

URBAN AGENDA FOR THE EU

Climate Adaptation Partnership

ACTION PLAN

*** *The Pact of Amsterdam states that the Action Plan "can be regarded as non-binding". Therefore, the actions presented in this Action Plan are not compulsory.*

26.10.2018

DEFINITIONS

Actions: should address a real need; an important issue, have real and visible impact and concern a larger number of Member States and cities; Actions should be new: no 'recycling' of elements which have already been done or which would be done anyway; Actions should be ready to be implemented: Clear, detailed and feasible; a study or a working group or a network is not considered an action.

Good practice: these are good projects and practices that have already been implemented and that are successful. The aim is to encourage their dissemination and mainstreaming (implementation at a wider scale) and transfer (implementation in more Member States and cities). They are instrumental to (one or more of) the actions proposed.

Responsible: is meant the institution (EU, national/regional/local) to who the action is addressed. It is not specifically any of the members of the partnerships. To describe why one institution should be responsible means that the partnership went into the analysis of the action and reached the conclusion that an action fits the purpose.

Deadline: refers to the timeframe where the action should take place in order to be meaningful. A deadline refers to a specific calendar.

Table of Contents

DEFINITIONS	2
1 INTRODUCTION	5
1.1 Objectives	6
1.2 Governance of the Partnership	7
2 ISSUES AT STAKE	13
2.1 Presentation of the issues	13
2.1.1 What is the general problem and what are the specific problems and issues?	13
2.1.2 Why are they relevant for the EU Urban Agenda?	16
2.1.3 What are the issues the Partnership focused on?	18
2.1.4 Are there any other important issues to be addressed at a later stage?	18
2.2 What has already been done?	19
3 ACTIONS	21
3.1 Better Regulation	22
3.2 Better Funding	25
3.3 Better Knowledge	34
4 GOOD PRACTICES	49
5 LINKS WITH OTHER COMMITMENTS	51
5.1 Link with the cross-cutting issues	51
5.2 New Urban Agenda and Sustainable Development Goals	52
5.3 Other commitments – Paris Agreement	54
6 MONITORING	55
Annex A Roles within the Partnership	59
Annex B Working Group themes, topics and elements	61
Annex C Overview of urban adaptation gaps, barriers and needs surveys	69
Annex D Overview of existing EU activities and initiatives on urban adaptation	73
Annex E Identified bottlenecks	75
Annex F References	82

Disclaimer

The document has been adopted by the members of the Climate Adaptation Partnership as a whole. It does not necessarily represent the individual views and opinions of its members who might have not endorsed the inclusion of all the recommendations included in the document in the same way. The views expressed in the present Action Plan are purely those of the Climate Adaptation Partnership and may not in any circumstances be regarded as stating an official position of the European Commission.



1 INTRODUCTION

On May 30, 2016, the Informal Meeting of EU Ministers Responsible for Urban Matters was held in Amsterdam. The ministers agreed on and established the Pact of Amsterdam: Urban Agenda for the EU (NP-CEU 2016)¹, which laid out the objectives, priority themes and the operational framework of the Urban Agenda work². In line with the EU 2020 strategy for smart, sustainable and inclusive growth, the Pact of Amsterdam defines Climate Adaptation as one of the Priority themes³ to be addressed by the Urban Agenda. The Climate Adaptation Partnership⁴ was set up in 2017 as a multilevel and cross-sectoral cooperation instrument and key delivery mechanism for the priority theme Climate Adaptation.

This Action Plan has been prepared by Urban Agenda for the EU Climate Adaptation Partnership to provide concrete proposals for the design of future and the revision of existing EU legislation, instruments and initiatives relating to the adaptation to climate change in urban areas in the EU.

The Action Plan has been developed in a participatory process involving key stakeholders from the EU institutions, national governments, regional and local authorities that are represented in the Climate Adaptation Partnership and beyond.

The Action Plan is guided by these key principles:

- **Respect for subsidiarity and proportionality** principles by defining clear responsibilities for actions on the appropriate governance levels, which ensure the most efficient delivery of the results and the highest added value;
- Seeking a **more effective integrated and coordinated approach to EU policies**, legislation, funding sources and initiatives governing urban adaptation issues;
- **Mainstreaming approach** by strengthening of the urban dimension in the EU adaptation to climate change policies and strengthening the adaptation dimension in the EU urban policies, instead of creating new policies;
- **Additional** to the existing initiatives, instruments and activities undertaken by EU, national, regional and local authorities by building on current achievements, best practices, accrued knowledge and lessons learnt;
- Strong **local governance level ownership** through active involvement of urban authorities and **innovative bottom-up approach** in the definition of the Action Plan;

¹ http://ec.europa.eu/regional_policy/sources/policy/themes/urban-development/agenda/pact-of-amsterdam.pdf

² <https://ec.europa.eu/futurium/en/node/1829>

³ <https://ec.europa.eu/futurium/en/urban-agenda>

⁴ <https://ec.europa.eu/futurium/en/climate-adaptation>

- **Striving toward territorial cohesion** by ensuring a wide geographic representation among Adaptation Partnership members and encouraging the expression of urban adaptation concerns originating in all geography of the EU;
- **Strong awareness of socio-economic issues** and potential socio-economic impacts of the proposed actions with the aim to minimise negative and promote positive impacts;
- Embedding of the proposed actions in the **existing working and decision-making structures** on all governance levels – EU, national, regional and local without creating unnecessary administrative burden;
- Compliance with EU legislation on **personal data protection** where the collection and exchange of information involve the processing of personal data.

The continuation of this document presents the objectives of the Climate Adaptation Partnership and the Action Plan, the governance of the Partnership, the urban climate adaptation issues at stake as well as the proposed actions in detail and their implementation timeline.

1.1 Objectives

Objectives of the Partnership

The Working Programme of the Urban Agenda for the EU defines the main focus of the Climate Adaptation Partnership:

“to anticipate the adverse effects of climate change and take appropriate action to prevent or minimise the damage it can cause to Urban Areas. The focus will be on: vulnerability assessments, climate resilience and risk management (including the social dimension of climate adaptation strategies).”⁵

Objectives of the Action Plan

The overarching objective of the Action Plan is:

to operationalise suggested policy and governance solutions for the identified key bottlenecks hindering successful adaptation to climate change in the EU urban areas.

In order to fulfil this objective, the Action Plan:

1. Provides concrete action proposals for the design of future and the revision of existing EU legislation, instruments, and initiatives relating to the adaptation to climate change in EU urban areas tackling the three pillars of Better Regulation, Better Funding and Better Knowledge;
2. Defines responsible institutions and organisations and implementation mechanisms for the proposed actions;
3. Proposes a timeline for the implementation of each of the actions;
4. Provides the basis for the monitoring of the action Plan implementation by defining Completion Indicators for the proposed actions.

⁵ Urban Agenda for the EU – Pact of Amsterdam, B Initial list of Priority Themes.

1.2 Governance of the Partnership

Coordinator

The Coordinator of the Climate Adaptation Partnership is the City of Genoa. The participation of the City of Genoa in several EU projects and networks on the themes resilience and risk reduction, led to a broad relationship with numerous European cities, working on risk reduction and climate change related issues. Special attention was put on risk assessment processes and related knowledge of different hazards, including deeper analysis of vulnerability and exposure through recognition, census and information, allowing the engagement of exposed population before, during and post-event. The Urban agenda for the EU and the candidature as Coordinator of the Climate Adaptation Partnership represented the opportunity to assess the medium-long term vision of the city of Genoa and its renovation process. This new mechanism gave Genoa and other European municipalities the opportunity to translate their needs in future EU policy improvements.

Members

The Climate Adaptation Partnership Members represent all governance levels – from the European to the local level - and key decision-makers and stakeholders engaged in urban adaptation to climate change in the EU.

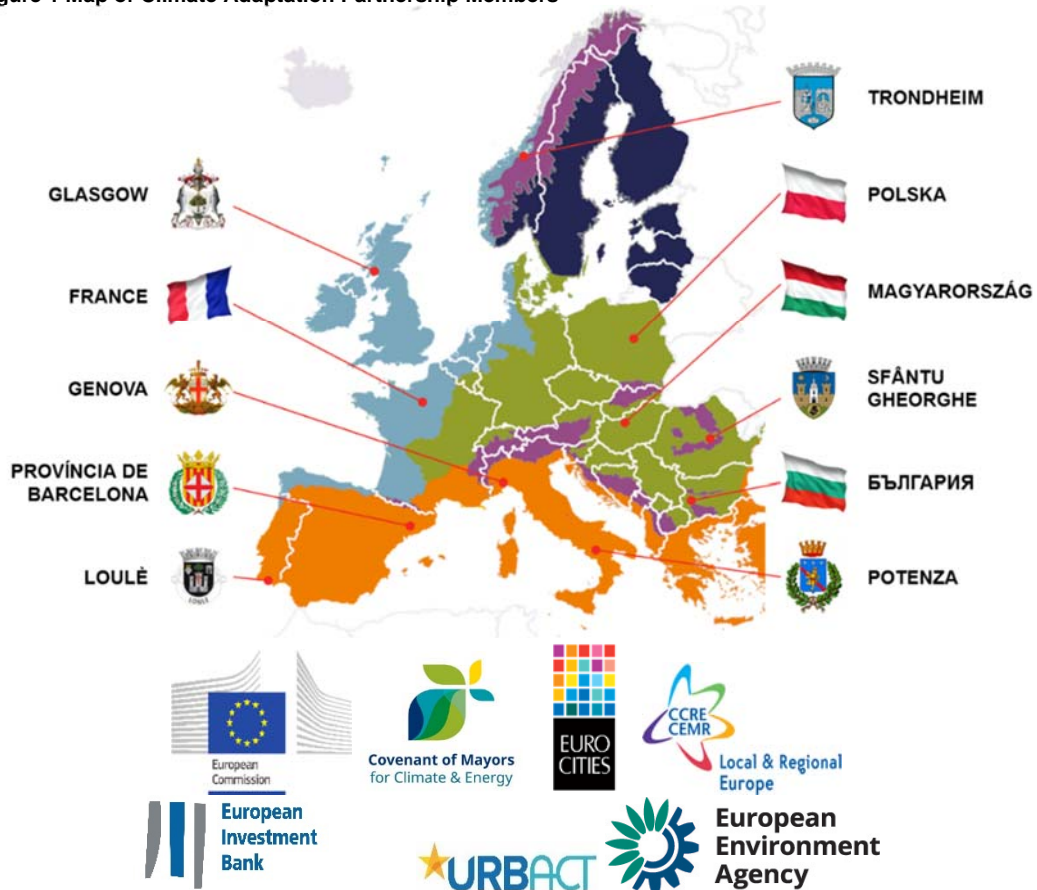
Table 1 Climate Adaptation Partnership members

Member States	Local/Regional Authorities	European Commission	Other EU Organizations / Observers / Stakeholders
France	Genova (IT) - Coordinator	DG REGIO	EUROCITIES
Poland	Barcelona Diput. (ES)	DG CLIMA	CEMR
Hungary	Glasgow (UK)*	DG ENV	EIB
Bulgaria*	Trondheim (NO)	DG RTD*	URBACT
	Loulè (PT)	JRC	EEA
	Potenza (IT)		Covenant of Mayors
	Sfantu Gheorghe (RO)		

* Partners that have not contributed or only to a limited extent to the Action Plan.

Furthermore, Climate Adaptation Partnership members originate from all EU macro-regions, ensuring broad geographic representation.

Figure 1 Map of Climate Adaptation Partnership Members



All Partners are members of the Working Groups (WGs) established in order to address 3 key areas of actions: Governance, Resources and Knowledge. Each WG includes a mix of members representing the different governance and decision-making levels as well as diverse geographical locations and expertise. Each WG is led by a nominated Partner.

Table 2 Working Group composition and roles of members

	WG Governance	WG Knowledge	WG Resources
Leader	LOULÈ (PT)	POTENZA (IT)	BARCELONA Diput. (ES)
Deputy		TRONDHEIM (NO)	EIB
Partners	GENOVA (IT)	GENOVA (IT)	POTENZA (IT)
	GLASGOW (UK)	LOULÈ (PT)	DG REGIO
	SFANTU GHEORGHE (RO)	SFANTU GHEORGHE (RO)	EUROCITIES
	POTENZA (IT)	EIB	GLASGOW (UK)
	FRANCE	GLASGOW (UK)	GENOVA (IT)
	POLAND	DG RTD	FRANCE
	HUNGARY	FRANCE	CEMR
	DG CLIMA	CEMR	
	CEMR	EEA	
	URBACT	JRC	
EEA			

- **WG Governance** is dealing with the political cycle, mandate, integrated strategic planning, decision-making, staff experience and similar topics;
- **WG Resources** is dealing with funding, human resources, cost-benefit analysis, climate adaptation monetizing topics and similar;
- **WG Knowledge** is dealing with data, expertise, methodologies, tools, risk assessments, monitoring indicator systems, capacity building, hazard/exposure, vulnerability analysis and other similar topics.

Further details on each Working Group topic break-down is provided in Annex B.

An informal **Local Authority Group** acts as an advisory board assessing the actions proposed and the activities foreseen from local authorities' point of view, to ensure the common ground and the baseline from the local level, which feeds into the EU and intermediary governance level actions. The detailed roles of the Technical Secretariat, Coordinator and Partnership Members are outlined in Annex A.

Background information used

In the process of developing the Action Plan a broad range of background information and expertise has been consulted:

- The expertise of Climate Adaptation Partnership members that includes urban municipalities, regional authorities, EU institutions, research bodies, city networks and initiatives and funding organisations;
- Background reports and literature published by the EU bodies and agencies, international organisations, research institutions, prominent NGOs, think tanks, etc.;
- The results of a survey consultation on the most critical issues in urban adaptation, with 65 respondents from urban municipalities across Europe sharing their views;
- Consultations – ad-hoc consultations with relevant stakeholders during the Action Plan development phase, broad public consultation online and intra-service consultation within the European Commission.

A full list of references can be found in Annex F.

Working method of the Partnership

As defined in the Pact of Amsterdam and the Orientation Paper of the Climate Adaptation Partnership, the overall working process follows five steps divided in two stages:

Figure 2 Partnership work process



Steps one to three directly contributed to the definition of the proposed actions and the development of this Action Plan and are outlined below.

Step 1 Stocktaking

The work in this step revolved around the identification of the existing EU level work and activities on adaptation to climate change, defining the scope of the partnership and Working Group work, ensuring the engagement and dissemination with a wider group of stakeholders. It also included considerations of resources for the Partnership work and external expertise needs. The first Partnership Meeting in Genoa established the overall structure for the Partnership work, identified key stakeholders and led to an agreement on communication strategy:

- The overview listing of existing EU regulations, instruments and initiatives is provided in Annex D;
- A summary of the consultations and communication and engagement activities is provided further in this chapter.

Step 2 Preparatory actions

During this step the Working Groups investigated relevant topics and issues to identify and analyse the main bottlenecks and potentials for local level adaptation to climate change in Europe. Additionally, in order to collect broader inputs, a survey among other local governments in Europe external to the Partnership was carried out. Second and third Partnership Meetings were held to facilitate the identification of key bottlenecks:

- The list of key bottlenecks identified is provided in Annex E;
- The key findings of the survey are provided in Annex C.

Step 3 Defining the objectives and deliverables

In the third step the members of Climate Adaptation Partnership put forward and agreed upon a set of actions that address a selection of the key bottlenecks identified in the preceding steps. A fourth Partnership Meeting concluded the work on the action development and provided the forum for cross-inputs by all Partners.

- The resulting proposed actions are described in detail in Chapter 3.

During Coordinators' Meetings of the Urban Agenda, special sessions have been dedicated to creating synergies and opportunities for collaboration among the partnerships. The Climate Adaptation topic has inherent synergies with Air Quality, Mobility and Land Use Partnerships. During this process, it is key to maintain the identity of the Partnership, while at the same time contribute to the Urban Agenda from a 'big picture' perspective, taking into account policy developments and proposed actions in the related Partnerships.

Consultations carried out

Public consultation has been an integral component of the development of the actions proposed in this Action Plan. The online consultation was held from 22 June – 17 August 2018 which resulted in a series of feedback and recommendations on the actions by European organisations, individuals, Member States and European Commission services. The received feedback was fully taken into consideration and the actions were revised and updated where appropriate. The majority of respondents confirmed the importance of the actions and agreed that the actions partially or mostly address the identified bottlenecks. Earlier, a consultation round on the bottlenecks identified by the Partnership was organised. The Partnership wanted to see how relevant these bottlenecks are according to other cities in Europe. This consultation, which took place in March 2018, confirmed the relevancy of the bottlenecks.

Communication of results

The Climate Adaptation Partnership is actively communicating its objectives and the work undertaken during the preparation of the Action Plan. It therefore informs the wider public about its progress and contributes to the general awareness on the issue, whilst gathering stakeholder input, feedback and support. This has been done in several ways and at different levels:

- Broader communication by participating in big events such as the 8th Annual Meeting of the *Community of Users for Safe and Resilient Societies* in October 2017, the *EUROCITIES Environmental Forum* in April 2018 and the *Open Day Resilient Cities* in April 2018 by ICLEI;
- Boosting communication via local networks of each partner;
- Establishing a good relationship with the communication team of the technical secretariat that support the partnership by carrying out interviews, recording videos, posting key messages and facilitating paper/article publications such as *"Boosting Adaptation to Climate Change in Europe"*, published by AWE International Magazine (October 2018);
- Presenting at national level in the Cohesion Agency meeting for the Metropolitan cities in Italy and at the FORUM PA in Rome on May 2018.

2 ISSUES AT STAKE

2.1 Presentation of the issues









2.1.1 *What is the general problem and what are the specific problems and issues?*

It is widely recognised that vulnerability and the potential scale of damage due to climate change is especially high in urban areas, which host high density populations (including highly vulnerable population groups), have a high concentration of valuable assets and economic investments as well as essential infrastructure networks and nodes (IPCC 2014, EEA 2013, COM 2013b, EEA 2017a). Europe's high rate of urbanisation – 75% of all citizens living in urban areas (WorldBank 2018) and cities accounting for more than 50% of Europe's GDP (MGI 2011) – calls for special attention to the impacts of climate change in cities and towns.

The key climate change impacts European urban areas are facing are: increasing temperatures, leading to the Urban Heat Island Effect, increased precipitation and extreme precipitation events leading to pluvial and fluvial flooding, water scarcity, as well as increased storm damage and the threat of nearby forest fires (EEA 2016). These direct impacts cascade through the urban systems leading to a wide range of secondary impacts on the economy, human health, social wellbeing, and overall quality of life and functioning of a city (see Figure 3 below) (EEA 2016). In order to preserve European cities as safe, attractive, liveable and inclusive spaces, innovation centres and economic powerhouses, action to address climate change impacts needs to be taken.

