



Mayors Adapt Knowledge Base Strategy: 'Urban adaptation knowledge gaps in Europe'

Executive Summary

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ABOUT THE KNOWLEDGE BASE STRATEGY

Mayors Adapt, the EU initiative on adaptation in European cities, undertook empirical research into urban adaptation knowledge gaps faced by European cities. This work identifies cities' needs on knowledge generation and the barriers to knowledge transfer and access that cities experience when working on adaptation and climate risks; these needs and barriers are preventing them from building adaptive capacity and implementing adaptation at city level. This executive summary outlines the gaps identified by cities regarding the current knowledge available, as well as proposes recommendations to address both the knowledge gaps and barriers to knowledge transfer.

The outcomes of this study feed into the objective of the EU adaptation strategy Action 4 Knowledge gap strategy; they also serve the further shaping and strategic direction of knowledge and capacity building support provided by Mayors Adapt (e.g. the topics and design of Mayors Adapt events for cities, the activities of the Helpdesk and the development of the online Urban Adaptation Support Tool) and will also be used for updating the relevant pages, database and tools of Climate-ADAPT platform.

KNOWLEDGE GAPS AND BARRIERS IDENTIFIED

The main gaps in the available information and data on adaptation (information supply) that cities identify are:

- Knowledge gaps related **to economic costs and social impacts** of climate change.
- The impacts of climate change on **essential urban services** including on the interdependencies between sectors which converge at the city level.
- Knowledge on current, past and future impacts is frequently cited as somewhat limiting gap, however cities are seeking help and expertise where required by working directly with knowledge providers to address such gaps. The exercise of **downscaling and interpreting impacts at a city scale**, however, remains a challenge.

The main gaps in information regarding undertaking the adaptation process (translating information into adaptation action) that cities face are:

- Developing, selecting and applying adaptation **indicators and the appropriate monitoring system** at city level to assess progress in adaptation and the effectiveness of measures is the most frequently expressed knowledge gap among cities.
- The challenges of understanding the **economic and social impacts as well as costs and effectiveness of adaptation measures** represent the second highest process-related knowledge gaps. Better understanding of funding possibility of measures is perceived as a gap.
- **Safeguarding against maladaptation** and **long-term institutional set-up** for urban adaptation were likewise identified as persisting knowledge gaps.

Additional challenges mentioned frequently are the perception that there are too many uncoordinated (climate change) initiatives for cities, reflecting a **lack of coherent direction at EU level**: both within the European Commission across the DGs and also at EU level between the institutions.

The main barriers identified by cities in accessing relevant knowledge are:

- The most frequently cited difficulty is that the information available is presented in **a too technical manner and not easily understandable** by urban adaptation practitioners and decision makers.

- **Lack of awareness of which tools are most appropriate** to guide cities according to which stage they are at in the adaptation cycle. The Mayors Adapt Urban Adaptation Support Tool has been developed in direct response to cities' needs and the information overload. The Urban AST provides simplified, concise step-by-step guidance and a guide through the 'sea of information' by quality checking and selecting of the most relevant information sources. It is however not yet well-known (and not widely used) by the European cities.
- A lack of **national support or a national framework** to facilitate action at city level is a barrier experienced by newer Member States in particular.
- **Lack of understanding of where to go, who can help and how to access available (credible) knowledge.** Cities require a suite of adaptation support options, from a credible source: online, in person, peer to peer, interaction with adaptation experts and telephone based support throughout the adaptation cycle. This will be particularly important as cities move further along the adaptation cycle into implementation and monitoring and evaluation

Different factors influence cities' needs regarding knowledge provision and applying that knowledge:

The cities in newer Member States (predominantly from EAST and SOUTH) are mostly in the first stages of adaptation cycle, the ones from older Member States (from WEST and NORTH) are more likely to be advanced to further steps. **Maturity of enabling national environment plays a role here.**

Cities identify that there is ample **information and evidence base** -even too much- available in support of adaptation cycle steps 1-3, but this becomes much more limited and reduced for steps 5-6.

According to interviewed experts from organisations, **city size can influence their adaptive capacity:** the bigger the city, the more adaptive capacity they can have, or have access to (in Europe).

RECOMMENDATIONS FOR KNOWLEDGE GENERATION AND TRANSFER

1. This report provides a good basis to define specific research topics and their underlying data needs to close objective gaps in knowledge generation and supply. It is recommended that the focus is on:
 - **economic costs, the social implications** of climate change impacts and adaptation options in urban areas;
 - further research is also required on **downscaling** (preferably 'lossless downscaling') of climate impacts to city level;
 - the development of practicable and **meaningful indicators and monitoring** systems;
 - modelling efforts of both **impacts and effectiveness of adaptation measures;**
 - the knowledge generation should result in **directly applicable data sets** and knowledge formats which are easy to use.
2. There are numerous **EU channels** that are contributing to the development of adaptation knowledge base and transfer to knowledge users. Specifically, the overall adaptation knowledge gap strategy related to EU adaptation strategy should feature a dedicated section on urban adaptation knowledge needs. Also the contribution from private and national research activities should be accounted for and stimulated.

