Overcoming the implementation gap in urban climate policies: The CASCADE experiment

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Abstract

Many European city governments have voluntarily committed to ambitious CO_2-emission reduction targets until 2020 and 2050. Supported by dedicated structures and networks (e.g. Covenant of Mayors), local governments have already developed, or are currently developing, ambitious climate action plans, all pursuing the aim of radical CO_2-emission reduction in the long term.

Though, the development of climate action plans is only a first step, as the actual crucial and more challenging part is the implementation. Besides financial investments also additional capacities, improved institutional structures and innovative strategies are necessary to successfully implement ambitious policies within existing national and regional framework conditions. There is often more competition than co-operation between cities. However, exchanging on common challenges in order to find new solutions provides potential for innovative ideas and new views on own structures. In particular, methods and formats for self-assessment and mutual learning can support cities' stakeholders to overcome their implementation gap in local energy and climate policies.

This paper will present results from the first phase of the three year project "CASCADE", which was initiated by 19 European cities in co-operation with EUROCITIES. Within the project, implementation challenges are being addressed in an intensive process of self-assessment and mutual learning. The methodological "backbone" of this process is a qualitative benchmarking framework in the thematic fields of "Renewable energy sources and distributed energy generation", "Energy efficient buildings and districts" and "Energy in urban transport". Up to a certain degree, existing local climate policy benchmarks provide a common exchange platform, but mainly for the comparison between cities. The CASCADE benchmarking framework goes beyond competitive comparisons. As a qualitative criteria-based assessment procedure it identifies key challenges and factors for a successful implementation of established local climate policy plans. These factors have been developed from a qualitative survey including interviews and workshops with representatives of the participating cities.

Six cities serve as examples. Self-assessment reports were provided based on the CASCADE benchmarking framework focussing on the implementation status of their local climate policies. These reports were reevaluated by four or five project partners from different cities in a desk-review process. During subsequent four-days peer learning visits, the CASCADE benchmarking framework was used again as a tool for an in-depth assessment of the local climate and energy action plans and the local activities towards implementation of these strategic documents. Finally, the visitors drafted a feedback report with recommendations and improvements for the hosts.

The paper describes the methodology of the CASCADE benchmarking framework for integrated learning, its applicability for peer learning processes, as well as first experiences and results from the peer learning visits.

Introduction

Many European municipalities have committed to ambitious reduction targets of greenhouse gas emissions. Supported by European projects and networks (e.g. Covenant of Mayors,

ICLEI), they have already developed ambitious climate action plans all pursuing the aim of a radical emission reduction in the long term.

Dedicated funding schemes at the national and European level mainly aim at supporting cities to set up climate policy plans. Usually, these plans consist of common components, such as defined emission reduction targets, CO_2-inventories, scenarios and policy packages with measures for climate protection (Covenant of Mayors 2010, ICLEI 2008, 2009, Klimabündnis 2013). However, recent research on ambitious cities that set up climate policy plans has shown that there is a great challenge in European municipalities to actually implement these plans (Bulkeleya, Betsillb 2005; Puppim, de Olivera 2009; Sharp et al. 2011).

The questions on how additional capacities can be developed for action and how innovative strategies to implement measures can be designed in current political and economic conditions are still open. As one approach, tools and procedures are required that enable cities' governments to assess their current state and stage of implementation of climate action plans. The CASCADE approach serves as one trial to support European municipalities by offering a procedural framework for (self-) assessment and addressing such challenges.

The paper is based on experiences made in the first year of the European project CASCADE[1] (Cities Exchanging on Local Energy Leadership), where 19 cities (all signatories of the Covenant of Mayors) have participated to foster practical knowledge exchange and mutual learning within Europe. As a networking and mutual learning project on local energy leadership, the project supports cities to achieve the European Union targets on energy and climate change. The project is funded by Intelligent Energy Europe and runs for three years[2]. Due to their relevance in local climate and energy policy, CASCADE concentrates on three general themes:

1. Energy efficiency in buildings & districts

2. Renewable energy sources & distributed energy generation

3. Energy in urban transport

For each theme, a group of 6–7 cities collaborated. Two group members per theme ("host cities") prepared peer learning visits during the first project year. The main objective of these visits was to assess the state of and obstacles for policy implementation and to identify potentials for enhancement. The "CASCADE benchmark for integrated learning" served as the main procedural framework and methodological tool for these assessment processes.[3]

The first part of the paper reflects on strengths and weaknesses for existing benchmark tools and describes the development of the CASCADE benchmarking framework as a procedural criteria-based tool to close the analysed gap between measuring the state of the art and implementation of policies.