However, European cities and towns are not equipped to face this global scale challenge on their own. Insufficient knowledge and awareness, lack of human and financial resources, conflicting urgent priorities, absence of political commitment and limited executive and legislative powers as well as the need of coordination with neighbouring and distant urban and rural areas (E3G 2014) all hamper effective local adaptation action and necessitate integration and support from other governance levels – from regional, to national, to European.

Figure 3 Overview of climate change impacts on urban areas in Europe

	 LIVING	 WORKING	 MOVING
HEAT 	Decreased comfort Health risks Increased energy use for cooling, decreased for heating	Reduced labour productivity Increased energy use for cooling, decreased for heating	Discomfort on public transport Rail buckling Increased energy use for cooling, decreased for heating
FLOODS 	Nuisance/health risks Damage to houses Power and water failures	Reduced accessibility Economic asset damage Power and water failures	Blocked roads and rail
WATER SCARCITY 	Discomfort Health and safety risks	Reduced productivity Power and water failures	Shipping constraints
WILD FIRES 	Health and safety risks Damage to houses	Damage to economic assets	Transport route blockage
STORMS 	Nuisance/health risks Damage to houses Power and water failures	Economic asset damage Reduced accessibility Power and water failures	Blocked roads and rail

Note: The examples are not exhaustive and they may not be relevant for all cities.

Source: EEA 2016.

The recognition of the importance of taking action on adaptation to climate change in urban areas is explicitly embedded in the EU climate change policies. The EU strategy on adaptation to climate change pledges that the EU ‘will support adaptation in cities, notably by launching a voluntary commitment to adopt local adaptation strategies and awareness-raising activities’. This is implemented through action 3 of the strategy by ‘introducing adaptation in the Covenant of Mayors framework’ (COM 2013). During the follow-up, the Mayors Adapt initiative was launched by the Commission in 2014; and in 2015 was merged with its older sister-initiative focussed on mitigation of climate change into the Covenant of Mayors for Climate and Energy. From 2017 it was further integrated into the Global Covenant of Mayors for Climate and Energy (further referred to as ‘Covenant of Mayors’), with regional Covenant of Mayors offices created all around the world. To this date, almost 1100 urban municipalities from 25 Member States have signed up to the Covenant of Mayors adaptation commitment covering around 60 million inhabitants (CoM 2018). These municipalities have committed to conduct vulnerability and risk assessments, and develop, implement and report on adaptation plans.

In addition, many other cities who have not joined the Covenant of Mayors have developed adaptation strategies or plans independently or due to national legal commitments. Altogether this has led to 25.5% of EU Urban Audit cities having a climate adaptation strategy or plan by January 2017 (Reckien et al. 2018). Recent analysis by Reckien et al. (2018) looked at 885 European cities in the EU-28, covering 190.684.004 inhabitants and thereby 37.3% of the EU-28 population. Their analysis shows that 48.624.481 people or about 9.5% of the EU-28 population are currently being protected by an urban adaptation plan.

The presence of national regulation has a significant impact on local climate planning. Cities in Denmark, France, Slovakia and the UK, where local climate plans are compulsory, are about 5 times more likely to have an adaptation plan than cities in other countries, with 56% of their cities having

an adaptation plan. This shows that binding measures at the national level significantly increase the amount of local authorities in the EU with a local adaptation strategy, potentially because such regulation is not only a liability but also comes with guidelines, and methodological and institutional support. There is scope to further encourage other EU Member States to adopt national regulation for local areas at the national level and combine these with methodological guidance and binding measures.

Furthermore, the important role of EU-level action has also been clearly shown: ‘in countries where autonomous LCPs (Local Climate Plans) are rare and cities are not required by national legislation to develop plans (...) international initiatives such as the Covenant of Mayors raise the awareness, build the capacity and, often through EU-funded projects, provide the expertise and the funding necessary to develop LCPs.’ (Reckien et al. 2018) as well as keep up momentum on the importance of climate adaptation (CoR 2016).

This is a notable achievement and to a significant proportion driven and supported by EU-level activities. However, it still leaves almost 75% of EU cities without an adaptation plan and the analysis omits smaller urban municipalities, which are likely to have even fewer approved adaptation strategies or plans due to their limited resources and know-how. Furthermore, having a strategy or action plan alone is not guaranteed to lead to actual implementation of adaptation measures on the ground and does not portend quality outcomes of increased resilience on local levels. Even many ‘advanced’ municipalities with adaptation strategies in place continue to struggle in their adaptation efforts due to limitations in know-how, resources and political support.

Within recent years, several surveys have been carried out addressing European local authorities to identify the critical gaps and barriers to successful adaptation to climate change in urban areas. Annex C provides an overview of the survey results with regard to key gaps, barriers and needs identified among European urban adaptation practitioners. Although progress is being observed in the awareness levels, development of local adaptation strategies and their implementation, the gaps and barriers do not appear to be sufficiently addressed and keep being re-iterated throughout the years by survey respondents. Although there is some variance in the details of the recognised gaps (often relating to how the survey has been designed and the respondent profile), the main types of remaining gaps, barriers and open needs according to local authorities are:

- Lack of financial resources for adaptation planning and implementation, including for co-funding EU projects and for participation in capacity-building activities;
- Lack of supportive frameworks and policies on national level and cooperation between the different governance levels;
- General lack of human resources and their capacities and know-how;
- Lack of experience in creating well-functioning long-term administrative set-ups for adaptation in municipalities;
- Gaps in understanding climate change impacts and economic costs in specific urban sectors;
- Limited capacity to collect, access and interpret climate data;
- Lack of experience and know-how on prioritising and implementing adaptation measures;
- Gaps in know-how on developing monitoring systems for urban adaptation;
- Limited awareness of the available information, guidance and other resources, also due to language barriers.

(DG CLIMA 2013, Romanovska et al. 2015, CoR 2016, Master Adapt 2017, CoM 2017, Covenant of Mayors 2018).

It is furthermore recognised that small sized urban municipalities as well as regional authorities face a distinctive set of gaps and barriers and often require tailored support responding to their specific needs (E3G 2014, Romanovska et al. 2015, EEA 2017a, EEA 2017b).

Grounded in this information and in order to define the focus of the Urban Agenda adaptation activities, the Climate Adaptation Partnership carried out an exercise of identifying and classifying the urban adaptation bottlenecks in Europe. Altogether 39 bottlenecks were identified, and two thirds of them (25 bottlenecks in total) are addressed by the proposed Actions in this plan.

The full list of the identified bottlenecks is included in Annex E.

2.1.2 *Why are they relevant for the EU Urban Agenda?*

Upon his election as President of the European Commission in July 2014, Jean-Claude Juncker outlined the policy priorities for his five-year term in office (Juncker 2014, EPRS 2018). The priorities revolve around 'big themes' that have the potential to bring real benefit for the citizens of the EU. Climate change, and specifically climate change in urban areas and the associated risks and responses, have direct and/or indirect implications for most of the Juncker's priorities. Successful urban adaptation to climate change offers a boost and safeguarding for the achievement of the following priorities:

Jobs, Growth and Investment – climate change impacts are a serious threat to industries, investment and economic activity, also affecting jobs, which are predominantly located in Europe's urban areas (EEA 2016). Taking action on urban adaptation protects these jobs and makes investments in industry more secure, thus stimulating investor confidence. Furthermore, climate adaptation creates new 'green' jobs necessary for the planning, implementation and maintenance of adaptation measures. It helps the re-qualification of the urban workforce towards the jobs of future and promotes innovation at the same time (EEA 2012, EEA 2016).

Digital Single Market – large swathes of ICT infrastructure (as well as the interlinked energy, transport and industrial infrastructure) are located in Europe's urban areas and are vulnerable to climate change impacts (JRC 2015). Protecting it from the damage, disruptions and collapse due to both extreme hazards and gradual climate change, is crucial for attaining the goals of improving access to digital goods and services, creating growth-conductive conditions for digital networks and services and maximising the growth potential of digital economy.

A resilient energy union – energy infrastructure is projected to suffer from a more than 10-fold increase of costs resulting from climate change related damages by 2080 (JRC 2015). Unless action is taken to increase the resilience of the energy infrastructure, of which a significant share is placed in Europe's cities and towns, the commitment to provide EU citizens and businesses with secure and affordable energy is under jeopardy. Urban areas and local authorities in the EU therefore need to be equipped with the awareness, know-how of and resources for climate-proof energy infrastructure in collaboration with the relevant national authorities and private sector. Likewise, cities have a significant potential to contribute to the energy efficiency goals of this priority, by implementing adaptation measures that also result in energy savings (e.g. by improved building standards, building stock renovation, promoting more energy efficient cooling when adapting to rising temperatures, etc.).

A deeper and fairer internal market with a strengthened industrial base as well as a deeper and fairer economic and monetary union – climate change impacts in urban areas, where the industrial activity is the highest and the market most active, result in high economic costs. These costs are a burden for the development of industrial activities and the free flows of goods and people. Due to socially unequal consequences of climate change impacts in urban areas, the European Pillar of Social Rights is concerned (ETC/CCA 2017). Ensuring cities' capacities to increase their resilience to climate change whilst keeping social aspects in mind would lead to a more stable production flow, trade and improved social equity within the deeply interlinked single market, economic and monetary union.

A balanced and progressive trade policy to harness globalisation – Europe is part and parcel of a global community interlinked and interdependent through trade relations. As such, it is not only vulnerable to the climate change impacts on European ground, but also sensitive to the impacts experienced along the trade paths. The economic losses and disruptions in value chains elsewhere are likely to have (often immediately felt) impacts in Europe, due to increased globalisation and international trade. This includes risks to raw material supply, risks to manufacturing, global food price volatility, loss of reliability of supply and distribution and economic repercussions, among others (EEA 2017). Furthermore, cities are the engines of international trade and globalisation, with almost half of the top 10 most powerful cities globally located in Europe (IUS 2017). This comes with increased exposure to climate change shocks globally. Actions need to be taken to increase the resilience of Europe's international trade chains to climate related impacts, looking beyond the immediate territory of the urban area and by adopting the extended system resilience approach.

Justice and Fundamental Rights Based on Mutual Trust – due to the disproportionate impacts of climate change among societal groups, it threatens several of the fundamental rights enshrined in the Charter of Fundamental Rights of the EU (the rights of women, elderly, children, access to health services, etc.) (COM 2012, DG EXPO 2012) and exacerbates social injustice issues (ETC/CCA 2017). Preventing the negative impacts on various social groups in European cities, where most EU citizens live and where high concentrations of especially vulnerable groups (e.g. the elderly, urban poor, persons with migration background) are found, can ensure higher levels of achieved social justice across the EU. Care needs to be given to identify the social impacts of climate change on urban populations, as well as the design of urban adaptation responses with social justice in mind to successfully contribute to this priority.

New Policy on Migration – climate change is likely to act as a contributing factor in the increased movement of people globally, often caused by the decline of the economic situation, and in some cases due to deeming a living area too risky or uninhabitable. According to evidence, climate migration is mostly to result in local and intra-regional movement. Climate change also reinforces rural to urban migration (COM 2013a). Some climate-influenced migration increase can also be expected from the neighbouring areas of the EU, although the most vulnerable populations are unlikely to have the necessary resources to migrate over large distances (COM 2013a). The current migration crisis indicates that the EU might not yet be ready to face this additional factor of migration decisions. As most of the migrant populations, both from within the EU and from outside, settle in urban areas and due to inherent social factors, they are likely to have lower adaptive capacity to climate change impacts. Addressing the particular vulnerabilities of migrants, by strengthening their adaptive capacities and engaging them in adaptation decision-making in cities, can successfully lessen the associated negative outcomes of migration Europe-wide and help achieve the objectives

of the European Agenda on Migration. Furthermore, also within Europe, migration and relocation are potentially successful adaptation measures if planned and managed well, which European urban areas need to be equipped to manage.

Stronger Global Actor – in the global arena of climate policies, the EU is positioning itself as a strong global actor. However, it is not only the EU bodies and the Member States that significantly contribute to international climate negotiations and agreements. European cities have a solid role as the largest and one of the most impactful non-state actors in the UNFCCC process (UNFCCC 2018). So far, European cities and towns have made significant commitments to climate change mitigation goals on a global level which need to be matched with equally ambitious adaptation action. Furthermore, the use of the collective negotiating power of urban municipalities internationally should be encouraged to achieve resilience goals. Additionally, the experiences, know-how and adaptation innovation developing in European cities is highly relevant for the EU's vision of supporting adaptation to climate change in the developing regions, contributing to efficient response to the global challenge to climate change and contributing to peace and prosperity in the world.

Democratic Change – in the spirit of subsidiarity and proportionality, all levels of governance, including the local, play an important role in European policy-making. However, effective vertical and horizontal coordination is key to make it work. Better regulation is especially important to address urban adaptation to climate change, which is a broad, multi-sectoral and multi-level responsibility, where impacts are felt locally, while decisions are being taken on all governance levels. Local authorities have repeatedly expressed their need for better coordinated European urban policies and better inclusion in the multi-level governance. The Urban Agenda for the EU addresses this need and the current Action Plan strives to achieve better regulation, better funding and better knowledge through complementary EU action in support of national and local urban adaptation initiatives.

2.1.3 *What are the issues the Partnership focused on?*

The actions constituting the present Action Plan address a significant number of the identified key bottlenecks to successful urban climate change adaptation in Europe. In total, 25 out of 39 identified bottlenecks are fully or in part addressed by the proposed actions. The Partnership has focussed primarily on the bottlenecks that are associated with:

- Provision, access and usability of key data, methodologies, tools and information essential for urban adaptation planning and implementation;
- Accessibility, suitability and promotion of EU and other funding sources for urban adaptation, including for the development of local adaptation strategies/plans and the implementation of adaptation measures;
- Awareness raising, capacity building and stakeholder engagement in support of good adaptation governance locally.

2.1.4 *Are there any other important issues to be addressed at a later stage?*

A sub-set of the bottlenecks identified by the Partnership are not directly addressed by the current Action Plan and remains to be tackled in the subsequent work of the Partnership. These bottlenecks relate to:

- Gaps in internal capacities and institutional set-up of Local Governments, such as:
 - Insufficient know-how on adaptation communication;
 - Inefficient or non-existing cross-departmental collaboration;
 - Conflicting budget priorities and difficulties in prioritising adaptation measures;

- Lack of overall capacities to manage and achieve successful implementation of the local adaptation strategies/plans due to multitude of other daily priorities.
- Multi-level governance issues such as conflicting priorities and strategic objectives between national/ regional and local level;
- Insufficient uptake of adaptation financing due to limited borrowing capacity or lack of know-how on using green-bonds as a financing instrument;
- The lack of knowledge and understanding on the role and importance of biosphere, ecosystems and green infrastructure in urban adaptation to climate change.

A range of action ideas that have been identified and proposed by the Partners, have not been developed into fully defined actions for the Action Plan. However, they are to be considered for further development during successive planning periods, especially in the light of addressing the remaining gaps (as outlined above) or any new emerging issues:

1. Update of EU guidelines on national adaptation planning with increased focus on sub-national level and enhanced communication;
2. Improvement of data accessibility for local Municipalities in the framework of ESPON;
3. Extension of national pages on Climate-ADAPT adaptation information portal to include more detail on national data sources;
4. Development and availability of templates for the elaboration of local climate adaptation strategies, localised in several national languages;
5. Funding adaptation-related capacity building activities for cities;
6. Opening of databases on historic climate hazards, projections, resilience investments and other relevant information held by a range of public and private institutions for the use in urban adaptation planning;
7. Further improvements of the dialogue between Local Authorities, national governments and the EU to foster appropriate decisions towards adaptation funding within the EU, i.e. explicitly including adaptation in INTERREG programs.

2.2 What has already been done?

The EU Strategy on Adaptation to Climate Change explicitly defines an action under Pillar I, to 'support adaptation in cities' (COM 2013b). For this purpose, the Covenant of Mayors for Climate and Energy acts as the key instrument of the EU supporting urban adaptation. The Covenant encourages political commitment, provides capacity building and technical support as well as building a community of urban adaptation practitioners in Europe (see Annex D for more details). A recent survey has shown that participation in the Covenant of Mayors or other international adaptation initiatives acts as a springboard for adaptation action in many European urban municipalities (Reckien et al. 2018). In order to broaden the positive impact of the Covenant on the local level adaptation initiatives in Europe, it's reach needs to be extended by increasing the numbers of signatories committing to adaptation targets and the Covenant activities need to be further supported.

Local authorities likewise benefit from a plethora of other initiatives and instruments developed under the EU Strategy on Adaptation to Climate Change, including those developing and supporting the knowledge base and capacities for adaptation, providing funding to support adaptation planning and implementation, integrating adaptation in the cohesion policy as well as promoting adaptation action on national level in Member States. The full overview of the existing EU level strategies, policies,

legislation, initiatives funding instruments, networks and projects and as well as knowledge support structures is provided in Annex D. The Action Plan puts forward actions that would help to scale up, better target and adjust the EU policies, tools and initiatives, as well as address the remaining gaps.

On the national level, the majority of EU Member States have by now approved their adaptation strategies (CA 2018). In 2014 it was reported that around half of them explicitly addressed urban adaptation (EEA 2014). The presence of national regulation has a significant positive impact on local climate change planning, which is evident in Europe, especially in those countries where countries local climate adaptation strategies or plans are compulsory (Reckien et al. 2018). Thus, the development of national adaptation strategies and explicit inclusion of urban resilience aspects in them needs to be further encouraged.

3 ACTIONS

In order to support and advance successful adaptation to climate change in European cities, a range of actions need to be taken to enable local governments to assess climate change risks and the vulnerability of essential urban systems (including the social dimension), strategically plan adaptation action based on solid evidence, as well as fund and implement measures on the ground leading to tangible increases in urban resilience in Europe. The European Union has a significant role in advancing adaptation action on the local level through enabling policies, instruments and initiatives complementing national, regional and local efforts.

Through the bottom-up working method of the Climate Adaptation Partnership, a set of actions are put forward, focussing on those issues where European level action is most needed and adds most value. The actions address a selection of the key bottlenecks identified and contribute to the three Pact of Amsterdam objectives: 1) Better Regulation; 2) Better Funding and 3) Better Knowledge.

The table below provides an overview of all Actions, which are presented in detail in the following subchapters. A range of additional actions have furthermore been suggested by the Partnership for consideration in the future iterations of the Action Plan (*see Chapter 2.1.4*).

