with the national government of Mali to install the first large-scale photovoltaic power plant in West Africa. The project is based on a partnership between R20 and Akuo Energy, a French company specialising in renewable power plant development. Together the partners designed a 50 MW solar power plant for the city of Kita, and conducted feasibility studies for its installation. This project has been approved by the government of Mali and will be launched after completion of environmental impact studies.

5. The lighting of the megalopolis of Rio de Janeiro in LED

The R20 saw its presence in Brazil grow strongly. Among the member states of the R20, we find Acre, Sao Paolo, Rio de Janeiro and Para, other regions and municipalities are also planning to join the network. The Brazilian team of the R20 works with partners on various renewable energy solutions. R20 partners in Brazil are the Jatobas Institute, the Vale Foundation, the Dom Cabral Foundation, Grupo Prisa and Dedini Industrias de Base.

Specifically, the R20 has achieved in 2013, with partners of Lighting Science Group and the City of Rio de Janeiro, a feasibility study to convert the lighting of public spaces in LED. Rio de Janeiro serves as a pilot region to demonstrate the possible results in terms of energy efficiency. **The R20 provides the analysis and necessary recommendations for the development and implementation of the project.**

An estimated 400,000 street lights managed by Rio Luz can be replaced by LED technology. This change in public lighting would save more than 50% of energy consumption, 30 million USD per year. Moreover, thanks to a lifetime of over 100,000 hours, the maintenance costs will be greatly reduced. The initial investment in LED-based street lighting would be quickly recouped.

After the implementation in Rio, the urban LED lighting project could be replicated across the country. There are plans to install 1.5 millions of LED lamps in 13 cities throughout Brazil.

VI. Low-carbon, Livable cities (LC_2)

1. General description

Launched in September 2013 by the World Bank, the Low-Carbon Livable Cities (LC_2) initiative is an action framework intended for local decision makers in developing countries. It is made up of a set of instruments and programmes designed to encourage a low carbon development process.

The proposed accompanying action aims to reinforce the capacity for intervention of local authorities, in two areas: **strategic planning and investment in infrastructure.** For one, measures are designed to equip local officials for urban planning and train them in drawing up GHG inventories and evaluating their investments. This approach does not include technical assistance in the field however. Secondly the World Bank develops **new financing instruments** for low carbon investment on a city-wide scale. Local officials are encouraged to improve their creditworthiness, and look to the private sector for solutions to insufficient and/or inefficient infrastructure in their cities.

The LC_2 audit is conducted to compile a GHG inventory using the Global Protocol for Community-Scale Emissions (GPC) method devised with several partners (including the C40 Cities network, ICLEI, the World Resources Institute, the UN Environment Programme and UN Habitat). This method is disseminated and applied by accreditation of local officials via the City Climate Planner Certification Program.

The City Creditworthiness Training Program helps cities improve their management practices to make **them more solvable and increase their access to capital.** One year after start-up, 66 cities in 22 countries had benefited from this initiative.

Also in September 2014 the Cities Climate Finance Leadership Alliance was launched at the UN climate summit. This alliance brings together 21 partners with the intent to accelerate investment in smart infrastructure for the climate at local scale.

2. Characteristics

Objectives

- Help local officials improve their climate planning process and **manage their finances soundly** for greater access to the capital funding needed to invest in urban infrastructure.
- The programme objective is to help **300 of the largest cities in developing countries reduce their GHG emissions** within four years of start-up in 2013.

Construction phases under this approach

	Territorial GHG assessment
	GHG assessment of property holdings and scope of competence
	Vulnerability assessment
	Scope 3
	Plan elaboration process
	Implementation and monitoring
	Reporting
	Funding
	Networking
	Evaluation
	Awareness / Training campaigns

Degree of maturity / elaboration: Not targeted · Low · Medium · High

Sector(s) covered

- All sectors in the territory are covered by the GHG inventory.
- In terms of financing, the approach focuses on mature technologies (e.g. public lighting).
- Generally speaking, participating cities are free to choose the sectors to be targeted by energy–climate action.

Method originator / owner(s)

The World Bank launched and continues to back the LC_2 initiative. The various schemes developed under the initiative are supervised by different departments within the World Bank.

Typological category

- ☐ International methodology for national use
- ☐ National climate strategy without accompaniment at the local level
- ☐ National climate strategy with local ambitions
- ☐ National climate strategy with local methodology
- ☐ Methodology developed nationally for local implementation
- ☒ International methodology for local use

Forms of adoption

- ☒ Voluntary
- ☐ Regulatory
- ☒ Access free of charge

Targeted climate action

☒ Mitigation ☐ Adaptation

Targeted geographic area

Developing countries

3. Strategic analysis: SWOT grid for the methodology

Strengths

- **The approach is built on solid training programmes,** covering: emissions assessment using GHG accounting methods; certification; financial management assistance via the City Creditworthiness Academy that aims to lift cities out of insolvency.
- **The initiative includes the Climate Action Planning Toolkit,** a planning assistance tool for developing low carbon projects.
- **A Climate-Smart Capital Investment Planning method is proposed,** to assist cities in allocating investment to resilient, low-carbon and cost-effective infrastructure projects. This method uses innovative financing approaches such as the International Lighting Efficiency Finance Facility (iLEF).

Weaknesses

- **The different segments are increasingly** independent, and are managed by different departments within the World Bank, with some coordination but without an umbrella administration.
- **The programme does not strictly** speaking assist cities in implementation (with the exception of the city of Rio de Janeiro).

Opportunities

- **The initiative relies on a solid network** of partners and on the activities, influence and human and financial resources of the World Bank.
- **Diversification and evolution** of this model are foreseeable, through new partnerships.
- **The initiative provides financial solutions** in a market of high demand, and addresses the structural conditions of access to financing for cities in developing countries.