Afterwards, the use of the developed framework in practice is described along the peer learning visits.

Benchmarking urban climate actions

In order to provide criteria to assess local climate policies and action, a number of benchmarking frameworks has already been developed (ICLEI 2008, 2009; Klimabündnis 2013, Hertle 2009).The multiple benchmarking method of the Climate Alliance is one typical example.[4] The explicit objectives of this method is to analyse the level of CO_2-emissions in given cities, to compare the cities' performance with regard to their climate-related activities and to enhance the local understanding of strategic challenges and obstacles for climate policy improvement by means of a number of indicators (Hertle 2009). The method consists of four elements. First, a city factsheet presents a brief overview of city characteristics, to identify the capacities and potential for climate activities. Second, the activity profile includes a matrix with 26 fields of action in the categories climate policy, energy, transport and waste. The activity profile is divided into four different levels (from beginner to leader). Third, a CO_2-emission display illustrates the historical development of CO_2-emissions. Finally, a set of 17 indicators synoptically gathers facts on the climate impact of the city actions (Klimabündnis 2013). The advantage of this indicator set is the provision of sound information on both the spectrum of climate-related activities and levels of emissions. However, the Climate Alliance benchmarking method predominantly focuses on the content of climate action plans ("what?"), not on the efficiency of management processes or organisational structures ("how?") for the implementation process. Therefore, there is a need of considering the stage of implementation of climate-related activities in improved benchmarking methods. In this context, a tool to assess existing obstacles and drivers along the implementation process seems appropriate to motivate discussions about how to promote energy and climate action on city level. This is the starting point for the CASCADE project. Within this project, a benchmarking framework, based on qualitative assessment criteria has been both developed and applied in cities supporting local authorities to conduct an assessment within inventive peer learning formats.

Designing a benchmarking framework for renewable energy, buildings and transport: the CASCADE approach

The CASCADE project for integrated learning started with 19 cities (divided into the thematic fields according to their interests and needs) and a supporting team of Eurocities as project co-ordinator and three thematic experts (Wuppertal Institute, Koucky & Partners, City of Malmo). The selection of cities was based on the following criteria: large or medium sized, high level of ambition in climate and energy policy, willingness to participate as host or visiting city and cross-national distribution throughout the project. Within the project four different peer learning formats for exchanging on climate action at city level are tested: peer learning visits, study tours, mentoring and shadowing. The present paper only addresses

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1. http://www.cascadecities.eu/phocadownload/leaflet%20cascade.pdf

2. EUROCITES as coordinator and Koucky & Partners and the Wuppertal Institute as thematically experts supervise the process in cooperation with the participating cities.

3. http://www.cascadecities.eu/cascadecities/activities/year1/peer_learning#.URtXA-47HeCQ

4. http://www.klimabuendnis.org/benchmark1.html?&L=2

the experience and the results of the first project phase in which six peer learning visits were conducted.

The development and use of the benchmarking framework was a crucial element to prepare peer learning visits within the three thematic foci of the project (two in each thematic focus). It serves as a procedural framework with an extended list of criteria and key factors describing an ideal implementation process for an urban climate policy. The criteria and factors were identified on the basis on semi-structured interviews and a quantitative survey conducted among the 19 initially participating cities in the CASCADE project.

PREPARATION: RESULTS FROM A SURVEY AMONG 20 EUROPEAN CITIES

The first step of developing the CASCADE benchmarking framework for integrated learning was an online survey and semi-formalised phone interviews with the persons in charge of climate policy in 19 participating cities. The surveys were conducted from June to September 2011. Through these surveys, crucial challenges were identified regarding the implementation of climate and energy policies and innovative institutional designs (e.g. governance) at local level. The internet and telephone survey was primarily conducted to identify the main challenges and obstacles impeding cities' stakeholders from implementing climate protection measures or energy efficiency measures in their city. Another main input came from a two-hours workshop session with all participants in Brussels in July 2011, including a discussion on the interview outcome and the elaborated important key factors for climate policy. The goal of this workshop was to validate the survey results on challenges and drivers by the cities.