Table 3 The overview of actions

BETTER REGULATION	
R1	Analysis of national multilevel urban development and planning regulations with focus on climate adaptation
BETTER FUNDING	
F1	Guidelines and toolkit for the economic analysis of adaptation projects
F2	Including recommendations for the OPs of the ERDF in order to improve its accessibility for municipalities
F3	A new LIFE for urban adaptation projects
BETTER KNOWLEDGE	
K1	Improving EU municipalities knowledge in the framework of Copernicus Climate Change Service
K2	Enhancing the local content of Climate-ADAPT
K3	Political training on climate adaptation
K4	Enhancing stakeholder involvement at regional and local levels
K5	Promote open access of insurance data for climate risk management
K6	Further engagement of national and sub-national government's associations as key facilitators (and relevant Covenant of Mayors supporters) to best support local authorities in their adaptation process

3.1 Better Regulation

The Urban Agenda of the EU focuses on a more effective and coherent implementation of existing EU policies, legislation and instruments. Drawing on the general principles of better regulation, EU legislation should be designed so that it achieves the objectives at minimum cost without imposing unnecessary legislative burdens. In line with the philosophy of the Urban Agenda for the EU, the Action Plan will not initiate new regulation but rather will contribute to the revision of existing and design of future EU regulation pertinent to the topic of urban adaptation, thus ensuring that it better reflects urban adaptation needs, practices and responsibilities. It recognises the need to avoid potential bottlenecks and minimise administrative burdens for Urban Authorities.

The Climate Adaptation Partnership proposes the following actions under the objective Better Regulation:

Table 4 Action under the objective Better Regulation

Action under the objective Better Regulation	
R1	Analysis of national multilevel urban development and planning regulations with focus on climate adaptation

Table 5 Action R1

Action R1		Analysis of national multilevel urban development and planning regulations with focus on climate adaptation	
Short description:	Collect and analyse all available multilevel regulation tools on urban development and planning regulations in a context of multilevel climate adaptation strategies (including evaluated EU Adaptation Strategy). Particular attention will be given to the urban planning and other spatial strategic planning tools tailored to the national, regional and local level needs. Collect and disseminate national, regional and local regulation case studies and good practices examples, develop conclusions and suggestions for multilevel regulation.		
Responsible institution:	Hungary	Contributing institutions:	EEA, Covenant of Mayors Office, JRC, Ministry of Environment in Poland, Loulè
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	06.2019 - Progress monitoring 12.2019 - Progress monitoring
Indicators of completion:	Collected and analysed multilevel urban development regulation systems of at least half of Member States based on questionnaires		
Bottlenecks addressed:	2, 3, 4, 26 (see annex E)	Cross-linkages:	K2 and F2

What is the specific problem?

Climate adaptation requires a long-term strategy, which is difficult to realise within the current institutional and political context. Currently adaptation actions are often based on sectoral regulations, which provide less effective, silo based approaches and solutions. Multilevel strategic spatial planning and urban development planning are some of the best tools to respond to the complex challenges of climate change and can support proactive cross-cutting urban adaptation. But existing urban planning regulations, urban planning documents (strategic concepts and strategies) and urban planning tools

(spatial and land use plans) related to climate adaptation are not detailed enough, or do not contain the relevant information to be used by the target audience (decision makers of municipalities). In other cases, regulations are well prepared, but not efficient (municipalities do not optimally use the potential of these regulations). Relevant information and efficiency are particularly important for the regional and local authorities. Municipalities find it difficult to make effective use of the existing regulatory documents and tools. Also, there is a lack of effective participatory tools for multilevel governance, cooperation concerning the connection between risk management, climate adaptation planning and urban planning. While stakeholder engagement plays an important role in urban planning in Europe (also embedded in regulations), we do not know the extent to which the regulations address the participatory process related to risk management in the climate adaptation field.

The existing national, regional and local case studies and good practice examples on regulation are diverse, but also too few and not accessible for their respective target groups. There are less experiences about the spatial nature of climate change impacts, risks and solutions. The role of urban planning is underplayed in national adaptation strategies of EU countries. The planning system's connection to short term political cycles constrains its use for achieving longer term progressive goals, such as adapting to climate change. One critical factor is to determine which political and legal enablers will be needed to encourage long-term investments in cities.

Investors also play an important role in long-term urban development related to climate change. We do not know which measures are required at the national level to overcome the barriers faced by cities to unlock investment, and how regulation can attract private investors to modernize sustainable and green urban infrastructure.

The geographies of cities vary greatly, and it is difficult to identify the best solution on a local level as good examples. In Europe national governments are generally responsible for urban matters' regulation, and there are many ways and fields of adaptation, but the multilevel nature of climate change makes it important to revise these tools on a larger, European scale.

How do existing EU policies/legislations/instruments contribute?

The EU Adaptation Strategy (EAS, 2013; evaluation is planned to be completed by the end of 2018.) includes Action 1: Encourage all Member States to adopt comprehensive adaptation strategies. In 2017, the Commission assessed whether action being taken in the Member States is sufficient. If it deems that progress is insufficient, the Commission considers proposing a legally binding instrument. EAS also includes Action 5: Further develop Climate-ADAPT as the 'one-stop shop' for adaptation information in Europe. It aims to contribute to the objective of better-informed decision making by providing access to information on climate impacts, vulnerability and adaptation via Climate-ADAPT knowledge platform. This platform contains a vast amount of resources on adaptation, including case studies and best practices examples, for the use of different governance levels. The Urban Adaptation Support Tool has been developed specifically in support of regional and local level adaptation action. Action 6: As part of the Adaptation Strategy package, the Commission has provided guidance on how to further integrate adaptation into the CAP, the Cohesion Policy and the CFP. This guidance aims to assist managing authorities and other stakeholders involved in programme design, development and implementation during the 2014-2020 budget period. On 6th May, 2013, the Commission adopted an EU-wide strategy promoting investments in green

infrastructure⁶. The strategy promotes the deployment of green infrastructure across Europe as well as the development of a Trans-European Network for Green Infrastructure in Europe, a so-called TEN-G. Furthermore, the European Environment Agency is regularly issuing reports on national and urban adaptation planning. These comprehensive reports include a wide variety of case studies and best practice examples. The Covenant of Mayors together with the Joint Research Centre of the Commission provide knowledge, outlining how their technical guidance supports municipalities in their development of sustainable energy and climate plans (SECAPs), local monitoring and reporting template for adaptation. Extensive communication material, such as best practices brochures, case studies, fact sheets are produced and disseminated by the Covenant of Mayors, all available online. Under the Hungarian Presidency, a handbook (“Climate-friendly cities”) had been developed as a European toolkit for urban planning.

The EU’s [Resource Efficiency Roadmap](#) (part of the EU2020 Resource Efficiency flagship initiatives) refers to land use planning: it is necessary to better integrate direct and indirect land use and their environmental impacts in all levels of decision-making.

Nevertheless, there is an important need to review and update the existing regulation systems of national, regional and local level. In addition, further work is needed on the development and collection of case studies and best practice examples in regulation, as well as making them available for the respective audiences. There is also a need to strengthen linkages between climate plans (such as SECAPs) and urban plans (throughout regulation) for more effective and integrated climate adaptation.

Which action is needed?

Collect and analyse all available regulation of urban development and planning process and documents (urban development strategies, land use plans etc.) in the context of European and national adaptation planning, such as sustainable energy and climate action plans, green infrastructure plans etc. which may be identified as the work progresses. Collaboration with national authorities, the Covenant of Mayors and other relevant partners will be important for implementation of a bottom-up approach.

Collect and disseminate national, regional and local regulation case studies and best practice examples, develop conclusions and suggestions for multilevel regulation and operational programs on national level, making them available for each Member State.

How to implement the action?

1. Indicators will be developed first, to define data and information needs for analysis;
2. Data and information collection for analysis is based on questionnaires (for each relevant governance level, maximum 3 pages);
3. Systematic analysis of collected data and information;
4. Preparation of conclusions, suggestions, selection of case studies for relevant governance levels.

The actors are national authorities responsible for urban planning (top-down approach) and local authorities (bottom-up approach) facilitated by local authority organisations.

⁶ http://ec.europa.eu/environment/nature/ecosystems/strategy/index_en.htm

The action is proposed to be implemented in 2019 before preparation of national Operational Programs of ERDF (or other funds) and will consider inclusion of any new or reinforced action.

Funding sources and needs

Each Member state collects their own regulations which are then analysed by the responsible and contributing institutions. This requires national and local authority funding sources.

Implementation risks

Lack of capacity of national and local authorities to implement the action. Lack of information or lack of clear regulation related to urban planning and climate adaptation. This could be mitigated by making use of available expert days by the partnership and strong support by the responsible institution.

Cross linkages with other actions

This action relates to better knowledge actions as it also improves available knowledge of how best to tackle adaptation challenges (e.g. K2). Furthermore, there is also a link to funding actions (such as F2) that aim at establishing recommendations for the Operational Programs.

3.2 Better Funding

The Pact of Amsterdam states that the Urban Agenda for the EU will contribute to identifying, supporting, integrating and improving traditional, innovative and user-friendly sources of funding for Urban Areas at the relevant institutional level, including from European structural and investment funds (ESIF) (in accordance with the legal and institutional structures already in place). The overarching aim of this Action Plan pillar is not to create new or increased EU funding aimed at higher allocations for urban authorities, however, it focusses on improved funding opportunities for urban adaptation based on lessons learned.

The Climate Adaptation Partnership proposes the following actions under the objective Better Funding:

Table 6 Actions under the objective Better Funding

Actions under the objective Better Funding	
F1	Guidelines and toolkit for the economic analysis of adaptation projects
F2	Including recommendations for the OPs of the ERDF in order to improve its accessibility for municipalities
F3	A new LIFE for urban adaptation projects

Table 7 Action F1

Action F1		Guidelines and toolkit for the economic analysis of adaptation projects	
Short description:	This action proposes to develop guidance and tools for robust analysis early in the project appraisal cycle to aid decision making on urban adaptation interventions the tools are aimed for in-house use by cities and financial institutions, as part of any Climate Risk and Vulnerability Assessment (CRVA).		
Responsible institution:	European Investment Bank	Contributing institutions:	Financial sector (KfW, National Promotional Banks, EBRD, Commercial Banks) EUROCITES, CoM, CEMR, representative sample of EU cities for testing
Implementation timeline:	01.2019 to 12.2021	Intermediary deadlines:	06/2019 - Terms of Reference and Workplan 12/2019 - Progress Monitoring 06/2020 - Draft Guidelines and draft Toolkit; Training
Indicators of completion:	Delivery of guidelines and toolkit; Dissemination and training on use for 10-12 cities belonging to the contributors by end 2020.		
Bottlenecks addressed:	31, 32 (see annex E)	Cross-linkages:	R1 and K3

What is the specific problem?

The consideration of costs and benefits enables decision makers to make informed and robust decisions between options, allowing trade-offs and/or providing a means to justify decisions. In many public and private institutions, economic cost-benefit analyses (CBAs) help provide the justification for project approval. In addition, such analyses facilitate dialogue with other national, regional or local stakeholder if priorities are conflicting. However, CBAs can be particularly challenging for projects related to climate change adaptation (CCA). The challenge arises due to high levels of uncertainty, and the stochastic nature of climate change projections, as well as the difficulty in estimating future benefits and avoided losses. The CBA of climate change adaptation for infrastructure, and in particular for urban multi component/sector projects, is therefore technically challenging to complete, as well as time and resource intensive and is often outsourced to external experts and consultants. As a result, it has proved difficult for financial institutions to develop quick and cost-effective in-house CBAs which permit robust decision making for adaptation interventions.

How do existing EU policies/legislations/instruments contribute?

The EU has comprehensive guidelines on CBA, and has supported projects such as ClimateCost, Econadapt, and more recently COACCH, but these do not resolve the challenge outlined above, particularly for urban multi sector adaptation interventions. However, this previous work does form an important point of departure. International experience has shown that much of this guidance has proven far too complicated (Computable General Equilibrium models, Real options from UK green book, etc.), some of which are not used at all (due to cost and/or labour considerations), or because

they are not seen to sufficiently aid in the decision-making process. EIB has started work on this, initially for large infrastructure projects globally, and has provided its concept note to the UA Partnership.

What action is needed?

This action proposes to analyse existing methodologies and good practices regarding the economic analysis of climate adaptation and develop these to infrastructure investments including green infrastructure in the urban context. The guidance and tools that are developed shall be appropriate for in-house use by cities (including small and medium-size) and financial institutions, as well as be cost effective and promote low regret and robust decision making on adaptation interventions. Such a tool would complement other considerations including developmental, social, financial and environmental which all need to be considered in the final project decision. Cities need to justify their priorities and use of public funds to the constituencies and funders (loans or grants) and are currently poorly equipped to do so. The availability of appropriate tools and guidance for urban investment decision-makers will permit, promote and enhance investments and operational changes in cities, enabling people, assets and ecosystems to cope with impacts and seize the opportunities that climate change presents.

How to implement the action?

It is envisaged that this work shall be carried out with the assistance of external consultants, to be led collectively by representatives (steering committee) of both the financial sector (commercial and international financial institutions and urban/cities. The approach requires the consultants to facilitate the sharing of best practices between cities, financial institutions and service providers and initially develop simple, best practice guidelines along the lines of the “Integrating Climate Change Information and Adaptation in Project Development: Emerging Experience from Practitioners” (EUFIWACC, 2016). Next steps are more detailed guidance on robust decision making under uncertainty and low cost, low regret solutions for urban adaptation with the tool kit to carry out such assessments, including training of how to apply such guidance and tools

Funding sources and needs

EU funds, EUR 2-3 million – EIB to commit to funding for Urban CRVAs (Economic analysis included) of 10-12 cities that are committed to working with EIB. Funding needed for rolling out the guidelines to cities, webpages, training etc. to cities through the implementing entity.

Implementation risks

There is a risk that the task of simplifying a highly complex challenge of economic analysis of adaptation, and nascent field, in the context of complex multi component/sector urban investments cannot move beyond guidance and best practices. A second risk, which is known from the urban partnerships, is the availability and willingness of all the stakeholders to commit the necessary time to support this action. This may be challenging for smaller cities, due to the complexity and resource constraints. It is therefore necessary to find cities that are willing and able to participate in the pilot and learning.

Cross linkages with other actions

This action has a link to R1, as it can be seen as one of several tools that can facilitate planning. Furthermore, it links to K3 as it can support the training and understanding of municipal politicians in understanding the costs (economic and financial) of adaptation.

Table 8 Action F2

Action F2				Including recommendations for the OPs of the ERDF in order to improve its accessibility for municipalities			
Short description:		Establishing recommendations for the Operational Programs (OP) in order to improve accessibility for Local Authorities and to increase adaptation actions' implementation. The recommendations are addressed to the Member States and Authorities managing ERDF. The actions also should be useful to integrate those recommendations into the new ERDF period (2021-2027).					
Responsible institution:		Diputació de Barcelona		Contributing institutions:		Local Authorities network (Covenant Supporter and/or Coordinator); Covenant Clubs, France, Hungary	
Implementation timeline:		09.2019 to 06.2020		Intermediary deadlines:		06.2019 Progress monitoring 12.2019 Progress monitoring	
Indicators of completion:		Concrete recommendations to be taken up by managing authorities					
Bottlenecks addressed:		6,12,18,19,20,30 (see Annex E)		Cross-linkages:		F1 and K6	

What is the specific problem?

The accessibility of the ERDF by cities and towns, especially small and medium-sized towns, due to the degree of complexity to fulfil all requirements, is limited. That complexity can be higher or lower depending on how these funds are managed by the Member States. For instance, in some Member States the entity applying for the fund must provide an upfront investment, which is a significant barrier for many Local Authorities. In some other countries Operational Programs take a long time to be developed and so the calls are delayed, thus creating uncertainty regarding the availability of the funding and the related conditions, so cities planning becomes more difficult. As a result, many Local Authorities feel discouraged and do not apply for one. Co-financing requirements can be also a constraint.

National structures are typically sectorial, which leads to a less integrated approach. Operational Programs are also often sectorial. On the other hand, climate adaptation requires an integrated approach. Non-adaptation projects (i.e. projects whose main goal is *not* adaptation) will not include adaptation criteria as it is not demanded by the OP.

How do existing EU policies/legislations/instruments contribute?

Each Member State develops its own Operational Programs (OP) and establishes specific ERDF calls linked to these OP, according to ERDF regulations (EU 1301/2013 and EU 1303/2013) and priorities. Adaptation measures can currently be executed through ERDF, however a high degree of technical expertise is required to prepare a project to fit call requirements. As a result, it is necessary to hire external consultancies, and in some areas co-financing requirements are high (i.e. 50%) and difficult to achieve by Local Authorities.

For example, co-funding requirements are established by regions, but sometimes there should be some specificities towards towns and cities. In some areas with high co-funding rates, there may be cities which have a high degree of vulnerable population and low-income rates, sometimes lower than those regions which have low co-funding rates. It may be suggested that co-funding rates for

towns and cities should be linked to their local economic situation, not to the region in which they are located. Managing authorities may consider lowering the co-funding rate by developing specific aids linked to the economic situation of the demanding local authority.

Which action is needed?

The required action is to define specific barriers encountered by Local Authorities when applying for an ERDF call and identify the solutions to overcome them that could be included as recommendations into the OP. They also should identify where bureaucracy to fulfil the call could be diminished as well as how more funds could be allocated to climate adaptation projects.

National authorities managing ERDF funds could include recommendations into their OP such as:

- Allocating part of the funds to climate adaptation projects to Local Authorities and considering to co-finance at least part of them, considering the economic profile of the Local Authority.
- Allowing supra-municipal entities (such as provinces, councils, etc.) to act on behalf of the municipalities, no matter their size, so these Authorities can help municipalities by bringing in technical expertise and, when possible, co-financing
- Lowering the co-financing requirements for adaptation projects and differentiating the co-financing requirements based on the size of the Local Authority (where smaller authorities should face lower requirements).

How to implement the action?

1. Local Authorities, supra-municipal Authorities, Covenant Coordinators should (together with the responsible and contributing institutions) develop an analysis of the barriers encountered by Local Authorities to implement adaptation actions through ERDF and propose recommendations using specific examples in order to present that to the Managing Authorities. For instance, DiBa could prepare a specific questionnaire to be sent to Local Authorities in order to determine whether they have ever applied in an ERDF call, and the reasons why if they have not applied in such a call. If they had applied in such a call, determining the main difficulties which they encountered to fit the requirements. Also, to determine if the experience was positive (potentially) leading to participation in future calls. They also should list which solutions could be included in the OP in order to facilitate access to the fund;
2. The abovementioned institutions should establish a dialogue with the managing authorities to ensure the uptake of recommendations. Meetings between Managing Authorities and Local Authorities must be organised so Local Authorities can present the recommendations;
3. Monitoring the result. The responsible and contributing institutions should monitor whether the recommendations will be included and into what degree;
4. Feedback by the abovementioned institutions to DG REGIO on the results so they might consider including some of the recommendations into the next ERDF period.