3. Increased use of **demonstration projects** should be made. Demonstration projects should focus on the application of climate services at the urban level and nature based solutions in cities and should involve end-users.

4. To improve the knowledge transfer it is recommended to **ensure better coordination among the different EU bodies and EC initiatives**. A specific example would be to increase coordination through EU Urban Agenda¹: All the relevant DGs could use this as an opportunity to plan a coherent approach across all relevant urban initiatives align knowledge transfer activities and events and ensure joined up messages relating to communication, planning and cross promotion of such activities.

5. **Strengthen existing mechanisms between data providers and the EEA** to support the knowledge transfer. Establish a process for ensuring all newest and relevant EU funded (and to extent possible MS funded) research on urban adaptation is channeled in the products and tools created and maintained by EEA.

6. **Further development of Climate-ADAPT**: Mandatory reporting (where relevant) to Climate-ADAPT in all service contracts and research projects should be envisaged; strengthen database of adaptation measures to cover the costs of implementation of the measure; further development of the database of available adaptation indicators for the urban context; a focus on the environmental and social impacts of adaptation, and urban specific database coverage analysis by adaptation cycle steps.

7. **Strengthen the links between EC adaptation activities and national and international frameworks**: Stronger links and increased dialogue between the EC and national adaptation activities; increased leverage of national activities or tools to a wider audience, through multipliers EU initiatives; formal consistent links between EC and international initiatives.

8. **Speed up and closely monitor the implementation of EU funds for adaptation**: The EC, in cooperation with Member States, should closely monitor the implementation of the European Structural and Investment Funds (ESIF) 2014-2020 programmes with regard to the planned adaptation actions. In particular, through the review of the annual implementation reports, follow-up the financial implementation of the programmes, as well as promoting the

¹ Adaptation is mainstreamed into the EU urban Agenda as one of the 12 priority themes

national level discussion through various means, such as macro-regional dialogue platforms² or climate-related workshops and seminars^{3,4}.

RECOMMENDATIONS FOR MAYORS ADAPT

Mayors Adapt was cited frequently by cities as an important resource to assist in addressing knowledge transfer challenges in particular.

9. Develop regular review mechanisms to ensure that the **knowledge base strategy maintains its relevance** and is fit for purpose.
10. Ensure a continued focus on city twinning and **peer to peer learning exchanges** which have been proven to work: the focus should be on both one-off exchanges and longer term working relationships between cities in person and online.
11. **Further development and promotion of Urban Adaptation Support Tool (Urban AST)** to urban practitioners: integrating its use in the Mayors Adapt city twinning programme 2016-17 to further promote the tool and gather direct user feedback to inform the tool's development; increased visibility of the Urban AST tool and cross referencing on Climate-ADAPT pages; increased consultation on its relevance and use within Mayors Adapt community and visibility on the CoM website.
12. Develop focused **guidance materials on a variety of topics:**
 - funding mixes and innovative financing mechanisms for urban adaptation;
 - communicating multiple benefits of adaptation at city level;
 - downscaling at city level and working with uncertainty;
 - a guide on what to avoid: avoiding maladaptation, lessons learnt from cities, learning from past failures;
 - tailored guidance according to the different stages in the adaptation cycle, an overview and assessment of available tools for urban adaptation.
13. **Address cities needs according to city size, region:** Consultation of cities further on their needs according to the city size, with a focus on small and medium sized cities.
14. **Providing a 'safe space to experiment in':** Mayors Adapt has the benefit of being both a political commitment coupled with the technical adaptation

² The four EU level Macro-regional strategies - Danube, Baltic Sea, Alpine, Adriatic and Ionian - all include climate change adaptation

³ E.g. series of dedicated events within the Jaspers Networking Platform on climate change adaptation and Major Projects funded under the ESIF 2014-2020 programmes:
<http://www.jaspersnetwork.org/display/EVE/Programme+of+Networking+Platform+events+2016>

⁴ Also including the dialogue with member States within the Working Group 6 on adaptation and various events with participation of the Commission

expertise assistance for cities offering a mixture of in-person, online and over the phone assistance to cities in different languages. Mayors Adapt can address cities' needs for 'human validation from a credible source'. This will be particularly important as cities move further down the adaptation steps into implementation and monitoring and evaluation.

15. Strengthen **collaboration with Mayors Adapt Coordinators, Supporters and other multipliers** in both knowledge generation and knowledge transfer

