

EU strategy on adaptation to climate change

Increasing cities' resilience to climate change

Key messages:

- Many cities have already adopted local climate adaptation strategies, notably through the Covenant of Mayors initiative, to reduce the impact of climate change and to make their territories more resilient. As cities are making progress towards mainstreaming adaptation across local policies, increased technical and financial support is needed to design, implement and measure the impact of their plans.
- Co-benefits on health, infrastructures, air quality, biodiversity, and mitigation should be better integrated in the assessment of adaptation options at local level. Local governments need more data on the monetary value to allow green infrastructures to compete with conventional options.
- Monitoring and evaluating the results of adaptation actions is necessary to assess the progress and success of adaptation plans. The new EU adaptation strategy should continue to support the development of local strategies and comprehensive sets of indicators to help cities monitor the progress of their adaptation plans.
- To make climate adaptation practices a reality everywhere in Europe, new approaches are needed to involve all stakeholders in efficient multi-level governance and multi-actor cooperation, within the framework of the European Climate Pact for instance and include the local level in the design of National Adaptation Plans.

The ambitious strategy set by the European Commission to reach climate neutrality by 2050 must be accompanied by an equally ambitious new EU strategy for climate adaptation. Europe needs to shift its focus from reacting to climate change disasters to building a new approach that prioritises prevention, risk reduction and resilience building.

Timely action to adapt to climate change will help reduce costs in the medium and long term. In EU member states, disasters caused by weather and climate-related extreme events accounted for 83% of monetary losses over 1980-2017 (€426 billion).¹ The current annual cost of climate change impact on critical infrastructures is €3.4 billion, and is expected to increase six-fold by 2050.²

¹ EEA report 'Economic losses from climate-related extremes in Europe' (2019): <https://www.eea.europa.eu/data-and-maps/indicators/direct-losses-from-weather-disasters-3/assessment-2>

² JRC study 'Resilience of large investments and critical infrastructures in Europe to climate change' (2016): <https://bit.ly/3f70lfj>

Nearly 90% of EURO CITIES members have adopted a climate adaptation strategy to adjust to the impact of climate change and protect their citizens.³ Vulnerable communities are likely to be further disadvantaged by the impact of climate change, such as increased rainfall and summer heat. The differential impact of climate change in cities are closely linked to inequalities around gender, race, disability and sexuality. The new EU strategy will need to consider these to increase the adaptive capacities of vulnerable groups, through targeted support, capacity building, and their involvement in co-creating adaptation plans. This is essential to make our society more resilient to climate change.

Although the larger European cities are moving forward with their climate adaptation policies, the EU's strategy can only be successful if it engages all local authorities. Under the Covenant of Mayors, around 3,000 cities of all sizes have committed to conducting vulnerability and risk assessments, and to developing, implementing and reporting on adaptation plans.⁴ But only 40% of European cities with more than 150,000 inhabitants have adopted adaptation plans to protect their citizens from climate impacts.⁵ Increased financial support and capacity building is needed to get everyone on board.

Mainstreaming climate across policies and climate-proofing of investments

Climate change adaptation must be mainstreamed into existing policies to achieve coherence and synergies, and to avoid counter-productive actions.

At city level, adaptation is based on a cross-cutting and multidisciplinary approach that fosters cooperation with surrounding municipalities, regions, and member states. When planning adaptation action plans, cities are also taking decisions that involve urban planning, defining standards for existing and new buildings, creation of green and blue infrastructures, and developing plans for protecting vulnerable citizens and infrastructures during extreme weather events.

At EU level, climate change adaptation must similarly be better mainstreamed across policies such as the Common Agriculture Policy, the Water Framework Directive and Floods Directive, the post-2020 EU Biodiversity Strategy, the Common Fisheries Policy, forestry, and policies related to public health.

In terms of climate mainstreaming across EU programmes, the Commission's proposal for a target of 25% of EU expenditure contributing to climate objectives, must be an absolute minimum. The 'do no harm' principle must be fully and transparently implemented as the strongest tools to prevent EU funding being used for projects that could negatively affect EU climate commitments. Climate-proofing of infrastructure investments is crucial and helps build resilience against current and future changes.

It should be mandatory that member states fully integrate climate mainstreaming and climate proofing considerations in their National Adaptation Strategies (NASs) and National Adaptation Plans (NAPs) – going beyond the vulnerability assessment – in the revision of the National Energy and Climate Plans (NECPs) to measure the carbon and resource intensity of the investments referred to in their plans.

Nature-based solutions for adaptation

Nature-based approaches are often called 'no-regret' options, meaning that the measures are useful even if the effects of climate change do not materialise as predicted. Such approaches are often more cost-efficient, contribute to preserve and restore ecosystems and allow for more flexibility in dealing with a constantly changing climate. Nature-based solutions for adaptation have multiple co-benefits in addition to their initial adaptation functions:

- better management of our freshwater resources can drive global efforts to tackle the most serious climate risks;

³ Cities leading the way on climate action, EURO CITIES publication, 2019, <https://bit.ly/3d6ArHO>

⁴ www.eumayors.eu (consulted in May 2020)

⁵ Data from April 2018: Report on the implementation of the EU Climate Change Adaptation Strategy (2018)

- after oceans, soil is the second largest natural carbon sink, surpassing forests and other vegetation in its capacity to capture carbon dioxide from air. Healthier soils lead to more sustainable food systems while adapting to climate risks;
- green areas in cities help prevent floods, reduce air and noise pollution, better manage water resources and reduce the urban heat island effect. They also contribute to healthier lifestyles and help prevent a large range of mental and physical health problems.⁶ Special consideration must be given to enriching the biodiversity of these areas to restore and support ecosystems which bring a range of benefits.