Funding sources and needs

Human resources are needed to deal with the analysis of the gaps and development of recommendations and to organise and attend the dialogue meetings with the managing authorities. Potentially use of expert days of the Partnership.

Implementation risks

There might be delays in the finalisation of the Operational Programs due to the extra time and effort necessary for dialogue meetings and inclusion of recommendations. This risk is to be mitigated by

seeking co-operation of additional contributing institutions, such as member states and Managing Authorities.

Cross linkages with other actions

Action F2 links to action F1 as the existence of a tool which standardises the economics of climate change could be useful for both actions, appliers of an ERDF and managers. It will be a way to assess projects and to see the options to implement them. Action F2 also links to action K6. The existence of Governance structures such as Covenant supporters will be helpful in order to gather information on potential recommendations for OP, also to facilitate project bundling and assess conditions needed to execute measures. A good engagement process between supramunicipal authorities such as provinces, county councils and municipalities will be useful to gather information from Local Authorities in relation to barriers to apply for ERDF-funds and potential solutions to overcome them

Table 9 Action F3

Action F3		A new LIFE for urban adaptation projects	
Short description:	The action consists of enhancing urban municipalities', cities' and towns' capacity to access LIFE funding for urban adaptation projects. It will be done through: 1. dissemination/upscaling the frameworks that exist in some Member States to support cities to win and/or implement LIFE funding for urban adaptation projects; 2. making concrete suggestions to improve access of cities to the LIFE programme, including access to technical assistance (TA) resources for the preparation and implementation of urban adaptation projects, independently from project funding.		
Responsible institution:	EUROCITIES	Contributing institutions:	EIB, French Ministry of Territorial Cohesion, Polish Ministry of Environment, City of Potenza, City of Genova, Province of Barcelona, EASME, DG CLIMA, Covenant of Mayors office
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	03.2019 Good practice review on multi-level coordination 10.2019 Gap analysis on LIFE TA, procedure, etc. 12.2019 European workshop 06.2020 At least one national dialogue 2021 New TA facility (EIB)
Indicators of completion:	<ul style="list-style-type: none"> • One European workshop completed with attendance of at least 25 participants; • At least one national dialogue completed by June 2020; • Report on cities bottlenecks to access LIFE funding and list of concrete suggestions to overcome those bottlenecks delivered to EASME and DG ENV as a contribution to the final evaluation of LIFE regulation 2014-2020. 		
Bottlenecks addressed:	6, 7, 12, 16, 18, 21, 22, 23, 24, 28 (see Annex E)	Cross-linkages:	R1

What is the specific problem?

City authorities face difficulties in accessing LIFE funding for their climate adaptation projects, mainly for these reasons:

- **Insufficient co-financing** - The 55% (since 2018) co-financing by LIFE constitutes a barrier for cities of all sizes, to access funding and implementing the projects. Integrating different types of funds (i.e. H2020, URBACT, ERDF) to provide the remaining 45% remains a challenge as well;
- **Complexity** - Many of the LIFE calls are complex, with timetables and conditions that can be different depending on the calls. The one-stage process for climate adaptation projects does not leave much time for cities to apply. City authorities encounter difficulties in identifying the most appropriate TA and project funding sources depending on the characteristics of the project (size, sector, scope and volume of funding needed). This makes the drafting of applications challenging, especially for smaller municipalities or municipalities with no European funding experts;
- **Information gap** - City authorities are not always informed about LIFE funding. This leads to many cities not being able to submit applications. Further promotion should be done at the national level to inform cities about the funding programs and the necessity to work on climate adaptation, in particular through the Covenant of Mayors;

- **Limited support from regional or national authorities** - National ministries or regions are not always aware of LIFE projects submitted by cities and their outcomes, and therefore are not able to support city authorities in the implementation and application of their project. This leads to LIFE projects not delivering their intended climate resilience benefits;
- **Low-quality applications** - Local authorities often lack the in-house capacity required to tackle climate change adaptation. They encounter challenges in identifying climate risks and vulnerabilities, and difficulties in prioritising adaptation projects/activities in relation to climate resilience objectives contained in strategic documents. This results in poor adaptation projects failing to pass the selection process;
- **Size of projects** - small city authorities fail to reach adaptation projects of a sufficient size and need to bundle them in order to get sufficient critical mass of funding;
- **Lack of technical assistance** – Up to now, there has been no technical assistance support specifically targeting cities to support them in the preparation of their climate adaptation projects (only for Member states or Regions to prepare integrated projects);
- **LIFE scope:** The regulation on the LIFE programme does not mention explicitly that LIFE funding can be used to draft or implement the Covenant of Mayors Sustainable Energy and Climate Action Plans, including their adaptation component.

How do existing EU policies/legislations/instruments contribute?

In the 2018-2020 work programme, LIFE Climate Action supports projects on climate adaptation, selected through a one-stage application process and a 55% co-funding. LIFE Integrated Projects provide funding for plans, programs and strategies on climate adaptation (and 5 other topics including mitigation), but developed on the regional, multi-regional or national level. TA in LIFE is aimed at (1) projects implementing environmental or climate action plans developed on the regional, multi-regional or national level to cover several cities, this is not suitable for cities which operate at small territorial scales and for which it would be more complicated to gather a critical mass of partner cities; (2) projects in the areas of nature, waste, air and climate change mitigation and adaptation - where adaptation is less known compared to other areas of interest; (3) the preparation of a future project proposal that targets an eligible action plan, strategy or roadmap, hence strongly linked with the project funding.

What action is needed?

Three streams of action are needed:

1. Identify good practices of Member States or regions working effectively with cities on urban adaptation using LIFE funding. In some countries, national, regional or supra municipal governments assume part of the co-financing needed in LIFE. In some other countries, the Ministry for Environment contracts an association to support project developers, including in municipalities, and helps them apply to LIFE projects (*inter alia*). This can be done through support to develop project proposals; co-funding; development of integrated projects that involve or benefit cities; or targeted technical assistance provided by national/regional authorities. The take up of such practices in other Member States and regions should be encouraged, with special attention to be paid to small and medium sized cities;
2. Disseminate those good practices across the EU by making them available to cities, regions and Member States, through city networks and initiatives such as the Covenant of Mayors, in national languages when possible;
3. Convey cities' feedback on the LIFE programme to the European Commission and make concrete suggestions to improve access of cities to LIFE programme, including during the negotiation of

the June 2018 Commission proposal on the [Programme for the environment and climate action \(LIFE\) 2021–2027](#), and to feed in the final evaluation of the LIFE regulation 2014-2020, expected in 2020 (the [mid-term evaluation](#) was released in November 2017). Concrete suggestions could include the improvement of technical assistance, specifically targeting the development of urban adaptation projects under the “traditional project call” and the “integrated project” call⁷.

How to implement the action

Two strands of actions in parallel:

1. Coordination across national/local levels (local also including small and medium sized cities):
 - Review of good practices on collaboration between national ministries and cities on LIFE (desk research) – lead: EUROCITIES;
 - Organisation of a European workshop on LIFE, inviting national ministries to present how they support cities to access LIFE funding possibly back to back with an existing city event to maximise participation - lead: EUROCITIES;
 - Organisation of at least one national dialogue between national ministries, regions and cities, as well as interested stakeholders such as city networks, initiatives, funders and investors on better cooperation on LIFE funding for urban adaptation in national languages – preferably back-to-back with or during a (broader/larger) national event. Expected long-term outcome at national level: established dialogues in place between national ministries or regions and cities, to reinforce awareness and when possible, support cities’ access and use of LIFE funding for urban adaptation projects – Lead: Covenant of Mayors.
2. Review of LIFE scope, conditions and application process and improvement of technical assistance
 - Gap analysis reviewing application procedures and timeframes, co-financing thresholds, language barriers– Lead: EUROCITIES;
 - Input into final evaluation of the LIFE regulation 2014-2020 – Lead: EUROCITIES;
 - Gap analysis reviewing where improvements to the existing TA facilities are necessary, in addition to those already identified. Based on previously identified bottlenecks, the new TA facility could provide: (1) Focus on local projects from smaller municipalities which may or may not become bankable; (2) Depending on resources available, provision of adaptation specialists speaking the local language who would work with the municipality for a certain amount of time (1-2 years) in order to help cities (a) build internal capacity, (b) plan specific adaptation measures and (c) create resilience strategies. The specialist would be able to assist cities in numerous tasks, as adaptation measures are usually not stand-alone projects; (3) Streamlining of procurement procedures. Lead: EIB.

Funding sources and needs

Use of partners' own resources, collaboration with the Covenant of Mayors, use of the TAIEX-EIR peer- to-peer instrument to fund national dialogues.

Implementation risks

- Risk of low attendance of European experts – mitigated through organising the workshop on LIFE back-to-back with an existing event;

⁷ An alternative option could also be, after the first stage is passed, to provide the project partners with a lump sum to developed further the project with the support of technical experts (i.e. URBACT projects).

- Risk of low uptake of national dialogues or recommendations from national dialogues by National ministries and other sub-national authorities - mitigated through the involvement of the national ministries of France and Poland as contributors to this action and their willingness to organise a national dialogue, hereby inspiring their colleagues;
- Risk of little feedback from cities (and other stakeholders) on the LIFE programme - mitigated through use of networks such as EURO CITIES and initiatives such as the Covenant of Mayors.

Cross linkages with other actions

Action F3 leaders will liaise with action R1 leaders, which will collect information on climate adaptation governance, to integration in action R1 survey questions about LIFE funding.

3.3 Better Knowledge

Reliable data is important for portraying the diversity of structures and tasks of urban authorities, for evidence-based urban adaptation planning and implementation. Knowledge on the vulnerabilities of urban areas to climate change needs to be further developed and brought to the users and decision-makers in local authorities; and successful experiences need to be better exploited. Initiatives taken in this context will be in accordance with the relevant EU legislation on data protection, the reuse of public sector information and the promotion of big, linked and open data.

The Climate Adaptation Partnership proposes the following actions under the objective Better Knowledge:

Table 10 Actions under the objective Better Knowledge

Actions under the objective Better Knowledge	
K1	Improving EU Municipalities knowledge in the framework of Copernicus Climate Change Service
K2	Enhancing the local content of Climate-ADAPT
K3	Political training academy on climate adaptation
K4	Enhancing stakeholder involvement at regional and local levels
K5	Promote open access of insurance data for climate risk management
K6	Further engagement of national and sub-national government's associations as key facilitators (and relevant Covenant of Mayors supporters) to best support local authorities in their adaptation process

Table 11 Action K1

Action K1				Improving EU municipalities knowledge in the framework of Copernicus Climate Change Service			
Short description:	This action aims at improving the abilities of local authorities to better exploit the knowledge value resulting from the Copernicus Climate Change Service (C3S) ⁸ to better plan climate adaptation strategies. It will focus on knowledge-sharing through the delivery of city-tailored training, workshop and webinar.						
Responsible institution:	DG JRC	Contributing institutions:	ECMWF, DG CLIMA, DG GROW Potenza and Genova municipalities				
Implementation timeline:	01.2019 - 06.2020	Intermediary deadlines:	06.2019 Progress report ⁹ and survey 09.2019 CDS C3S City-tailored training 12.2019 Progress report 03.2020 Webinar				
Indicators of completion:	Survey completed (at the latest by Q2-2019) CDS C3S City-tailored training delivered (at the latest by Q3-2019) CoM ¹⁰ -run Webinar delivered (at the latest by Q1-2020) PESETA Workshop delivered (at the latest by Q2-2020)						
Bottlenecks addressed:	5, 10 (see Annex E)	Cross-linkages:	K2 and K3				

What is the specific problem?

Municipalities need effective tools for territorial analysis to better plan climate adaptation strategies and inform policy-makers at a local level. Information available from the Copernicus Climate Change (C3S) Service CDS (Climate data Store) can be freely used by the cities and helps them to formulate more effective adaptation strategies. In particular, the combination of C3S data in combination with local sources of information are important for the different steps of climate adaptation planning, including vulnerability and risk assessments as well as the definition of different local climate adaptation plans.

However, the wealth of information made available by C3S needs to be well understood to be used in an accurate way.

How do existing EU policies/legislations/instruments contribute?

COPERNICUS represents a significant EU investment and the available output products on territorial analysis have already boosted the knowledge in a number of domains, including climate change (C3S). The level of the disaggregation of datasets is an important aspect of the available data and certainly needed for city-level planning of climate adaptation strategies.

In this direction, C3S Sectoral Information Services have already developed Essential Climate Variables (ECV) and impact indicators based on temperature and other climate variables specifically for some case study cities, to bring more consistent and useful data to different sectors operating in urban areas.

⁸ Copernicus Climate Change Service (C3S).

⁹ Progress report will be a maximum 2-page report, possibly following a standard template provided by the Partnership.

¹⁰ Covenant of Mayors.



What action is needed?

The data made available by C3S CDS can be effectively used by cities and municipalities to develop their climate adaptation plans. Although the disaggregation of data at city-level can still be an issue, the data already available, if properly used can be a useful tool in the drafting and implementation of the plans.

There is, however, a gap between the knowledge available and the potential users, which can be covered by appropriate, targeted training tools directed to technical staff of the municipalities or support consultants.

How to implement the action?

In order to implement this action, four main steps (or sub-actions) have been identified; each led by one of more responsible/contributing institution:

1. Survey targeting cities to understand 'what cities would expect from the use of the C3S CDS'. Delivered by Q1-2019; main responsible(s): Potenza and Genova Municipalities;
2. Training tailored to cities' needs (based on the results of the survey) on the use of the C3S CDS. Delivered by Q2-2019; main responsible(s): ECMWF;
3. Webinar prepared by Covenant of Mayors (CoM) Office on how to benefit from Copernicus data. Delivered by Q3-2019, main responsible(s): DG CLIMA;
4. Workshop for cities on the use of the outputs of the PESETA¹¹ project. Delivered by Q1-2020; main responsible(s): DG JRC.

Funding sources and needs

The sub-actions will be implemented within the responsible institution's budget. The Workshop on the PESETA project is planned to be organised at JRC-Ispra premises and participants will have to cover their own travel/accommodation expenses.

Implementation risks

There is a minor risk of identifying gaps in knowledge outside the partners' area of expertise. When this occurs, it remains to be seen how this could potentially be addressed.

Cross linkages with other actions

Possible links with other actions have been identified on support to drafting local adaptation plans as the training tools provided by this action will also support the drafting of local adaptation plans; and action K2 and K3 on content of Climate-ADAPT platform and political training, respectively, as complementary knowledge-sharing initiatives.

¹¹ PESETA: Projection of Economic Impacts of climate change in Sectors of the EU based on bottom-up Analysis.

Table 12 Action K2

Action K2		Enhancing the local content of Climate-ADAPT	
Short description:	To enhance the local content of Climate-ADAPT, its usability and uptake by cities and other local municipalities.		
Responsible institution:	European Environment Agency	Contributing institutions:	DG CLIMA; Covenant of Mayors for Climate and Energy; DG REGIO; EASME; DG Research; EIB; Eionet; leaders of EU funded projects
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	01.2019 New version of Climate-ADAPT launched 06.2019 Progress monitoring 12.2019 Progress monitoring
Indicators of completion:	Increased use of Climate-ADAPT by municipalities, measured by number of views and downloads of local-level content; At least 3 funding and financing local adaptation case studies completed; Webinar on local-level content of Climate- ADAPT carried out.		
Bottlenecks addressed:	2, 5, 6, 9, 10, 27 (see Annex E)	Cross-linkages:	R1, K1 and K5

What is the specific Problem?

The tools, guidelines and resources useful to city-level adaptation are available through Climate-ADAPT, however while there is a high-level categorisation aimed to “tag” resources relevant for local stakeholders, a more detailed categorisation or rating is not provided. As a result, local practitioners may have difficulties selecting the resources appropriate to their situation. Accessing climatic data at local resolution is another problem for urban practitioners due to data formats and complex user interfaces of many climate services, combined with uncertainty built into climate scenarios. The information on EU funding for urban adaptation requires more promotion, also through best practice case studies.

How do existing EU policies/legislations/instruments contribute?

In the EU Adaptation Strategy, Climate-ADAPT is intended as the platform supporting better-informed decision-making, branded as the 'one-stop shop' for adaptation information in Europe. Climate-ADAPT includes local content, however it does not have a specific local focus. Climate-ADAPT is being revised as of 2018. This also offers an opportunity for addressing the problems listed above, along with a continuous management and enhancement in following years. Importantly, Climate-ADAPT contains the Urban Adaptation Support Tool (UAST)¹² developed by the Covenant of Mayors for Climate and Energy (CoM) and EEA to support development of Sustainable Energy and Climate Action Plans by CoM signatories.

The information on EU funding for local adaptation is currently available through Climate-ADAPT, CoM website and DG REGIO Cities page. The 'Financing urban adaptation report' (EEA, 2017) provides examples of funding use.¹³

¹² <http://climate-adapt.eea.europa.eu/knowledge/tools/urban-ast>.

¹³ <https://www.eea.europa.eu/publications/financing-urban-adaptation-to-climate-change>.

Copernicus Climate Services and other climate services¹⁴ provide some information for Municipalities on climate hazards (e.g. Sectoral Information System activities¹⁵; see also Action K1).

What action is needed?

Specific consideration of local practitioners' needs in the ongoing (2018) revisions and development of Climate-ADAPT in 2019-20, including: improvement of UAST content and its promotion; provision of access to climate services and climate data; promotion of information on and examples of local adaptation funding and financing, through collaboration between EEA, CoM, DG CLIMA, DG RTD (Research and Innovation), EASME and other partners; providing a space for the case studies on use of insurance data (see Action K5).

How to implement the action?

- Review of the UAST text and evaluation of its resources (EEA, CoM, other partners (e.g. RESIN¹⁶ project); 2018);
- Provide a page containing information on available Copernicus data and its use to cities and other local municipalities as well as guidance on the uncertainty of climate scenarios (see also Action K1);
- Improving the visibility of the EEA-held urban and local data and information on climate change on Climate-ADAPT;
- Establishing mechanisms for promoting the outcomes of LIFE, Interreg and Framework Programme (FP) projects on local adaptation on Climate-ADAPT (EEA, EASME, DG RTD and DG REGIO);
- Collection of case studies relating to funding and financing local adaptation (EEA, CoM, EIB, EC, Eionet), including a possible publication of an updated report on local adaptation/financing (2020);
- Improving coherence of information on EU funding for local adaptation among Climate-ADAPT, CoM, DG REGIO Cities website (EEA, CoM, DG REGIO);
- Exploring the possibility of providing summary sheets on funding and financing of adaptation in several national languages (translation not to be done by EEA, but e.g. by CoM or translated by Member States; and
- Promotion of local contents of Climate-ADAPT through e.g. webinars on UAST organised jointly by CoM, EEA and DG CLIMA; distribution of information about the launch of the revised Climate-ADAPT website (Jan 2019).