The survey and the workshop led to the classification of challenges that are crucial for implementation problems of climate policies in participating cities:

1. **Structural challenges**: e.g. spatial structures, geographical conditions as constraints for renewable energies caused by lack of space or specific weather conditions.

2. **Regulatory challenges**: e.g. national regulations, impeding the development of renewable energies or lack of binding requirements for efficient buildings.

3. **Political challenges**: e.g. short term political agenda, lasting for only one period whereas climate protection requires a long-term perspective. Almost every city of the survey mentioned this fact to be one main obstacle, as long-term projects cannot be financed safely.

4. **Roadmapping and process management** within administrations, with stakeholders and with the general public. One important factor is the coordination of involved actors. In order to preserve acceptance, the administrative staff of has to co-operate and to keep the public informed on new projects. By involving many actors, conflicts will arise due to different interests, which must be solved by keeping the same goals. Therefore, a roadmapping process is required.

5. **Financing and investments**: e.g. lack of budget to finance projects, limited profitability in a short term, missing funding schemes, missing investments of private actors.

6. **Information and knowledge**: e.g. missing acceptance, knowledge and skills for new technologies, lack of com-

munication. One of the main challenges is to improve the acceptance, knowledge and skills related to new measures and developments at local level. It was stated that new technologies are difficult to introduce due to uncertainties and cost issues. Another important aspect is a lack of communication regarding on-going climate protection measures and initiatives.

All these obstacles and challenges have been identified as being relevant for the implementation of climate policy plans. To find evidences on how an ideal implementation process should look like, the CASCADE benchmarking framework for integrated learning was developed based on results from surveys and workshops. In the next step, the challenges and obstacles identified above, have been converted into key factors representing a "desirable" standard of successfully implemented local climate policies. Three alternative frameworks have been developed for the three thematical foci: 1. Energy efficient buildings & districts, 2. Renewable energy policies and distributed energy generation, 3. Energy in urban transport.

ELEMENTS OF THE CASCADE BENCHMARKING FRAMEWORK

The identified challenges and obstacles were rephrased to the opposite to describe an "ideal" standard, the final list of benchmarking criteria for implementation. According to the different topics they have been grouped into six groups (A to F). Within the three thematic fields there slightly different wording was necessary, so that the final templates for the CASCADE benchmarking framework consist of seven parts:

1. **Context of the city.** The context includes identified structural challenges in cities that have no direct possibilities to change these conditions, thus affecting their ability to meet the ideal standard (key factors). Those aspects of a city, e.g. urban context, building stock, topography, must be described before checking the other key factors in order to understand certain mechanisms of the climate policy implementation process.

2. **Thematic groups and its key factors.** The analysis of the identified challenges and drivers leads to key factors which can be structured in six thematic groups. Each group provides key factors presenting the ideal features of local policy and governance and are crucial for the successful implementation of local energy policies. Those key factors are complemented by examples of evidence, which serve as criteria to facilitate an assessment of the performance achieved for each key factor. The groups of factors are described in the following.

A – Local leadership and ambition: Even if the legal options for city governments differ from country to country, cities can be pioneers within existing legal frameworks and even exceed national standards. The related key factors cover the issues addressing the role of the administration in the entire city. Examples are the political commitment of a municipality, the use of regulatory capacities at local level or the consistency of strategy and affinity to innovative projects.

Group **B – Local strategies and policies** address the city's local strategies and policies with a special focus on policy integration. The key factors include for example the existence of a long-term strategy for energy and climate policy at local

level and the existence of a binding urban development plan. Policy integration (local and regional) is also important, since regional policy in all subjects should be consistent with local plans.

With regard to energy and climate policy, **C – Organisational and managerial improvements** are necessary in local administrations to overcome the traditional disciplinary separation of organisational structures in municipalities in order to develop integrative solutions. Therefore, these key factors especially address organisational and managerial issues with a special focus on monitoring. Examples are the integration of climate and energy policies into existing planning documents (e.g. urban development plan) or the integration of projects in other units of the local administration.