Threats

- **There are no specific requirements** in terms of outside reporting, and participating cities are free to choose among the tools offered by the World Bank according to their needs.
- **The City Creditworthiness Training** Program has proven to be costly, and is a long-term undertaking.
- **The initiative relies on financing** from the World Bank and on investment funds in partner institutions. The iLEF scheme is independent, and is supposed to generate revenue.
- **It is sometimes difficult to implement the iLEF scheme,** due to divergent interests or budgetary constraints in different cities, for instance.

4. The Rio de Janeiro low carbon development programme

The LC_2 approach draws upon World Bank experience in cities like Rio de Janeiro that is unrolling a vast urban programme to attain its low carbon development objectives. The Rio de Janeiro Low Carbon City Development Program (LCCDP) helps the city **plan, execute, oversee and keep accounts on its low carbon investments and mitigation action in different sectors of activity.**

LCCDP was launched in June 2012 at the Rio+20 summit, and is a full-fledged scheme backed by an evaluation protocol based on ISO certification. **The scheme's key features are clearly defined roles and responsibilities for implementation,** planning options and evaluation, and stages of programme execution.

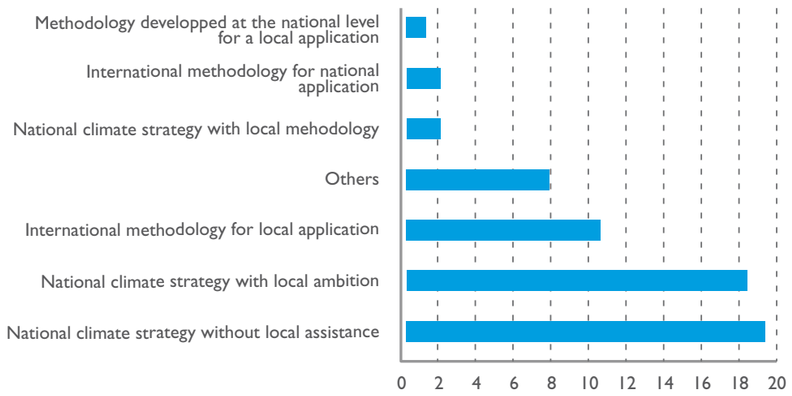
LCCDP is considered to be a pioneering business model that should be disseminated and reproduced in other cities. Drawing upon this project the World Bank has drawn up a handbook for city officials and urban planners covering the elaboration and implementation of low carbon programmes that meet the requirements of the LCCDP evaluation protocol.

Annexes

I. Panorama and classification of local action programmes surveyed

The 60 individual local action programmes surveyed for this benchmark study have been characterised and classed in seven categories:

- ✔ **National climate strategy without accompaniment at the local level** (e.g. Italy). The country has its own climate planning process or procedure, but has not developed methodology, tools or guidelines for local authorities in its territory.
- ✔ **National climate strategy with local ambitions (e.g. Luxemburg).** The country has adopted measures to accompany local authorities, but the content is not highly developed (specific tools without constructed methodology, or methodology that is very general, guidelines without tools).
- ✔ **National climate strategy with local methodology (e.g. France and Germany).** The country has developed a methodology to accompany local authorities, in addition to the national planning process.
- ✔ **International methodology for national use (e.g. NAMAs).** This is an international framework developed in the wake of the Kyoto Protocol, to give structure to climate planning by State governments: UNFCCC, MRV, NAMAs. Each country is examined separately to identify the terminology and forms of implementation adopted.
- ✔ **Methodology developed nationally for local implementation** (e.g. PPC in Canada). A methodology to accompany local authorities has been developed at the national level, by a non-governmental body.
- ✔ **International methodology for local use (e.g. Climate Compass).** A methodology to accompany local authorities has been developed internationally, and is adaptable to several countries and/or geographic areas.
- ✔ **Others** (e.g. The Compact of Mayors). Tools developed at an international level without a full-fledged methodology – programme or platform to accompany local authorities, statement of commitments pledged by local authorities.



Number of action programmes by type (Source: I Care & Consult, 2014)

II. Climate planning stages defined for benchmarking in this study

Construction stage	Definition of terms
Territorial GHG assessment	Inventory of GHG emitted in the local authority's territory, all actors
GHG assessment of property holdings and scope of competence	Inventory of GHG emitted by/at local authority properties and in the exercise of its duties
Vulnerability assessment	Assessment of the territory's vulnerability to climate change
Scope 3	Scope 3 included in the GHG inventory
Elaboration process	Steps taken to draw up the action plan, in liaison with oversight and guidance bodies, the process followed to identify measures, interaction with actors and the participative process
Implementation and monitoring	Execution of measures under the action plan – project design, fundraising, etc. – and monitoring of implementation
Reporting	Publication and communication mechanisms to make data and results available to stakeholders
Funding	Measures to make financial means more readily available to local authorities for implementation of their action plan; setting up financing mechanisms, methodological guidance and accompanying support for identification and mobilisation sources of financing, assistance with project financial montage, etc.
Networking	Linking participating local authorities with other towns and cities, and/or with financers, technology suppliers, etc.
Evaluation	Tool (s) or method (s) for ex post evaluation of implementation of an action plan or specific project
Awareness / Training campaigns	Mechanisms to inform and explain action to actors, stakeholders and the general public, steps to build actors' capacities

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The French Environment and Energy Management Agency (ADEME) is active in the implementation of public policy in the areas of the environment, energy and sustainable development. The Agency provides expertise and advisory services to businesses, local authorities and communities, government bodies and the public at large, to enable them to establish and consolidate their environmental action. As part of this work ADEME helps finance projects, from research to implementation, in the areas of waste management, soil conservation, energy efficiency and renewable energy, air quality and noise abatement.

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