Funding sources and needs

To be managed within existing budgets or actions to be considered within future budgets.

Implementation risks

One risk could be a difficulty in identifying relevant case studies, to be mitigated by using the (contacts of the) Climate Adaptation Partnership as platform to discuss how the most relevant case studies can be identified. Another risk is a potential lack of dedicated resources for this action, to be mitigated by periodic monitoring of progress. Finally, the risk of a potential lack of coordination with other platforms such as CoM, DG REGIO Cities website, DRMKC is to be mitigated by periodically discussing this issue within the framework of the Climate Adaptation Partnership..

¹⁴ see e.g. JPI Climate: see e.g. JPI Climate: <http://www.jpi-climate.eu/ERA4CS>.

¹⁵ <http://climate.copernicus.eu/sectoral-information-system>.

¹⁶ <http://www.resin-cities.eu/home/>.

Cross linkages with other actions

The action primarily links to actions on the revision of urban development and planning regulation tools (Action R1), both in case of such tools provided to local authorities on a national level, and through the Climate-ADAPT portal. The incorporation of additional local content on Climate-ADAPT will both directly and indirectly support the drafting of local adaptation plans which is at the heart of a number of other actions. Beyond the development of guidance and case studies supported through this action, the enhancement of local use of data sources such as Copernicus is further explored in Action K1. Linkages should also be made between the local content of the Climate-ADAPT portal and alternative climate adaptation tools such as insurance (Action K5).

Table 13 Action K3

Action K3		Political training on climate adaptation	
Short description:	Give specific training to local politicians (mayors, councillors, political local leaders...) on the benefits of climate change adaptation, how to deal with adaptation in a city, how to communicate with the citizens and involve all actors affected by climate issues. Raise awareness of the costs of inaction – what are the risks of not adapting. Provide knowledge of the co-benefits of adaptation actions. Inform about the risks of maladaptation. The final outcome should be that politicians are decided to prioritise adaptation in public policies.		
Responsible institution:	CEMR (Council of European Municipalities and Regions)	Contributing institutions:	Energy adaptation partnership cities (Glasgow, Genova, Loulè, Potenza) and other interested ones; EUROCITIES, COSLA (Scottish Association member of CEMR).
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	2019 political training academy 1 and 2 2020 political training academy 3 TBC sessions in the cities 06.2019 Progress monitoring 12.2019 Progress monitoring
Indicators of completion:	Number of local politicians (mayors or other) attending/number of sessions Communication material produced (e.g. booklets for the academy sessions)		
Bottlenecks addressed:	3, 9, 27 (see Annex E)	Cross-linkages:	R1, F1, F3, K2 and K4

What is the specific problem?

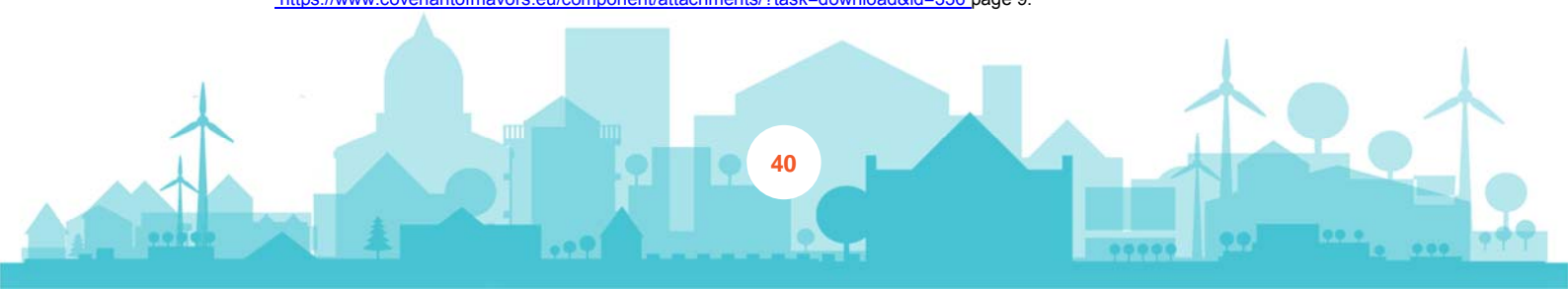
Not every local politician (mayor or not) has a deep knowledge of what adaptation means to the city and its' citizens and which specific actions can be proposed. In the same way that there are trainings for technical experts, politicians can also benefit from a target training dedicated to them on the same topic.

Adaptation measures sometimes requires substantial investment that can only be secured if there is sufficient political buy-in. This political support is often missing: the Covenant of Mayors needs-assessment report indicates that “Changes in the local political priorities” is the third most important barrier faced by city officers for the implementation of their Sustainable Energy and Climate Action Plans.¹⁷ Sometimes there is a lack of political coordination on how to maximise the actions at city level. Communication at the level of the public also plays a key role from the mayor's side.

How do existing EU policies/legislations/instruments contribute?

Since 2013, the EU Adaptation Strategy encourages national, regional and local adaptation action to contribute to a climate-resilient Europe. The review of the EU Adaptation strategy will be adopted at the end of 2018. Although there is a lot of work done on adaption so far, there is a need to understand more from the local politicians' side in general, so that they can complement the work proposed by the technical experts. A right balance of understanding the challenge is a key to success.

¹⁷ <https://www.covenantofmayors.eu/component/attachments/?task=download&id=336> page 9.



What action is needed?

In principle, two local political training academies can be held in Brussels in the period mentioned (co-organised by CEMR/EUROCITIES, alongside a major EU event) and then different smaller sessions in the cities involved in parallel with national, regional or local events which they have already planned.

Political trainings on climate adaptation further provide opportunities to make linkages to other urban challenges. Communities and groups which are often impacted by climate change can also be vulnerable to other social challenges and inequalities (e.g. women, children, elderly, ethnic minorities, and the homeless). Consequently, adapting to climate change provides opportunities to promote policy synergies and holistically address such challenges. For example, through the regeneration of Urban Deprived Areas and Neighbourhoods, to simultaneously improve Air Quality and mitigate urban heat waves (see also Urban Agenda for the EU, 'Urban Poverty' and 'Air Quality' Partnerships).

How to implement the action?

The action is proposed to be implemented from 2019, once the new EU Adaptation Strategy review is published. Local politicians will learn about the new measures proposed in this review, in order to gain a deeper knowledge on adaptation, be innovative, propose specific adaptation measures in their cities and have more effective communication with the public and citizens. Attention will be paid to the inclusion of small and medium sized cities in this action.

Funding sources and needs

The resources would be provided by the partners involved, depending on the number of participants/location.

Implementation risks

The risk of a low attendance of local politicians is to be addressed with targeted communication and coupling with other events where the politicians are participating;

Cross linkages with other actions

The actors involved in K3 will consider some aspects from the other actions in the programs of the training sessions so mayors can be informed of the latest developments, key pieces of information, news at EU level.

Table 14 Action K4

Action K4		Enhancing stakeholder involvement at regional and local levels	
Short description:	Stakeholder engagement is key in municipal policy-making and climate change adaptation planning. Therefore, additional efforts need to be made to inform and raise awareness among citizens and other stakeholders on adaptation-related issues, as well as account for their expertise and priorities. This implies encouraging stakeholder consultation and participation as common practices at the municipal level when planning climate adaptation actions (i.e. in the framework of the Covenant of Mayors).		
Responsible institution:	DG CLIMA	Contributing institutions:	European Commission DGs, CoM and city networks (CEMR, Climate Alliance)
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	06.2019 Progress monitoring 12.2019 Progress monitoring
Indicators of completion:	<p>Identification of at least 3 best practice examples of particular LIFE projects that demonstrate the value of stakeholder engagement, and to ensure they are accessible through resources such as climate-ADAPT.</p> <p>Information and guidance on stakeholder engagement in local climate adaptation actions provided through resources such as climate-ADAPT (see Action K2).</p> <p>Analysis of feasibility to add stakeholder involvement at regional and local levels as supporting criteria when allocating climate adaptation funding.</p> <p>Webinar on stakeholder engagement (importance and lessons learned) at regional and local levels.</p>		
Bottlenecks addressed:	4, 5, 33, 39 (see <i>Annex E</i>)	Cross-linkages:	K2 and K3

What is the specific problem?

Beyond political commitment, climate adaptation calls for a long-term strategy. Drafting such local strategies in consultation with citizens and other relevant stakeholders is a key success factor in strategic decision making on climate adaptation policies and investments. However, sometimes there is a lack of political coordination on how to maximise the actions at city level. Moreover, there is a lack of effective tools and methodologies for communication concerning the connection between risk management and planning for the adaptation to climate change.

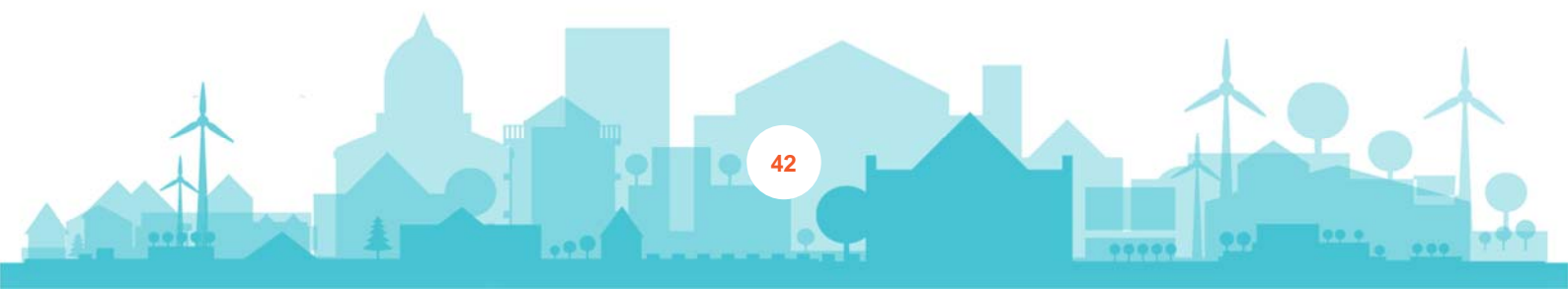
How do existing EU policies/legislations/instruments contribute?

EU and National governments and institutions have the means to further encourage stakeholder involvement in climate adaptation policy development as a driver for a greater participation at local level.

Currently, the EU Guidelines on developing adaptation strategies, the Urban Adaptation Support Tool (UAST step 1.6) on Climate-ADAPT, and the EU Covenant of Mayors guidance on developing Sustainable Energy and Climate Action Plans (SECAPs) and reporting guides encourage the engagement of stakeholders. However, additional measures are required to ensure the information effectively reaches decision-makers. For example, through increased awareness raising and training, and increased resources to support stakeholder engagement.

What action is needed?

The local players have already largely demonstrated their capacities to directly engage with civil society and sufficiently empower other relevant stakeholders (e.g. universities, research institutes,



thematic agencies, SMEs). Yet more action is needed to further promote local stakeholders' role and ability to participate to the development of local adaptation plans.

The Commission and its initiatives for cities (e.g. the Covenant of Mayors and URBACT) shall therefore continue exploring new ways that encourage and facilitate a more participatory and collaborative approach where citizens and other players have their say in the decision making and planning stages at local level. For example, through user-centred research concepts such as 'Living Labs'. This will ensure a greater awareness and commitment of citizens and other local stakeholders in climate adaptation policies and actions.

How to implement the action?

- Investigation of citizens' and other stakeholders' involvement in climate adaptation practices through an assessment of developed adaptation strategies, and assessment to identify potential gaps and opportunities;
- Investigate opportunities to incorporate stakeholder engagement as supporting criteria for allocation of climate adaptation funding;
- Continued promotion of urban adaptation projects incorporation of stakeholder engagement through funding streams such as LIFE (see Action F3);
- Continued promotion of stakeholder engagement in development of local adaptation strategies by city-networks through events, training programs, webinars and guidance.

Funding sources and needs

The resources needed for the implementation of this action will be found internally; no external funding needs are currently foreseen.

Implementation risks

There is a risk that this Action is not given enough priority. This risk could be mitigated by monitoring progress and defining clear intermediate products and steps to be followed in the implementation phase.

Cross linkages with other actions

This action relates to K2 as information and guidance on stakeholder engagement in local climate adaptation actions will be provided through resources such as climate-ADAPT. Moreover, the importance of stakeholder engagement in local climate adaptation actions could also be underlined as part of the training academy foreseen (Action K3).

Table 15 Action K5

Action K5		Promote open access of insurance data for climate risk management	
Short description:	Investigate and promote open access of insurance data for climate risk management.		
Responsible institution:	DG CLIMA	Contributing institutions:	Municipalities, regional authorities, insurance and re-insurance companies and EIOPA (European Insurance and Occupational Pensions Authority)
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	06.2019 Progress monitoring 12.2019 Communication established and a cooperation initiative in place
Indicators of completion:	At least 5 urban and regional plans that integrate climate and risk related information from the insurance sector since the commencement of this action. At least 1 case study on the local use of insurance data in climate adaptation planning on the Climate-ADAPT platform.		
Bottlenecks addressed:	4, 5, 10, 33 (see Annex E)	Cross-linkages:	F1

What is the specific Problem?

Risk transfer and disaster risk response are important elements of strategies on adaptation to climate change and disaster risk reduction. Climate related damage is expected to increase with climate change, due to increasing numbers of extreme weather events that will also be increasingly powerful (storms, floods, heat waves, droughts). In terms of financial and economic damages, this will increase the burden on governments and citizens. The adaptive capacity of cities is an important factor in preventing damages. The insurance sector and public sector at municipal and city levels are not structurally sharing their information on disaster loss data in local risk assessments and identification of adaptation options, which may lead to sub-optimal adaptation practices, leading in turn to higher damages, higher recovery costs and higher premiums charged by insurers.

How do existing EU policies/legislations/instruments contribute?

The EU Adaptation Strategy (2013) includes Action 8: Promote insurance and other financial products for resilient investment and business decisions. It promotes the use of products and services by insurance and financial markets. The 'adaptation preparedness scoreboard' that was developed as a tool in the EU Adaptation Strategy is also addressing the topic where one of the indicators (8e) states 'Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention'. Insurance aimed towards natural and man-made disasters was addressed by the Commission in a Green Paper adopted along with the EU Adaptation Strategy. This focuses on a number of questions related to the adequacy and availability of appropriate disaster insurance. Its main objective was to raise awareness and to assess whether action at the EU level could be appropriate or warranted to improve the market for disaster insurance in the EU. As a response to the public consultation, sharing of data was one of the main desires support broadly by both the public and the insurance sector respondents. A recent study was conducted by DG CLIMA on 'Insurance of weather and climate related disaster risk: Inventory and analysis of mechanisms to support damage prevention in the EU'. It delivered important new insights and analysis in the field as well as policy recommendations, specifically on shared vulnerability assessments, transparency in public-private cooperation and risk allocation. The study also proposed a number of measures such as the use of community rating systems and allowing cities to pool their

insurance. However, important gaps exist, particularly in terms of specific next steps. A key issue here is the lack of a critical mass of pilot cases, where sharing of risk data and loss data has been applied to improve local, urban or regional resilience.

What action is needed?

This action will be a specific roll-out of action 8 of the EU Adaptation Strategy, serving the policy objectives of the Green Paper on Insurance of Man-Made and Natural Disasters and following a number of key recommendations made in the DG CLIMA study on insurance, disaster risk and climate change. The action will lead to insights into structural data sharing to improve adaptation action, risk prevention, risk transfer and disaster risk management. It will also provide experience and potential evidence of how integrating insurance in adaptation and disaster risk management can improve climate resilience, lower climate risk and adjust the insurance business model to the consequences of climate change.

How to implement the action?

An outreach to municipal, regional and insurance stakeholders should be conducted before commencing this action. The action is proposed to be implemented once the next Commission will assess the need for the revision of the Adaptation Strategy and will consider including any new or reinforced action¹⁸:

1. Analysis of 20 regional and urban adaptation plans to see which actions and investments are being planned to prevent or reduce the negative impacts of climate change;
2. Integration of the economic development plans for the same regions and cities into the analysis under step a;
3. Mapping of the extent to which insurance loss-data of climate-related extreme weather events have been used in those plans;
4. Improvement of the plans selected in step a, based on insurance data.

An outreach to municipal, regional and insurance stakeholders should be conducted before commencing this action.

Funding sources and needs

The resources required for the implementation of this action will be found internally; no external funding needs are currently foreseen.

Implementation risks

Failing to engage the insurance sector and getting access to the required information. This risk could potentially be mitigated through an enhanced dialogue with relevant stakeholders on the value of insurance data in adapting to climate change, and potential benefits for the insurance sector in information sharing.

Cross linkages with other actions

This action primarily links to Action F1 through its role in enabling further economic analysis of adaptation projects.

¹⁸ <https://publications.europa.eu/en/publication-detail/-/publication/4f366956-a19e-11e7-b92d-01aa75ed71a1/language-en>.

Table 16 Action K6

Action K6 Further engagement of national and sub-national government's associations as key facilitators (and relevant Covenant of Mayors supporters) to best support local authorities in their adaptation process			
Short description:	To enhance/strengthen the role and reinforce the commitment of (sub-) national government associations as facilitators (and supporters?) for local municipalities to implement their climate adaptation strategies.		
Responsible institution:	CEMR/Covenant of Mayors Office	Contributing institutions:	Cities (e.g., Potenza), Local and National Authorities involved in the partnership and National municipality associations
Implementation timeline:	01.2019 to 06.2020	Intermediary deadlines:	07.2019 Case Studies/examples 12.2019 Progress monitoring
Indicators of completion:	Number of trained associations in "train the trainers" sessions Number of activities carried out by the trained associations after the training sessions Number of cities and regions supported through the above-mentioned activities carried out by the associations Number of case-studies/examples Number of briefings sent to associations		
Bottlenecks addressed:	39 (see Annex E)	Cross-linkages:	K4 and R1

What is the specific problem?