There is also a demand for professional **Stakeholders and citizens' involvement (Group D)** in order to promote renewable energy sources and sustainable urban development. Partnerships, professional networks and information campaigns are formats aiming at involving social groups into the city's strategy on renewable energy sources and distributed energy generation, and motivate them for investments.

Even though, **E – Information, knowledge and awareness** is a rather "soft" factor, it is the basis for stakeholders and the general public to contribute to the city's strategy, e.g. on renewable energy sources. There is a number of stakeholders who have to be motivated by additional information and networking efforts: energy suppliers, utilities, urban planners, craftspeople, education institutions, building and housing companies, the financial sector and the public in general. The broad field of information and knowledge can be roughly subdivided into:

- general knowledge and awareness of energy and climate issues,

- professional knowledge about energy efficiency technologies and renewable energy sources and

- knowledge about financial options, programmes and funding schemes.

The final group **F – Financing, investments and risks** focuses on financial and investment issues. Its key factors address resources that the municipality can allocate to investments and maintenance of renewable energy sources and distributed energy generation. Additionally, activities that have been developed to reduce investment risks and to foster additional private investments play an important role to support the implementation of climate protection measures.

The CASCADE benchmarking framework described above was applied in learning visits among participating cities. Although it was used to assess the respective "host city" (see Table 1[5]), visiting cities have benefited from this process as well, since the benchmarking framework has provided the tool for analysing and assessing the gaps and challenges in policy implementation.

Peer learning visits in six cities

During the first year of the CASCADE project, six peer learning visits were conducted in different participating cities between February and June 2012. The rationale of this learning format is a group of experts from different cities working on similar issues. They evaluate local policies, programmes and practices being implemented in a particular city and give recommendations on possible areas of improvement[6]. This type of format has been applied in other contexts as the MIXITIES-project focussing on integrating migrants and migrant communities in European cities[7].

Table 2 gives an overview of the peer learning visits conducted in 2012[8, 9].

Next to a preparatory workshop, the process of a peer-learning visit has a four-step-sequence:

1. The host city first elaborates a self-assessment report along the CASCADE benchmarking framework which serves as preparation for the evaluation. The aim is to critically review the own performance.

2. The self-assessment is sent to the "peers" (the visiting and also evaluating cities) for a desk review. If needed they can ask for further information or explanation, and suggest actors of the municipality or other stakeholders as interview partners for the following exchange.

3. A three days "peer-learning-visit" is organised in the host city. Every visiting city participates with one expert from the municipality and one local stakeholder. During the visit, the peers conduct 15 to 20 interviews with relevant local stakeholders, e.g. staff from the administration or utilities, politicians, NGOs: Each interview is conducted by two peers, preferably from different cities. They record the results by allocating relevant statements according to the benchmarking framework's key factors.

4. In a presentation at the end of the visit, the peer group expresses first findings and recommendations for the host city. A provided data sheet provided a structured outcome of all interviews. It sorted the outcome of the interviews based on the CASCADE benchmarking framework. They are improved and completed afterwards and sent in form of a written feedback report to the host city a month after the visit.

Based on the project design, the host cities were selected on a voluntary basis according to their experiences and interests in the three thematic fields. It seemed that the host cities were quite advanced regarding their focus on development and/or implementation of climate action. Nevertheless, in all workshops the peers still found areas of improvement and gave recommendations to the host cities.

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5. The basic documents for the CASCADE Benchmarking framework and the related list of factors can be downloaded at: http://www.cascadecities.eu/cascadecities/resources/downloads (last access: 0311, 2013).

6. http://www.cascadecities.eu/cascadecities/activities/year1/peer_learning#.ULd-LnY71OlE

7. http://www.integratingcities.eu/. The C40 Cities also apply peer learning formats in several climate related issues such as solid-waste management and bike sharing (www.c40.org).

8. At the beginning of the project CASCADE the cities were able to choose which thematic field they prefer. The host cities had thematic focuses within the thematic field, therefore the peer learning visits had been adapted.

9. SEAP – Sustainable Energy Action Plan of the Covenant of Mayors (www.eu-mayors.eu).

Table 1. Exemplary extract of the benchmark.

CLUSTER C. Organisational and managerial issues

With regard to energy and climate issues it is necessary to overcome the traditional disciplinary separation of organisational structures in municipalities in order to develop integrative solutions. Therefore, these factors especially address organisational and managerial issues with a special focus on monitoring.