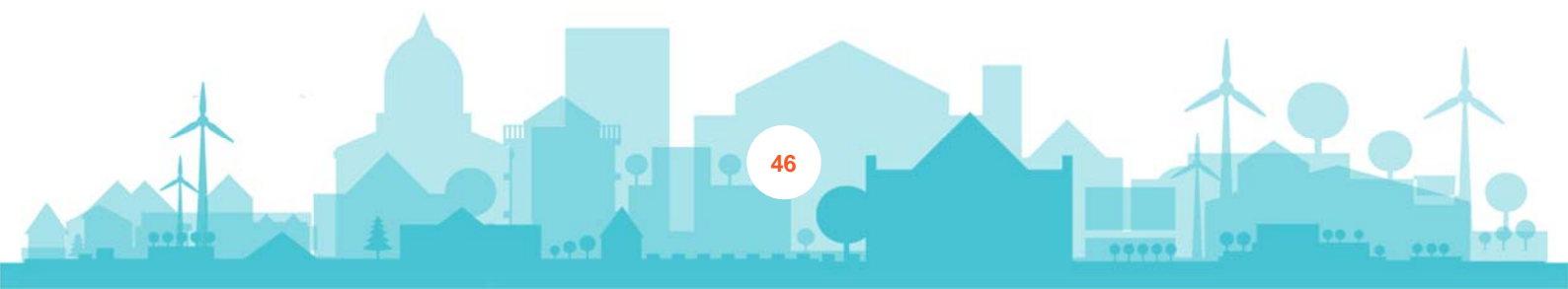
Climate adaptation often calls for the development long-term strategies, and this is not always the main dimension of political will and decision making at the municipal level. This represents a distinct weakness for the municipality in the process of application in the Covenant of Mayors for Climate & Energy. Additionally, small- and medium-size cities are often still struggling to actually translate their commitment into effective adaptation actions and need further support in the process. Therefore, the municipalities must be supported, and additional efforts need to be made in order to stimulate political commitment and best support for the Covenant of Mayors for Climate and Energy community.

How do existing EU policies/legislations/instruments contribute?

The Covenant of Mayors for Climate and Energy includes intermediate bodies with the specific function of coordinating municipalities' engagement in the region. An effective role could be played by national municipality associations and networks representing an effective horizontal organisation with significant capacity to influence political willingness on common operational objectives. They are as important allies to support Covenant of Mayors signatories in meeting their commitments and increase the impact of the initiative - notably on the adaptation side.

What action is needed?

Reaching out to additional associations/networks and looking for new partnerships in order to be able to further support Covenant signatories and other local authorities in their adaptation process to utilise such resources and harness expertise in the adaptation field.



Implementing and supporting national networks of cities committed to the adaptation process by means of National municipal associations.

How to implement the action?

The National municipality associations and networks are already engaged in promoting a wide participation of their associated municipalities in the Covenant process, e.g. supporting them to reach their targets, develop and implement their Sustainable Energy and Climate Action Plans (the so-called SECAPs).

The main actions proposed would be the following:

'Train-the-trainers' sessions

- **Aim:** to train national associations, who will in turn train their associated municipalities and regions;
- **Deadline:** one session during the European Week of cities and regions in October 2019 and a second one during the CEMR congress in Innsbruck on 6-8th May 2019;
- **Comments:** Action K3 on "Training academy" has been proposed for the same period, so synergies can be made.

Compilation of case studies/examples to distribute at the train-the-trainers' session

- **Aim:** compile relevant case studies to share with trainers, to be disseminated in sessions provided by the trainers;
- **Deadline:** In time for the train the trainers' sessions;

Input to national roundtables organised by CoM at national events.

- **Aim:** provide recommendations to national associations to liaise with Member states to involve local and regional governments (including small and medium sized cities) in the development of their national climate and energy plans;
- **Deadline:** each national association involved will define their timing and this action will feed into it.

Progress monitoring

- **Date:** December 2019
- **Objective:** Assess if there has been an increase in number of national associations involved deeply, what they have done and plans for the future:
 - Number of trained associations in "train the trainers" sessions;
 - Number of activities carried out by the trained associations after the training sessions;
 - Number of cities and regions supported through the above-mentioned activities carried out by the associations;
 - Number of case-studies/examples;
 - Number of briefings sent to associations.

Funding sources and needs

Additional resources have to be provided for the Covenant to further engage national municipal associations and networks, and for the National municipal associations to support cities in their action.

Implementation risks

Implementation prospects depend on the CoM capacity to establish an effective working network, and consequently on the efficacy of each national municipal association to act as a facilitator to influence political willingness. National municipal associations may not have sufficient resources to properly support local municipalities on these topics. Potential mitigation measure will be formulated if needed when progress is regularly monitored by the Partnership.

Cross linkages with other actions

The actors involved in K6 will consider some aspects from the other actions in their discussions, more to be informed than to take a specific action.

4 GOOD PRACTICES

Several repositories of implemented good practices on urban adaptation in Europe are available online, providing comprehensive sources of information, inspiration and learning:

Key EU sources for good urban adaptation practice cases:

- [Climate-ADAPT case studies database](#);
- [Covenant of Mayors Good practices database](#) and [publication](#);
- [European Environment Agency reports](#);
- [LIFE programme publication on adaptation projects](#).

Other sources:

- [URBACT Good Practices](#);
- [Resilient Europe project solutions](#);
- [INTERREG Europe Good Practices Database](#);
- [INTERREG IVC Capitalisation – Climate Change](#);
- [Circle-2 Adaptation Inspiration Book](#);
- [Future Cities project cases compilation](#);
- [GRaBS project case studies](#)- Green and blue infrastructure;
- [SIC adapt compilation of good practice tools and measures](#);
- [Making cities resilient - Role models](#);
- [KEEP](#) (Interact portal of all Interreg projects, with some analysis of climate adaptation projects);
- [Natural Water Retention Measures](#) - NWRM platform;
- [Klimatilpassning.dk \(English / Danish\)](#) Danish national portal;
- [KomPass Tatenbank \(German\)](#) German national portal.

5 LINKS WITH OTHER COMMITMENTS

5.1 Link with the cross-cutting issues

As stated in The Pact of Amsterdam, the complexity of urban challenges requires integrating different policy aspects to avoid contradictory consequences and make interventions in Urban Areas more effective. (NP-CEU 2016). This is particularly true for adaptation to climate change, which is inherently an issue of a complex and cross-sectoral nature.

Good urban governance is addressed by most of the Actions through improving awareness, coordination and cooperation as well as by supporting robust governance decision-making with data, tools, methodologies, best practice and trainings.

The Action Plan *strongly endorses urban-urban and cross-border cooperation* proposing actions that foster coordinated learning between cities, countries and European roof organisations. It fosters and promotes participation in Europe-wide initiatives and networks, such as Covenant of Mayors or city associations, which act as vehicle for such cooperation (see Actions F1, K2, K3 and K6).

Sound and strategic urban planning is specifically targeted by Action R1 which strives to provide information and know-how on the successful use of urban development and planning regulations and tools for urban adaptation to climate change. Numerous other Actions (F1, F2, K1, K2, K4, K5 and K6) likewise contribute to this cross-cutting issue aiming to provide essential knowledge, data and resources.

By addressing both vertical and horizontal integration, most of the actions promote **integrated approach** to adaptation planning and implementation, which in its focus ranges from integration between various levels of governance and stakeholders (F2, K4 and K6) to cross-sectoral integration which is essential for adaptation (R1, F2, K5); to methodological integration that enables to address the complexity of the issue (F1, K1).

Albeit *per se* the Action Plan does not strive to emphasise innovation and rather endorses 'good practice' regardless of its innovation potential, **innovative approaches** appear in several Action, in particular those oriented towards provision of data, services and development of methodologies or new governance set-ups (F1, K1, K4, K5 and K6).

An impact on societal change, including behavioural change, is the expected indirect outcome of the Action Plan as a whole and also the individual Actions, especially in terms of behavioural change among politicians, decision-makers, stakeholders, data holders, which would have trickle-

down effect on the society as a whole. Actions K3 and K4 specifically target behavioural change by enhancing awareness of adaptation issues among local politicians and promoting higher engagement of stakeholders in adaptation planning and implementation processes.

Several Actions aiming to achieve improved accessibility of EU funds and knowledge resources for urban adaptation or promote participation in Covenant of Mayors pay special attention to the **challenges and opportunities of small- and medium-sized cities** (F2, F3, K2 and K6). Furthermore, the specific needs of smaller municipalities in terms of adaptation funding are integrated in all relevant actions.

The implementation of adaptation measures and **urban regeneration** are synergistic processes that benefit significantly from coordinated approach. Most of the processes that lead to the implementation of grey, green and blue adaptation measures will also contribute to urban regeneration. Thus, Actions R1, F1, F2, F3, K5 and K6 are very likely to have an indirect positive effect on urban regeneration in a variety of European Municipalities. The same accounts for the **availability and quality of public services of general interest** - it is an intrinsic task of adaptation to ensure the good functioning of the urban systems providing public services in the light of impacts and disturbances resulting from climate change; every action that contributes to improved adaptation outcomes, safeguards the provision of these services.

5.2 New Urban Agenda and Sustainable Development Goals

The New Urban Agenda (NUA) of the United Nations was adopted in 2016 at the HABITAT III Conference and sets a shared strategic vision for sustainable urban development globally (UN GA 2016). This Action Plan aligns with a number of its statements (in particular 13, 79, 80 and 101) and leads towards their implementation on the European scale.

NUA Vision 13 g). *Adopt and implement disaster risk reduction and management, reduce vulnerability, build resilience and responsiveness to natural and human-made hazards, and foster mitigation of and adaptation to climate change.*

The objective of the Climate Adaptation Partnership is to anticipate the adverse effects of climate change and take appropriate action to prevent or minimise the damage it can cause to Urban Areas and the aim of the Action Plan is to define specific actions that lead to the achievement of greater resilience and improved adaptation to climate change in Europe.

NUA Call for action 79. *We commit ourselves to promoting international, national, subnational and local climate action, including climate change adaptation and mitigation, and to supporting the efforts of cities and human settlements, their inhabitants and all local stakeholders to be important implementers. We further commit ourselves to supporting building resilience and reducing emissions of greenhouse gases from all relevant sectors.*

The Climate Adaptation Partnership and its Members strongly share the commitment towards promoting climate change adaptation and the Action Plan is designed with direct inputs from stakeholders who are the actual or future implementers of urban adaptation efforts in order to understand their needs and provide targeted and effective support.

NUA Call for action 80. We commit ourselves to supporting the medium- to long-term adaptation planning process, as well as city-level assessments of climate vulnerability and impact, to inform adaptation plans, policies, programs and actions that build the resilience of urban inhabitants, including through the use of ecosystem-based adaptation.

Even though the implementation period of the Action Plan is within the immediate short term, the intended impacts of the Actions are positive long-term changes and shifts in the quality, quantity, efficiency and effectiveness of adaptation planning processes on municipal level; including thorough providing improved support and resources for climate vulnerability and impact assessments and development of adaptation strategies, plans, policies, instruments and on-the-ground measures.

NUA Effective implementation 101. We will integrate disaster risk reduction and climate change adaptation and mitigation considerations and measures into age- and gender-responsive urban and territorial development and planning processes, including greenhouse gas emissions, resilience-based and climate-effective design of spaces, buildings and constructions, services and infrastructure, and nature-based solutions. We will promote cooperation and coordination across sectors, as well as build the capacities of local authorities to develop and implement disaster risk reduction and response plans, such as risk assessments concerning the location of current and future public facilities, and to formulate adequate contingency and evacuation procedures.

Due to the strong integrative elements of the proposed Actions (see previous chapter), the Action Plan provides an important contribution to this goal of effective implementation. The actions mostly focus on the aspects of integration between adaptation planning and urban planning, cooperation and coordination across sectors and governance levels and capacity and awareness-building activities. The Partnership commits to further development of the integration in the future work of the Climate Adaptation Partnership and the subsequent iterations of the Action Plan.

The Sustainable Development Goals (SDGs) adopted in 2015 by the United Nations General Assembly set an even broader global perspective for sustainable common future. Goal 11 aims to 'Make cities and human settlements inclusive, safe, resilient, and sustainable' (UNGA 2015) and the targets 11.5 and 11.B speak about issues related to urban resilience to natural and man-made disasters, which are expected to be exacerbated by the projected climate change (IPCC 2014):

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.

The Climate Adaptation Partnership process is a response to these important urban resilience issues recognised both globally and on the European level, however playing out on the local level. Acting

locally is key for the successful achievement of the SDG, however local action can only be successful if it is supported by all governance levels in a concerted action. The participatory bottom-up approach, which is at the basis of this Action Plan, ensures that local realities and needs are brought together with a wide-ranging international expertise as well as national and international legislative and strategic mandates in defining coordinated state-of-the-art solutions – defined as specific Actions in the Plan - aimed to increase the number of urban areas adopting and implementing adaptation plans and strategies resulting in reduced human and economic losses due to climate change impacts.

5.3 Other commitments – Paris Agreement

The Action Plan and its Actions is likewise a contribution towards the Paris Agreement commitments of the EU, in particular for the achievement of Article 7 goal of *'enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change'* (UNFCCC 2015).

It aligns with the Paris Agreement recognition of the importance of the engagement of all governance levels, and the acknowledgement that adaptation action should be participatory, transparent and integrated, consider vulnerable groups, communities and ecosystems and should be based on and guided by best available evidence (UNFCCC 2015). Actions R1, F1, K1, K2 and K5 strive towards providing the best available evidence and know-how, while Actions K3, K4 and K6 contribute towards building transparent and participatory adaptation governance on the local level. The rest of the Actions aim to ensure the acutely necessary resources for successful urban adaptation planning and implementation on the European scale.

6 MONITORING

The implementation of the Action Plan will follow an iterative process of regular bi-annual progress updates, contingency management and circular feedback for the improvement of action outcomes. Each action will be assessed against the achievement of the intermediary and final deadlines as well as the progress achieved on the defined indicators of completion. The Monitoring Master template below will be used for the purpose.

Table 17 Monitoring Master Template

Action	Responsible institution	Implementation period	Intermediary deadlines	Indicators of completion	State of Play
Action R1	Hungary	01.2019-06.2020	06.2019 Progress monitoring 12.2019 Progress monitoring	<ul style="list-style-type: none"> Collected and analysed multilevel urban development regulation systems of at least half of Member States based on questionnaires. 	
Action F1	European Investment Bank	01.2019-12.2021	06/2019 - Terms of Reference and Workplan 12/2019 - Progress Monitoring 06/2020 - Draft Guidelines and draft Toolkit; Training	<ul style="list-style-type: none"> Delivery of Guidelines and toolkit; Dissemination and training on use for 10-20 cities belonging to the contributors by end 2020 	
Action F2	Diputació de Barcelona	09.2019-06.2020	06.2019 Progress monitoring 12.2019 Progress monitoring	<ul style="list-style-type: none"> Concrete recommendations to be taken up by managing authorities 	
Action F3	EUROCITIES	01.2019-06.2020	03.2019 Good practice review on multi-level coordination	<ul style="list-style-type: none"> One European workshop completed with attendance of at least 25 participants; 	



Action	Responsible institution	Implementation period	Intermediary deadlines	Indicators of completion	State of Play
			10.2019 Gap analysis on LIFE TA, procedure, etc. 12.2019 European workshop 06.2020 At least one national dialogue 2021 New TA facility (EIB)	<ul style="list-style-type: none"> At least one national dialogue completed by June 2020; Report on cities bottlenecks to access LIFE funding and list of concrete suggestions to overcome those bottlenecks delivered to EASME and DG ENV as a contribution to the final evaluation of LIFE regulation 2014-2020. 	
Action K1	DG JRC	01.2019-06.2020	06.2019 Progress report and survey 09.2019 CDS C3S City-tailored training 12.2019 Progress report 03.2020 Webinar	<ul style="list-style-type: none"> Survey completed (at the latest by Q2-2019) CDS C3S City-tailored training delivered (at the latest by Q3-2019) CoM-run Webinar delivered (at the latest by Q1-2020) PESETA Workshop delivered (at the latest by Q2-2020) 	
Action K2	European Environment Agency	01.2019-06.2020	01.2019 New version of Climate-ADAPT launched 06.2019 Progress monitoring 12.2019 Progress monitoring	<ul style="list-style-type: none"> Increased use of Climate-ADAPT by municipalities, measured by the number of views and downloads of local-level content; At least 3 funding and financing local adaptation case studies completed; Webinar on local-level content of Climate –ADAPT carried out. 	
Action K3	CEMR (Council of European Municipalities and Regions)	01.2019-06.2020	2019 political training academy 1 and 2 2020 political training academy 3 TBC sessions in the cities 06.2019 Progress monitoring 12.2019 Progress monitoring	<ul style="list-style-type: none"> Number of local politicians (mayors or other) attending/Number of sessions Communication material produced (e.g. booklets for the academy sessions). 	
Action K4	DG CLIMA	01.2019-06.2020	06.2019 Progress monitoring 12.2019 Progress monitoring	<ul style="list-style-type: none"> Identification of at least 3 best practice examples of particular LIFE projects that demonstrate the value of stakeholder 	



Action	Responsible institution	Implementation period	Intermediary deadlines	Indicators of completion	State of Play
				<p>engagement, and to ensure they are accessible through resources such as climate-ADAPT.</p> <ul style="list-style-type: none"> • Information and guidance on stakeholder engagement in local climate adaptation actions provided through resources such as climate-ADAPT (see Action K2). • Analysis of feasibility to add stakeholder involvement at regional and local levels as supporting criteria when allocating climate adaptation funding. • Webinar on stakeholder engagement (importance and lessons learned) at regional and local levels. 	
Action K5	DG CLIMA	01.2019-06.2020	06.2019 Progress monitoring 12.2019 Communication established and a cooperation initiative in place	<p>At least 5 urban and regional plans that integrate climate and risk related information from the insurance sector since the commencement of this action;</p> <p>At least 1 case study on the local use of insurance data in climate adaptation planning on the Climate-ADAPT platform.</p>	
Action K6	CEMR/Covenant of Mayors Office	01.2019-06.2020	07.2019 Case Studies/examples 12.2019 Progress monitoring	<p>Number of trained associations in “train the trainers” sessions</p> <p>Number of activities carried out by the trained associations after the training sessions</p> <p>Number of cities and regions supported through the above-mentioned activities carried out by the associations</p> <p>Number of case-studies/examples</p> <p>Number of briefings sent to associations</p>	



Annex A Roles within the Partnership

Role of the Technical Secretariat

The main role of the Technical Secretariat is to provide technical support to the Partnership. The support consists in five tasks:

1. Support the coordinator - the Secretariat will assist the Coordinator in setting up the Partnership, in organising mailing lists, in creating and update a calendar of events, assist the coordinator in organising meetings, participating in all meetings and drafting minutes;
2. Provide expertise to the Partnership - if needed, the Secretariat would mobilize additional external experts with EU experience on the topic, provide analytical work, review documents, draft documents, etc.;
3. Outreach and communication - the Secretariat will prepare information material (e.g. leaflets, brochures), maintain the collaborative platform (website), organize one-day workshop per Partnership per year, assist coordinators in a workshop at the EWRC (1 workshop per Partnership);
4. Reimburse travel costs - the Secretariat might provide reimbursement of travel costs, but only in exceptional case;
5. Support the European Commission - the Secretariat will monitor the progress of the Partnership (regular reports on the state of play), identify bottlenecks and the improvement needed (if needed), report back to the COM and to the UDG/ DGUM, draft guidelines and templates), organize two coordinators' meeting per year, provide assistance to the COM in managing Urban Agenda.

Roles of the Partnership Members

The roles of the Members described below are those provided by the Working Method described in the Partnerships chapter of the Pact of Amsterdam (NP-CEU 2016), with some additional provisions.

Coordinator

The coordinator is the key actor to make the Urban Agenda for the EU operational. Coordinator is the main contact point for the Members of the Partnership and other interested urban authorities, European Commission and Member States. The Partnership may ask the European Commission to facilitate the process, among others concerning the coordination between Partnerships, and to provide assistance for technical Secretariat duties and for expertise at EU level.

The Partnership Coordinator has specific roles and responsibilities listed below. It has to:

1. Organize Partnership meetings: prepare the agenda, send the invitations, provide meeting rooms (in their Ministry, City Hall, etc.), invite (external) keynote speakers when appropriate, draft the minutes, etc.;

2. Chair Partnership meetings;
3. Organize the work between Partnership meetings (e.g. written consultation, ask for contributions, prepare documents, etc.);
4. Be the link between the Partnership and the urban authorities, the Commission and Member States. It will meet the UDG and DG, provide them with a draft and concise annual report. It will be also the interlink with a wider range of interested parties such as Urban Authorities, Member States not involved in the specific partnership and other stakeholders (in particular inform on the progress and offer the possibility to contribute e.g. through consultations, e-mails, updates, conferences, etc.);
5. Cooperate with the other Partnerships, when deemed of added value;
6. Participate and contribute to other working groups/ networks;
7. Coordinate the drafting of the Action Plan;
8. Monitor and report on progress [through inter alia the website (see chapter III, paragraph 2 of the Working Programme)];
9. Coordinate the work (e.g. ensuring that the contributions are prepared on time and at a good quality, mediating if there are different positions with a view to arriving at an acceptable position, etc.);
10. Define rules for the Communication Strategy of the Partnership
11. Coordinate the communication on actions and results (visibility);
12. Define rules for the Stakeholder Engagement of the Partnership
13. Send results from the Partnership to the DG meeting.

Partners

The Partners play specific roles and responsibilities to:

1. Contribute to the implementation of different actions foreseen in every step of the Workplan to define and implement the Action Plan;
2. Participate in the technical work of the Climate Adaptation Partnership with own resources;
3. Contribute to the Climate Adaptation Partnership through their own individual expertise but also through the wider knowledge of the organization they represent;
4. Promote and facilitate the debate about the Climate Adaptation Partnership within their territory.

Annex B Working Group themes, topics and elements

Theme A - Working Group Governance

Topic 1 - Coordination and Organisational Structure

References highlight the following elements and needs:

- to promote dedicated local structure to boost institutional interest and/or enhance involvement in urban climate adaptation, awareness and change empowering the city skills' staff;
- to establish horizontal (i.e. across sectoral departments) coordination mechanisms and vertical (i.e. across governance levels) mechanisms;
- to establish consultative and participatory mechanisms, fostering the multi-stakeholder engagement in the adaptation process;
- to facilitate the development of a framework for knowledge-exchange across experienced staff in different European Cities.

Topic 2 - Political Cycle - Mandate

Partnership highlight the following elements and needs:

- to rethink traditional approaches adding and/or integrating climate adaptation, land use management and local regulatory frameworks to urban planning;
- to use Strategic Integrated Planning as common methodology to manage Urban area/Urban centre to cope with Climate Change Impacts;
- to ensure continued support of the public administration across several election cycles to maintain commitment to long-term actions and policies.

Topic 3 - Decision making criteria

References highlight the following elements and needs:

- to develop toolkits and decision frameworks that can effectively inform and support local policies and strategies on climate adaptation with multilevel governance coordination;
- to select reliable short-term and long-term socio-economic indicators to support decision-making drawing evaluating and connecting their interdependency on climate adaptation variables.

Summary of theme, topics and elements

Table 18 Summary of Theme, topics and elements for Theme A

THEME	TOPIC	ELEMENTS
GOVERNANCE & PLANNING	coordination and organisational structure	local structures
		horizontal and vertical coordination
		consultative and participatory mechanisms
		knowledge exchange
	political cycle - mandate	urban planning integrate climate adaptation
		integrated strategic planning
		commitment continuity
	decision making criteria	toolkit & decision frameworks
		reliable indicators to support decision making process

Theme B - Working Group Knowledge

Policies for Climate Adaptation and risk reduction should be sustained by the knowledge of the urban and natural environment, its related specific hazard characteristics, as well as the availability of reliable data on the vulnerability and exposure of population, infrastructures and assets. Work in this area will take stock of the many methodologies that already exist at European level to help cities plan their adaptation measures and evaluate risks and vulnerabilities, such as the [Climate ADAPT platform](#), etc. and the monitoring and reporting framework of the Covenant of Mayors for Climate and Energy.

Topic 1 - Risk Assessment

References highlight the following elements and needs:

- to monitor, record and report damages associated to climate related extremes;
- to carry out local and sectoral risk assessments;
- to list, monitor, and evaluate adaptation actions at the local level;
- to adopt customized (Europe Region) UNISDR Scorecard Indicators - Sendai Framework for Disaster Risk Reduction in relationship with other climate adaptation tools to establish which are the thresholds of urban/local communities' resilience (UNISDR 2015).

Topic 2 - Hazards and Exposures

References highlight the following elements and needs:

- to identify expected impacts of all kind of hazards (because communities could be potentially affected by) in selected context (urban-rural, urban-urban and cross-border) to manage the risks and to contribute to Climate Adaptation Planning at medium-term and long-term periods.

Topic 3 - Vulnerability analysis

References highlight the following elements and needs:

- to analyse the vulnerabilities as pre-requirement that contribute to understand that climate-related events may become disaster occurrences;
- to define different vulnerability profiles which depend on economic, social, geographic, demographic, cultural, institutional, governance and environmental factors;
- to assess the role of stressful non-extreme events (e.g. drought, warm spells, etc.) on exposed populations and infrastructures vulnerability.

Topic 4 - Data

References highlight the following elements and needs:

- to gather standardized methodologies to compare data between different urban contexts;
- to compare, elaborate and represent data in a dynamic way, taking into account time as the main variable.

Topic 5 - Expertise

Partnership highlight the following elements and needs:

- to involve experts to present, according to their experience in the field, the best methodologies, tools and concrete experiences, solutions for information management and knowledge dissemination (e.g.: projects implemented in their countries);
- to promote debates on the impact of climate change and identify the most critical sectors.

Topic 6 - Methodologies and Tools

Partnership highlight the following elements and needs:

- to inventory tools and products to facilitate the preparation and implementation of strategies about climate change (e.g.: Presentation of Methodologic processes already carried out in the context of Climate Change);
- guidance for sustainable urban planning, climate change plans;
- guidance on use of data and models for planning, implementation and monitoring;
- to develop and present innovative tools and products that facilitate the awareness and the dissemination among citizens (e.g.: Communication materials - Brochures, websites, brands);
- to promote techniques to facilitate the active involvement of the different actors (in particular through the creation of local and national networks, the involvement of partners and key actors in the implementation of Climate Change Adaptation);
- to propose a methodology to account for the climate adaptation contribution of urban infrastructure investments, including both individual investments and multi-sectoral investments under a city's long-term capital expenditure programme, and identify suitable indicators to be monitored by the local authorities – this would be particularly important to justify intervention by climate/green financing instruments or EU / IFI targeted interventions.

Summary of theme, topics and elements

Table 19 Summary of Theme, topics and elements for Theme B

THEME	TOPIC	ELEMENTS
KNOWLEDGE	risk assessment	monitoring, record and report damages
		local risk assessment
		local level adaptation action evaluation
		UNISDR scorecard customized indicators
	hazard and exposure	expected impacts in selected context
	vulnerability analysis	climate-related events/ disaster occurrences
		vulnerability profiles differences
		stressful non-extreme events role
	data	standard methodologies
		time responsiveness
expertise	involvement on concrete solutions	

THEME	TOPIC	ELEMENTS
		climate change impacts/sectors debates promotion
	methodologies and tools	support climate change strategies
		guidance urban planning/climate adaptation
		guidance on use and data models
		increased awareness
		promotion technique of proactive involvement
		city's long-term capital expenditure programme on climate adaptation

Theme C - Working Group Resources

The capacity of human and natural systems to adapt to climate change depends on their resources availability. Adaptation opportunities, constraints, and limits are connected to the context of social actors, which includes individuals, businesses, government agencies, or other informal social groups. Sometime, difficulty in allocating and assessing adaptation resources is related with the lack of specific indicators on costs and benefits analysis, resource depletion, environmental change, and distributional issues.

Topic 1 – Funding

Partnership highlight the following elements and needs:

- evidence of gap between adaptation needs and funds available for adaptation to achieve a better assessment of global adaptation costs, funding, and investment. Studies estimating the global cost of adaptation is characterised by shortcomings in data, methods, and coverage;
- different financial products for different types of interventions (e.g. grants, loans, guarantees, credit enhancement etc.) which may come from different sources (e.g. national budget, ESIF resources, loans from commercial banks and/or IFIs, investments by private sector companies, etc.);
- different financing sources and products to support studies (e.g. CR-Climate Resilience VA-Vulnerability Analysis), capacity building, and capital investment.

Topic 2 – People

Partnership highlight the following elements and needs:

- institutional capacity of cities (including smaller cities) to handle climate adaptation and potential support needs;
- human resources, for example staff training on economic adaptation issues.

Topic 3 –Value of adaptation - social, economic.

Partnership highlight the following elements and needs:

- to evaluate costs and benefits of adaptation options and interdependencies between adaptation policies and other policies;
- to extend cost-benefits analysis/cost effectiveness analysis;
- to evaluate non-monetary costs and benefits related to adaptation options;
- to recognize that soft measures (e.g. early warning systems, disaster preparedness plans, change in operations and management etc.) can generate significant results without necessarily requiring large infrastructure investments;
- to extend cost-benefit analysis to the no-acting respect to municipalities, citizens, businesses;
- information sources;
- monitoring costs;

- to assess co-benefits of adaptation options in terms of e.g. mitigation, health, wellbeing, property values.

Topic 4 – Monetizing Climate Adaptation

Partnership highlight the following elements and needs:

- to identify the types of climate adaptation interventions or actions that could generate revenues or savings/reduced losses. This could justify the use of repayable sources of finance (e.g. loans, financial instruments);
- to analyse the potential for private sector investment in climate adaptation if the benefits of such investments for businesses and economic activities are demonstrated;
- to assess the need for a dedicated blending facility encompassing technical assistance (e.g. for CRVAs - Climate Risk Vulnerability Analysis - feasibility studies, etc.) and potential financing from international financial institutions.

Summary of theme, topics and elements

Table 20 Summary of Theme, topics and elements for Theme C

THEME	TOPIC	ELEMENTS
RESOURCES	funding	gap - adaptation needs/funds availability
		different financial products for interventions
		different financial sources for studies CRVA
	people	capacity of cities
		human resources
	value of adaptation	costs/benefits of adaptation options evaluation/interdependences
	monetizing climate adaptation	extended cost benefits analysis
		non-monetary cost of adaptation options
		soft measure give results without large investments on infrastructures
		cost/benefit of no-acting
		information sources
		monitoring costs
		assess cost/benefit adaptation options
		climate adaptation options/actions to generate revenue or saving/reducing losses
analysis the potential for private sectors investments if benefits are demonstrated		
dedicated blending facility/technical assistance for e.g. CRVA		

Cross-cutting Issues

The horizontal factors/issues represent the comparative enabler to perform the cross analysis devoted to find concrete bottlenecks and potentials to be addressed by the definition of the Action Plan with specific actions. Each issue is defined by parameters and elements chosen by the Partnership as qualifying factors.

Monitoring Indicators

Confidence is a key aspect since policy-decision-makers hesitation is often caused by the uncertainty still existing on climate trends and indicators. In order to better evaluate the expected local impacts and to implement more effective and focused measures cities would have at their disposal a flexible process, connected to a continuous monitoring of adaptation actions in order to be evaluated and revised on a constant basis.

The topics' themes will be analysed respect to the following parameters and elements:

1 – Models' Uncertainty:

- best availability of climate data and information that describe scenarios of future radiative forcing and variables that describe climate impacts;
- uncertainty about the trends of societal, economic, and technological change at local scale when introducing climate change factors as added variables.

2 - High resolution and high-end climate scenarios

- data resolution limits on climate scenarios to increase the geophysical, biological, and socioeconomic downscaling necessary to implement climate adaptation actions at local scale;
- critical system functionalities that are valuable to stakeholders and society (i.e., what are the urban adaptation requirements to face high-end Climate Change that can ensure the functionality of all networks, e.g. telecommunications, water, gas, electricity or transportation).

3 – Local Level indicator - Use and Application

- human deaths and injuries;
- number of permanently or temporarily displaced people and those directly and indirectly affected by climate events;
- impacts on properties, infrastructures, services, lifelines, ecosystem services, crops and agricultural systems and human health;
- impacts on psychological well-being and safety perception;
- financial or economic loss (including insurance loss).

Summary of issue, parameters and elements

Table 21 Summary of Theme, topics and elements for monitoring and indicators

ISSUE	PARAMETER	ELEMENTS
MONITORING INDICATORS	models uncertainty	data availability on future climate scenarios
		uncertainty on trends vs climate variables at local scale
	high resolution & high-end climate scenarios	data resolution limits
		critical system functionalities
	local level indicators	human death & injuries
		displaced people
		impacts on properties
		impact on safety perception
		financial & economic losses

Communication

This issue is linked to the wider problem of a modest public awareness and knowledge of Climate Change and his current and future impacts. The parameters are relevant to analyse how the public-

private synergies could change and renew relationships between institutions and stakeholders and how to improve and increase the communication in order to find the dissemination tools and methods needed to be more effective and accessible to the general public.

The topics' themes will be analysed respect to the following parameters:

1 - R&I stakeholders' engagement

- sharing learning and co-creation of knowledge between climate services providers (Universities, Research, Private sectors, etc.) and Institutions, and between Local government and communities to enhance the role of stakeholders;
- sharing lessons learnt on existing case studies among all actors;
- stakeholders' role and engagement methodology to rethink and effectively transfer cross-knowledge about identifying adaptation options and related selection criteria, contribute to decision-making frameworks design and integration of adaptation topics in traditional planning, improve cost-efficient combinations of measures;
- governance support and appropriate implementation timing of climate adaptation actions.

2 - Dissemination and Public Education

- communication and dissemination strategies and education models on climate change;
- risk communication tailoring to private sector and the general public, including local communities and specific social groups;
- characters of uncertainty and complexity of climate change and adaptation explanation.

3 - Local Action Groups - Communities Involvement

- gathering local population knowledge, data, information and capacities on reducing their exposure and vulnerability.

Summary of issue, parameters and elements

Table 22 Summary of Theme, topics and elements for Communication

ISSUE	PARAMETER	ELEMENTS
COMMUNICATION	R&I stakeholders' engagement	interlink among climate service providers-local government-communities
		lesson learned on existing case studies
		enhance stakeholder role as sharing knowledge actor
		governance support
	dissemination and public education	strategies and models on climate change
		tailored communication to private sector/general public
		explanation of uncertainty of climate change
	local action groups - community involvement	local population knowledge gathering

Sectorial Impacts

Climate change impacts are expected to exacerbate existing climate-related risks and to create new risks for the biosphere and anthropic systems. Some of these risks may affect a particular European region and/or a particular sector. At the same time, in the same contexts, climate change could have



some potential benefits. The sectors listed below summarize the most relevant to Urban Areas to assess methodologically concrete adaptation actions.

The topics' themes will be analysed respect to the following sector/parameters:

1 - Main sectors related to the biosphere:

- freshwater resources (large fraction of species faces increased extinction risk, loss of biodiversity);
- terrestrial and freshwater ecosystems (habitat modification, over-exploitation, pollution, and invasive species. Irreversible regional-scale change in the composition, structure, and function of terrestrial and freshwater ecosystems, including wetlands);
- coastal systems and low-lying areas (submergence, coastal flooding, and coastal erosion);
- marine systems (marine-species redistribution, marine-biodiversity reduction, reduced fisheries productivity).

2 - Main sectors related to the anthropic systems:

- food security and food production systems (negative impact on productivity, although individual locations may benefit);
- urban areas (heat stress, extreme precipitation, inland and coastal flooding, landslides, air pollution, drought, and water scarcity pose risks in urban areas for people, assets, economies, and ecosystems);
- rural areas (water availability and supply, food security, and agricultural incomes, shifts in production areas of food and non-food crops);
- key economic sectors and services (changes in population, age structure, income, technology, relative prices, lifestyle, regulation, and governance);
- human health (increases in morbidity in many regions);
- human security (displacement of people, indirectly increase risks of violent conflicts);
- livelihoods and poverty (reduced economic growth, make poverty reduction more difficult, further erode food security).

Summary of issue, parameters and elements

Table 23 Summary of Theme, topics and elements for Sectorial Impacts

ISSUE	PARAMETER	ELEMENTS
SECTORIAL IMPACT	biosphere	freshwater resources
		freshwater and terrestrial ecosystems
		coastal system
		marine system
	anthropic systems	food security
		urban area
		rural area
		key economic areas
		human health
		human security
		livelihoods and poverty



Annex C Overview of urban adaptation gaps, barriers and needs surveys

Table 24 table overview of urban adaptation gaps, barriers and needs surveys

EU cities adapt project survey	Mayors Adapt Knowledge Base Strategy	Committee of Regions report survey	Master Adapt project survey	Covenant of Mayors needs survey	Climate Adaptation Partnership survey on key bottlenecks
2013	2015	2016	2017	2017	2018
196 respondents	85 respondents	10 respondents	21 respondents	593 respondents	65 respondents
(DG CLIMA 2013)	(Romanovska et al. 2015)	(CoR 2016)	(Master Adapt 2017)	(CoM 2017)	Technical Secretariat of the Climate Adaptation Partnership
Main gaps, barriers and needs identified for urban adaptation in Europe					
Implementing adaptation measures	Knowledge gaps related to economic costs of climate change	Lack of awareness and political commitment	Lack of financial and human resources	Cities need the most support on climate adaptation (45.1%) (as compared to mitigation and access to energy pillars of the Covenant of Mayors)	Climate change adaptation is only in the mandate of city environmental departments, lack of integration between departments



EU cities adapt project survey	Mayors Adapt survey for Knowledge Base Strategy	Committee of Regions report survey	Master Adapt project survey	Covenant of Mayors needs survey	Climate Adaptation Partnership survey on key bottlenecks
Involving the community	Knowledge gaps on social impacts of climate change	Financial constraints, lack of funding, in particular for co-funding EU projects	Uncertainty regarding climate predictions at regional and local level	Limited financial resources	Too many tools and templates exist on adaptation to climate change, making it difficult for cities to find their way (need for more coherence on way forward)
Assessing impacts	Knowledge on impacts of climate change on essential urban services	Lack of appropriate legislative and regulatory frameworks on national level	The complexity, vulnerability and risk of climate change	Lack of technical expertise	The different time horizons of political cycles and climate adaptation policies (political timeline hinders policies)
Prioritising risks	Know-how on developing, selecting and applying adaptation indicators and the appropriate monitoring system	Limited cooperation between government levels	Lack of clarity in responsibilities and insufficient administrative structures	Support needed for adaptation in sectors buildings, energy, water and waste, and land-use planning	Barriers to obtaining data, lack of data sharing (need for centralization)
Creating organisational support	Understanding the economic and social impacts as well as costs and effectiveness of adaptation measures	Limited capacity to participate in exchange between cities		Know-how on implementing adaptation options	The communication used to 'spread the word' about climate adaptation policies are not suited to their target audience.
Knowledge on climate impacts	Know-how on safeguarding against maladaptation			Know-how on designing and prioritising actions based on certain criteria	Conflicting budget priorities within local authorities.