No	Key factor	Examples of Evidence	Comment
C	Organisational and managerial issues		
C.1	Within city administration, an organisational structure for managing climate and energy issues is established.	• Establishment of a climate or energy department, either as a separate administrative department and/or a cross sectoral management body • Clear definition of responsibilities and competencies regarding renewable energies and distributed energy generation • Clear decision-making processes and procedures	Is the organisational structure established effective and helps it to deliver projects?
C.2	The city administrative procedures facilitate the development of projects and activities in the field of renewable energy and distributed energy generation.	• Changes to tender procedures and public procurement • Budget considerations towards long term planning • Consideration of all costs when approaching funding for renewable energy and distributed energy generation initiatives (e,g, existence of full cycle costs analyses and analyses of external costs of investment projects)	This key factor focuses on the administrative procedures and preparatory analyses, while C1 deals more with organisational/structural issues.
C.3	Potentials for emissions reductions and renewable energies are analysed and provide the data basis for the local strategy and for implementing the right combination of measures/technologies.	• Availability of thorough analyses on technical or economic emission reduction potentials for all relevant sectors • Availability of technical or economic potential analyses on different renewable energy and distributed energy generation technologies.	
C.4	Data about progress made in the implementation of energy policies and projects is regularly (yearly) monitored by the city council.	• Existence of a regular monitoring of greenhouse gases • Existence of a bottom up monitoring scheme to measure the effects of single activities and projects on emission reduction (of measures at national and local level) • Technical and non technical monitoring is conducted for all renewable and energy generation projects. • Communication of performance to local media and citizens	Does the monitoring scheme established covers also calculating the effects of measures at national level and of the city's activities?

Table 2. Peer-learning-visits conducted in 2012 within the CASCADE project.

	Energy efficient buildings and districts	Renewable energy sources and distributed generation	Energy in urban transport
Host city	Birmingham (UK)	Genoa (IT)	Nantes (F)
Visiting cities	Eindhoven (NL) Mannheim (D) Milan (I) Tampere (FIN) Warsaw (PL)	Amsterdam (NL) Edinburgh (UK) Gateshead (UK) Gijon (E) Venice (I)	Burgas (BG) Stockholm (S) Sunderland (UK) Terrassa (E)
Thematic focus	Building retrofit scheme and city energy plan	Implementing the SEAP	Energy efficient urban mobility
Host city	Tampere (FIN)	Amsterdam (NL)	Sunderland (UK)
Visiting cities	Birmingham (UK) Eindhoven (NL) Mannheim (D) Milan (I) Warsaw (PL)	Edinburgh (UK) Gateshead (UK) Genoa (I) Gijon (E) Venice (I)	Burgas (BG) Nantes (F) Stockholm (S) Terrassa (E) Amaroussion (GR)
Thematic focus	new low carbon housing areas and large scale retrofitting projects for 1960-70s building blocks	District Heating	Introduction of electric vehicles and other ICT/GIS innovations

FINDINGS AND RECOMMENDATIONS FROM THE PEER LEARNING VISITS

Within the feedback reports, the peer groups followed the structure of the CASCADE benchmarking framework, and the key factors. The following findings are representative results from the peer learning visits and therefore provide an overview on possible areas of improvement and recommendations, which the cities received in the feedback reports. The findings are illustrated by concrete examples.

A. Local leadership and ambitions: The initial status of the different participating cities regarding implementation and ex-

periences with climate action on local level was quite unequal. Some have been working on this issue for several years, others were just about to finalise and submit their SEAP. Nevertheless, the participants had in common that they all have high ambitions themselves. But this does not necessarily mean, that the SEAP and climate action is supported throughout the administration.

During the peer learning visit in Genoa, the peer learning team noticed a strong political support for the SEAP by the City Council. The City of Genoa submitted its SEAP in 2010, and it

plays an important role in the administration. For this reason, it had a strong focus during the visit. However, it remained inconclusive whether the SEAP has been sufficiently integrated into the day-to-day working procedures in the municipality. To strengthen the energy leadership and the level of ambition, the peer learning team recommended mainstreaming the SEAP inside and outside the administration. Therefore, it could be helpful to define binding targets for the use of renewable energies in the different sectors and at city level in general. Genoa with its historical buildings experiences the conflict between building modernisation (regarding energy efficiency and the use of energy from renewable sources) and preservation. However, the peers presumed that national legislation has not been exhausted to its full potential yet.

Experiences from other peer learning visits show that mainstreaming and strengthening the SEAP, highlighting the importance of climate action and communicating the long term targets are general issues cities are facing. During the Amsterdam visit, the peers were impressed by the thoroughly commitment for the SEAP in general and the acceptance of district heating in particular. Nevertheless, they found a need to increase ambition at the political level of city boroughs and suggested to refine the overall target for the districts and negotiate local targets for the extension of district heating in the relevant areas.

B. Local strategies and policies: All host cities had climate action plans in place, defining targets for the expansion of renewable energy technologies and/or the reduction of GHG emissions. But in several visits the peers missed the corresponding potential analyses and/or development plans showing the next managerial steps, projects and milestones analysing the accessibility of long-term targets. For this reason, the peers advised the City of Birmingham for example to develop a detailed action plan including a regular evaluation to follow up the development of energy efficiency in buildings and districts.

Furthermore, some unique possible areas for improvement were found, for example in Genoa, where the harbour is important for the city's face and shape but is managed by an independent port authority. The harbour management regards climate and energy issues as very important as well and has developed its own action plan, the Port Energy Action Plan (PEAP). The peers found cooperative structures between the city administration and the port authority. Nevertheless it the assessment showed that the SEAP of the city and the PEAP of the port authority could stronger relate to each other.

C. Organisational and managerial improvements: Organisational and managerial matters of climate and energy policy at local level are treated individually in each municipality, each structure having advantages and disadvantages. In some administrations one person or group in the environmental department is responsible for implementing the SEAP, whereas in others there interdisciplinary and cross-sectoral teams exist. The latter were found in almost all host cities and can thus be regarded as the more reasonable organisation. When responsibility is distributed on more than one department, the traditional structure of city administrations can overcome implementation challenges and a mainstreaming of the SEAP is supported.

During the peer learning visit in Tampere, however, it could be observed that structures can be too extensive, thus resulting in unclear responsibilities and uncoordinated action. Al-

though the Sustainable Community Unit, including the central administration, the economic and the urban development department, is mainly responsible for energy and environmental policies in Tampere, other entities and groups conduct energy related projects as well. Thus, responsibility is divided among several departments, but the peers ascertained the need for a leading head or team having the overview, coordinating and integrating all city related climate and energy actions. According to the feedback report provided by the responsible expert after the visit, this leading head could be one of the existing teams or groups as well as a single person. It would help to use synergies between plans and projects and to avoid administrative efforts.

D. Stakeholder and citizen involvement: For the implementation of advanced policies, conduction of projects and building infrastructure to finally reach climate and energy targets, it is necessary to build capacities by creating cooperative structures and establish networks. Therefore, professionals, stakeholders and citizens have to be involved. All cities that were hosting a peer-learning visit within the CASCADE project have established these necessary structures and networks. Nevertheless, the peers found some possible improvements in this group of factors.

The City of Nantes for example is quite advanced in developing a more sustainable urban transport system: the administration is well organised, has developed plans, has set their targets, and the city is in close contact with the main providers of public transport and mobility services. The peers found helpful that this structure could be complemented by a co-operation with the public health sector in order to promote active travel. As walking and travelling by bike does not only contribute to lower emissions in the transport sector but also helps to improve the health and fitness of the citizens. A collaborative campaign could provide synergies for both health and climate.

E. Information, knowledge and awareness: Information, knowledge and awareness request strategies and campaigns for all (relevant) stakeholders and social groups, from professionals to the broad public. Overall, the peer visiting teams saw high levels of knowledge and skills within the responsible departments and organisational entities of the host cities managing climate and energy issues. However, all peer visiting teams reported a lack of training skills, knowledge and awareness-raising activities of the staff outside the 'sustainability area'.

For example, in Birmingham the municipal staff working on energy and climate action is well trained and knows about the city's climate plans, targets and actions. Nevertheless, the peer group recommended that employees in other departments should also be informed to make sure that energy and climate aspects are taken into account in all decision-making and development processes throughout the city administration.