EU cities adapt project survey	Mayors Adapt survey for Knowledge Base Strategy	Committee of Regions report survey	Master Adapt project survey	Covenant of Mayors needs survey	Climate Adaptation Partnership survey on key bottlenecks
Communicating climate change	Long-term institutional set-up for urban adaptation			Know-how on designing an integrated approach for mitigation and adaptation	Insufficient resources and time/scale to implement projects/policies
Understanding of climate change	Relevant information being presented in a too technical manner and not easily understandable			Language barriers to accessing information and training	Lack of awareness, capabilities and resources within Local Authorities to draft Social, Environmental and Climate Assessment Procedures (SECAPs)
	Lack of awareness of which tools are most appropriate to guide cities according to which stage they are at in the adaptation cycle.				Lack of citizen awareness on climate issues
	Lack of national support or a national framework to facilitate action at city level				
	Lack of understanding of where to go, who can help and how to access available (credible) knowledge				



Annex D Overview of existing EU activities and initiatives on urban adaptation

Regulation and governance

- [EU strategy on adaptation to climate change](#) (Action 3: Promoting adaptation action by cities);
- [Urban Agenda for the EU](#);
- [Covenant of Mayors for Climate and Energy Political commitments](#);
- Relevant global processes with European participation:
 - [UNFCCC/Paris agreement](#);
 - [Sustainable Development Goals](#);
 - [The New Urban Agenda](#).
- Relevant international initiatives on adaptation and resilience with European city participation:
 - [UNISDR Making cities resilient campaign](#) / 10 essentials and resilience scorecard;
 - [100 Resilient cities](#);
 - [C40 cities](#).

EU Funding and financing

Funding sources

- [Mainstreaming adaptation in EU funding programs](#);
- [European Regional Development Fund](#);
- [Cohesion Fund](#);
- [INTERREG - European Territorial Co-operation Programs](#);
- [LIFE programme](#);
- [EIB loans and instruments](#);
- [Horizon 2020 research funding](#);
- [Climate-KIC innovation initiative](#);
- [Urban Innovative Actions initiative](#);
- [Joint Programming Initiative Urban Europe](#);
- [URBACT programme on sustainable integrated urban development](#);
- [ESPON Programme on territorial development and spatial planning](#);
- [EBRD loans](#);
- [European Economic Area grants](#);

Information on EU funding and financing

- [Covenant of Mayors for Climate and Energy Funding guide](#);
- [EEA report 'Financing urban adaptation to climate change'](#);
- [Climate-ADAPT cases on adaptation funding and financing](#);
- Various national contact points and events by funding and financing providers.

Knowledge

- Covenant of Mayors for Climate and Energy Capacity support:
 - [Urban Adaptation Support Tool](#);
 - [Twinings](#);
 - [SECAP and monitoring templates and guides](#);
 - [Webinar series](#).
- Climate-ADAPT portal – urban adaptation content
 - [Relevant EU policies and funding sources](#);
 - [Urban vulnerability map-book](#);
 - [Comprehensive knowledge database for urban adaptation information, data, tools and guidance](#);
 - [Urban adaptation case studies](#);
 - [Adaptation measures database](#);
 - [Urban-relevant national adaptation information](#);
 - [Urban Adaptation Support Tool](#).
- European Environment Agency /European Topic Centre for Climate Change Adaptation
 - [EEA report Urban adaptation to climate change in Europe 2016 — Transforming cities in a changing climate](#);
 - [EEA report Urban adaptation to climate change in Europe 2012](#);
 - [ETC/CCA report Social vulnerability to climate change in European cities – state of play in policy and practice](#);
 - [Open European Day events at Resilient cities conferences](#).
- [COPERNICUS data and services, Urban SIS](#);
- [ESPON outputs](#);
- [URBACT outputs](#);
- [LIFE project outputs](#);
- [Eurostat city statistics](#);
- [Horizon2020 project outputs](#);
- [JPI Urban Europe project outputs](#);
- [JRC reports](#).

Annex E Identified bottlenecks

1. Cross-departmental collaboration on adaptation within cities

Climate change adaptation is increasingly considered to be a social rather than environmental issue. However, it remains the mandate of environmental departments, despite affecting various local authority activity areas e.g. public health, transport and public housing. Especially in smaller municipalities there may not be dedicated sustainability team in the local government structure that would have a broader, or more systemic overview of the issues. To effectively tackle issues related to impacts of climate change on vulnerable groups (e.g. older people living alone being in danger during heatwaves; private tenants likely not to have contents insurance and thus affected by flooding), various local authority departments should come together, but this happens rarely. In particular the social care/public health departments are rarely involved in adaptation planning.

2. Accessing guidance on adaptation planning

There are many decision support tools already in existence, and the H2020 research projects keep on producing new ones. For cities often, the problem is not the absence of knowledge, but too much information to choose from, and effectively not being able to 'see the wood for the trees'. What is needed is the evaluation of the existing tools and decision frameworks, with the engagement of cities, and their prioritisation - what is the most useful? Which tools are the most appropriate to which types of cities?

3. The different timeframes of political cycles and climate adaptation policies.

The significantly different timeframes of the much shorter political cycles and the longer spanning climate adaptation policies. The relatively short duration of political cycles favours an immediacy of results in areas that can be more easily perceived by the general public, creating the conditions for the neglect of climate adaptation policies. The closer we are to an electoral moment, the more this bottleneck influences decision-making.

4. Insufficient support information to the decision-making process

Absence of information, lack of skills and training to analyse the available information and inadequacy of the scale of the available information. The decision-making process should be grounded on sufficient and reliable data in order to produce expedite results which correctly address the perceived problem.

5. Barriers to obtaining the required data.

Local Authorities face difficulties when trying to obtain existing data from regional / national level organisations (e.g., Environmental Agencies, High Water Management Agencies, etc.) and such data may exist in a format which isn't readily usable. Obtaining data on any particular problem or issue is

both time and resource consuming. Therefore, whenever such data already exists, it should be publicly and clearly shared in order to ensure awareness to its existence and promote its compatibility with different platforms and tools in compliance with applicable legislation on the protection of personal data. A culture of cooperation should be pursued, whereby proper and formal channels are established and communication is ensured.

6. National level authorities do not promote / communicate EU CA funding opportunities in the most efficient manner

The EU makes certain funding opportunities (e.g., H2020) available for municipalities to take advantage of. National authorities are, by nature, more aware of such funding opportunities but often fail to properly communicate and inform local authorities of their existence. Local authorities fail to take full advantage of potential funding opportunities because they are unaware of their existence. The lack of knowledge about potential funding sources may deter the implementation of CA policies or limit the scope of such policies.

7. The scale and / or timeframes of existing funding opportunities may not be sufficiently tailored to the local authorities' needs

Existing funding opportunities often carry constraints in relation to the scale of the projects they are tailored to finance and the timeframes in which those projects should be implemented. Local authorities, especially the ones governing small portions of territory or a reduced population, often struggle to find funding opportunities for projects of a scope in accordance to their scale.

8. The communication methodologies used to 'spread the word' about climate adaptation policies aren't suited to their target audience

Stakeholders are often a diverse and heterogeneous group. In order to fully engage with them, a common and adequate level of language should be achieved. A mistargeted communication on climate adaptation policies may increase the public's resistance towards a change in behaviour. The more diverse and heterogeneous the stakeholders' group is, the better the language used to engage with them needs to be tailored.

9. Different types of knowledge, awareness and / or commitment to climate adaptation in multi-level organisations.

Within most organizations, at a local, regional or national level, there is neither the same level of knowledge, awareness nor commitment to climate change adaptation issues. There is a need to ensure the same level of knowledge and commitment in the organization to the implementation of options and measures to adapt to climate change. On the other hand, addressing the risks associated with climate change may require a review of the main activities and decision processes implemented at different levels. Diverse levels of knowledge, awareness and commitment to climate change adaptation issues within multi-level organisations.

10. The scale of data is not as needed and there's a lack of skills and training to analyse data.

The holders of climate information (= the scientific community) and the persons responsible for urban policies do not talk and do not communicate enough, because they're not asked to do so or because they're not organized to do so. There is a potential for national level to ensure data collection in line with the needs of cities and applicable legislation on the protection of personal data.

11. Conflicting budget priorities

The structure of municipal budget might be a problem. In many cases transferring money from maintenance to investment budget allocations can be difficult. For adaptation projects this can be a serious difficulty since many investments will have “benefits” into the maintenance allocation budget. This is a problem since it makes it more difficult to decide to take action since benefits are not easily foreseen for the one making the investment. This can be seen in many Authorities and depends on how the Authorities budget is managed.

12. Insufficient resources to finance large projects

In some cases, measures to be taken need a strong investment by the Local Authority. Local Authorities have a lot of responsibilities and, in many cases, they do not have enough resources to finance the project. Even in new projects and urbanizations including adaptation criteria might not involve big investments, the already built urban area might need changes and specific adaptation measures which can be, sometimes, very important. This bottleneck is especially important in medium sized cities.

13. Difficulties in combining resources coming from the budget of different entities/ departments in the local administration

This difficulty arises due to the fact that adaptation is a cross-sectoral issue. Some actions should be leaded by different departments or entities, and a strong coordination between them is needed. For instance, the use of water in green areas might affect different departments: green areas department, urban planning, water supply (which can be outsourced), and an integrated action needs their coordination.

14. Borrowing capacity might be limited

Local Authorities might have their borrowing capacity limited due to the existing rules. This is of course a great bottleneck for them to get funds to invest in adaptation measures, which are measures that must be planned with a mid and long-term vision. Another issue is what is counted as a debt and what is not for a Local Authority. For instance, a leasing or renting mechanism, is it a debt in the accounting of the municipal budget? Furthermore, this constraint also limits the implementation of new financing schemes which in some cases could be considered as debt.

15. Daily priorities take time and resources from actions derived from mid and long-term plans such as SECAPs

Local Authorities deal with citizens and territory directly. Therefore a part from their legal responsibilities, frequently they must act even in areas they are not directly responsible for. This direct contact with the citizens involves that daily tasks are always a priority, and often there is not enough time to stop to think in a mid-long term plan. In many cities human resources are overloaded of work, making it more difficult the implementation of mid-long term measures.

16. Even EU is promoting the CoM and SECAP drafting, there are no specific funds or aids for Local Authorities to draft them.

Even a SECAP plan could be, in relative terms, not especially expensive for a medium or big city, the daily priorities and sometimes the lack of knowledge and awareness towards climate change for some decision takers makes it difficult drafting adaptation plans (SECAP or others). Having an adaptation plan is important in order to have a list of actions well prioritized which can help decision takers and at the same time raise awareness of the impacts of climate change. In some countries

there are laws which make it compulsory to have climate plans, but if it is not so, many cities and towns won't do that.

17. Conflicting priorities and strategic objectives between national/ regional and local level

This bottleneck will affect differently to different countries and at different periods. It is important that national, regional and local strategies are aligned. If a national government doesn't have the same priorities as the ones stated in the regional or the local governments, it will be difficult to implement any action. National and regional governments can prioritize specific funds or even approve legislation favouring adaptation measures, if climate change is not a priority, it will be very difficult for the Local Authorities to act.

18. Significant administrative burden and complexity of the funding application process

Once the funds are there cities might have difficulties in accessing them. Sometimes complex administrative procedures are needed in order to access the funds. Or calls are not clear enough (i.e. are they paying for a drafting a project and its realization? How is that if they pay also for drafting the project afterwards they ask information which only can be known if the project is already drafted?).

19. Difficulties in combining resources coming from the budget of different entities

Adaptation is a cross-sectorial issue and as already explained this makes it more difficult to act. Actions can involve different departments within the Local Authority but also different areas or departments from the national or regional Authorities, not being clear enough who is responsible for it.

20. Delays in the launch for the calls for application and/ or in the decision awarding the funding

Administrative procedures are complex and slow, this means that once a Local Authority has asked for a fund till the time they know if they can have it or not many months have passed. If the fund is given, the Local Authority could have difficulties on beginning the action on time, especially if the fund is given at the end of the year, when the Local Authority accounting is being closed. This means an extra delay of the action.

21. Overlapping between the different available financing opportunities and lack of a single entry-point

There are many calls within different programs and sometimes it is difficult to have information on all of them, or even to know the main differences. Which of the calls suits best for a specific project? This can be difficult to answer. Even the EU is advancing towards the one stop shop for all their funds, it is still difficult to have knowledge of the different opportunities.

22. Difficulties in providing co-financing to match the EU/ supranational funding available

In certain cases, projects (especially large ones) might be difficult to implement even with co-financing. Many of the calls from the EU have the aim of increasing knowledge, capacity building, exchanging practices and developing new methodologies, this can be really interesting but many cities also need to act. There is availability of funding mostly for preparatory stages of the project and lack of financing for infrastructure investments; and funds to invest usually need a co-financing. Some projects, even with co-financing cannot be developed by the Local Authority due to their limited budget or their borrowing capacity.

23. Administrative complexity of the application process, language barriers

Many of the calls are complex and most of them in English, templates to be filled and project structure can be really different depending on the program and call. This makes it difficult for the Local Authority staff to ask for them directly. Therefore, usually, they must hire specialised consultants to guide them through the process, drafting a proposal and drafting all reports needed. So, the Local Authority must have some budget to do so and the knowledge gained is outsourced, it is difficult that it remains in the Public Administration.

24. Difficulties in reaching a sufficient project size

Project size needed to access to some funds might be too big for medium sized towns and cities. Projects can be “relatively” small but they might be difficult to finance by own resources and at the same time might not achieve the minimum size required for a project. Here the role of supra-municipal entities can be important trying to bundle projects, however it is usually more difficult to do than it might seem, since different projects might have a different degree of maturity, involve different areas (Local Authorities organize different each other), different budget situations of the Local Authorities involved, etc.

25. Difficult to standardise since climate change vulnerabilities are local by definition

Furthermore, the perception of the impacts of climate change may vary depending on the location. An effort needs to be made to develop methodological instruments for measuring these impacts. CoMO is working this issue. This lack of standardization, by the nature of adaptation issues, makes it difficult to create of specific funds and assess the feasibility of the projects.

26. Mainstreaming is difficult to implement

It needs capacity building towards adaptation to climate change among all sectors involved and all kind of technicians (from environment areas. Urban planning, social services, education, civil protection, risk prevention, etc): Adaptation can be included as part of other actions and ideally should be mainstreamed in non-climate projects starting from the design phase. In many Local Authorities there are different departments which are affected; therefore, new ways of coordination should be established to avoid overlapping or contradictory decisions.

27. Lack of awareness towards climate change and its impacts among decision takers

Raising awareness, information and communication are crucial to prioritize actions and to help all stakeholders on decision-taking. The threats of climate change are difficult to foresee in the mid-long term. It is seen as something distant in time. This is important since this lack of awareness brings that adaptation plans can be belittled or even not perceived as needed (see bottleneck 6).

28. In EU funds there is no specific Technical Assistance support for Adaptation projects

There are EU funds to support technical assistance for sustainable energy projects, but that is not the case for adaptation projects. Adaptation projects are quite complex due to the cross-sectorial nature of it and there is a big difficulty on perceiving the economic benefits of acting. There is a strong need to prepare and draft the projects so they can be implemented and, to identify appropriate financing. So technical assistance could be of especial importance.

29. Green bonds are under-used

Green bonds are quite new and they could be a good way to finance adaptation actions, however cities should have a good rating, otherwise they cannot use them.

30. Adaptation is not included as a specific condition for CEF, Fisheries, AERDF, ERDF

This is a bottleneck to mainstream adaptation. Projects including adaptation are not specially valued so this is a contradictory message from EU. In one side EU is preparing the new strategy on climate change, on the other side funds do not include adaptation as a condition.

31. There are difficulties to establish PPP to execute adaptation actions

One of the problems of adaptation is its economic analyses (see bottleneck 22). The mismatch between the entity investing and the ones perceiving the benefits makes it difficult the participation of private investors. Insurance sector is perceived as one of the main potential private sectors that can be interested in participating.

32. Economic analysis of adaptation projects is difficult for several reasons

There can be a mismatch between the entity that bears the cost of the investment and that perceiving the benefits. The cost of adaptation has to be born in the present while the benefits may occur over a longer period of time. The probability and magnitude of climate change impacts are difficult to foresee and the expectations may be significantly different from reality. The impacts of climate change have both direct and indirect consequences and there are difficulties in establishing boundaries when estimating them. Ecosystem services studies, downscaling them to local level, will also be essential in order to understand benefits of adaptation, and can become a first step to monetize some of the benefits.

33. The accuracy of available data as well as sufficiently disaggregated information to assess climate change baseline at city scale is missing.

34. There is **lack of a common effective methodology to assess climate adaptation strategies/scenarios** at city level.

35. **Cities do not have competence over biosphere.** Biosphere is considered an important sector but its competence is on the regional and national level (unless cities have a responsibility in a protected area). The cities do not have the competence in this sector and the biosphere is not high on the agenda of cities. Only in those cases where cities are responsibilities on protected areas biosphere emerges in the agenda.

36. **Data on biosphere is not available.**

37. There is **lack of local municipalities capacities to include climate in risk protection.**

38. Paradigm of vulnerability analysis needs to be changed in order to **include biosphere components in risk assessment processes.**

39. **Climate adaptation needs long term strategy and this is not the main dimension of political will and decision making.** Small and medium cities potential to be committed on long term strategy is limited (due to lack of resources and different priorities in urban management). Lack of effective tools for communication concerning the connection between risk management climate adaptation planning. Lack of effective methodologies (shared by EU municipalities) for the definition of stakeholders' role and engagement in risk and climate adaptation field.

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