During the Amsterdam visit with its special focus on district heating, the peers found that the municipal staff should have more technological and economical skills in order to sharpen the view for future business cases developed by the local energy supplier.

F. Financing, investment and risk: As expected, financial challenges were found in each city. Though, many cities, companies and investors have discovered energy efficiency and renewable energy as promising future branches of their economies, the economic crisis of the last year has influenced the prosperity of the 'green branch'. Nevertheless, the related factors were partly

matched by all host cities. Not surprisingly, the necessity to guarantee for a long-term-financing of the SEAPs' actions and projects was found in many cities, but not in Amsterdam.

The City of Amsterdam held shares of the local energy supplier NUON, which have been sold to Vattenfall in 2009. 150 million Euros have been used as start-up capital for the Amsterdam Investment Fund (AIF) as a revolving financial instrument to finance projects in three main areas: First, city development and accessibility; second, economy and innovation and third, climate, sustainability and air quality. The AIF is an important financial source for energy and climate projects in the city and in particular for the extension of district heating (DH). However, the interviewees reported during the peer-learning visit that it is difficult to connect existing buildings to the DH-grid. The energy price for district heating which does not (yet) provide a noticeable financial advantage for the users is identified as a main reason. Hence, the peers recommended to offer special conditions to owners of existing buildings. One possibility could be the design of different 'energy service packages' such as 'retrofit and switch' – a combination of refurbishment measures and connection to the district heating system to be developed in close co-operation with Energy Service Companies.

Conclusions and outlook

One of the greatest benefits of the described approach can be seen in the close co-operation and exchange the participating cities experienced during the peer learning visits. The assessment by people facing similar challenges brings a 'view from outside the box' to the host cities and can generate new ideas and approaches. In contrast, the peers gain knowledge by assessing the host city and engaging intensely towards solutions and recommendations. Within the peer-learning visit, the benchmarking approach helps the participating cities (hosts and visitors) to understand general structures of local climate policies and hence offers the opportunity to exchange and learn from each other. Even if the comparison of the city's status with the key-factors of the CASCADE benchmarking framework content did not always lead to new insights or ideas, a systematic analysis of the status quo of a given thematic area or focus turned out to be very helpful. Furthermore, the feedback report written 4-6 weeks after the visit can be used as an argumentative basis and substantial legitimisation for further political discussions. For example, 75 % of the participants presented their gained knowledge in their administration and most of the participating experts stated that climate policy management within the administration could be improved either by newly gained knowledge on organisational questions, new partnerships or other new activities. One participant was able to convince his own administration to implement his project idea, because this idea proved to be successful in another city within CASCADE, which is one example for a first success of the project. (Schuele and Arens, 2012). Provided more effects will be evaluated in the second years, since the initiation of projects in municipalities is very time consuming.

The CASCADE benchmarking framework was designed to assess main areas for improvement in an implementation process rather than to design a profile of activity or compare cities with each other. It also serves as a checklist for a self-assessment of the state of implementation for local policies and therefore as a tool for improving the climate strategies of both types of cities within the CASCADE project, host cities and visiting cities. One important factor though is that all participating cities met in an environment, in which competitiveness did not play a role. This led to a communicative and honest atmosphere, where challenges could be explicitly addressed.

The framework enabled visiting experts to systematically assess the performance of the host cities. Especially the discussion structure proposed by the framework facilitated the identification of weaknesses and sensitive points of the implementation process. The CASCADE benchmarking framework has been developed for general climate policy strategies. It would need to be modified if cities specify on one aspect, such as district heating in the case of Amsterdam.

However, the efforts required to carry out such extensive peer learning visits might appear disproportional. Usually, about six visiting experts from partner cities stayed four days in a host city to study the structure and performance of the climate activities of the host cities. This is expensive but necessary, since the peer learning visits and the interviews provided the opportunity to communicate intensively with the responsible institutions and public bodies in the host cities.

While the first year of this project offered a process for exchange and mutual learning regarding climate policies of cities, the next phases ("cascades") are going one step further and provide exchanging visits, where cities show other cities their day-to-day work. This and the third phase (2014) in which the procedure will be disseminated at the regional level of the partner cities will be organised among the partner cities.

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