Co-benefits should be better integrated in the assessment of adaptation options, allowing green infrastructures to compete with conventional options. Environmental, social and economic co-benefits in Life Cycle Assessments (LCA) should be included in cost-effectiveness analyses when evaluating different options of infrastructure. More research, undertaken at EU level by the Joint Research Centre (JRC), and guidance would be welcome to help local authorities measure the co-benefits of nature-based solutions in adaptation policies.

Measuring progress and success

Monitoring and evaluating the results of adaptation actions is necessary to assess the progress and success of adaptation plans. However, unlike mitigation policies, there is no single way to measure adaptation actions: most monitoring activities focus on the process rather than on the outcomes. The outcomes of climate change adaptation actions are difficult to track, and there is a lack of adaptation monitoring tools. The post-2020 EU climate adaptation strategy should continue to support the development of local strategies and allow the use of local indicators to help cities monitor the progress and success of their adaptation plans.

Measuring progress should also help tackle maladaptation to climate change: the targets and indicators put forward by the EU adaptation strategy should help assess the harmful potential of some adaptation activities, such as increasing emissions of greenhouse gases (e.g. cooling systems), financing highly polluting technologies (e.g. water desalination producing toxic waste), or technological infrastructure that displaces the problem elsewhere (e.g. some hard sea defences). The Commission should work with city authorities to develop guidance to avoid maladaptation at local level, as well as reinforcing capacity building to enable sharing of experiences.

Supporting local adaptation actions

Being at the frontline of climate change, the need for cities to adapt is clear. This requires strategic choices to protect vital infrastructure, such as energy plants, drinking water and telecommunication. Significant investment and financial support are needed to prevent damages of those critical infrastructures.

EU funding is a vital resource for cities to finance adaptation planning and implementation. The reinforced policy objective for a greener, carbon free Europe in the next programming period for the European Regional Development Fund (ERDF) can support increased investments locally. Access to ERDF for climate adaptation purposes has previously been limited in some member states.⁷ More generally, to match ERDF spending with urban climate needs, it is vital to ensure the full involvement of city authorities in the development of operational programmes.⁸ The LIFE programme presents some difficulties as well: the 55% co-financing is a barrier for cities, as is limited in-house capacity to develop bankable adaptation projects.⁹ The new LIFE programme should take into account the difficulties faced by cities to enable them to benefit fully from EU funding to finance their adaptation projects.

⁶ Kuo, M. How might contact nature promote human health? Promising mechanisms and possible central pathway. *Front Psychol.* (2015)

⁷ Urban Agenda Partnership for Climate Adaptation Action Plan (2018)

⁸ EUROCITIES statement on Cohesion policy post-2020, October 2019, <https://bit.ly/2NYlqx0>

⁹ Urban Agenda Partnership for Climate Adaptation Action Plan (2018)

Horizon Europe, with a proposed 35% spending priority on climate related topics, can be a strong catalyst to help bring more climate adaptation solutions close to the market and replicate innovative approaches piloted at the local level. Both Horizon Europe missions 'Adaptation to climate change including societal transformation' and '100 climate-neutral cities by 2030' will have an important role to play, if supported and implemented, in putting innovative solutions for climate adaptation on the market, scaling them up and replicating them across cities.

Overall, the Commission should focus on funding more adaptation-related capacity building activities for and in cities, and on upscaling and replication of effective solutions. Many Horizon 2020 and ERDF projects are successful, but their added value remains limited when there is no funding for upscaling to achieve greater impact.

Also, the Commission can contribute to bridging current knowledge gaps on adaptation to ensure informed decision-making. This can be done by further developing tools such as Climate-ADAPT¹⁰, the Urban Adaptation Support tool, as well as linking with the Covenant of Mayors local adaptation plans and supporting the work of the Urban Agenda partnership on Climate Adaptation. The Commission can further support initiatives providing access to city level data, for example by making the data collected in the Copernicus Climate Change (C3S) Service CDS (Climate data Store) more accessible and easier to use for local practitioners. Urban decision-makers need accessible, robust and relevant climate information to underline the necessity of climate adaptation measures to increase resilience. The Commission can help by encouraging the private sector, and in particular the insurance sector, to share its data on risk prevention, risk transfer and disaster risk management, to help cities design informed adaptation plans.

Multi-level and multi-actor cooperation

In many cities, a large part of the territory is privately-owned. It is therefore more complex for local authorities to enforce some necessary measures such as increasing green areas to decrease urban heat island effect and improve drainage. Engaging citizens and business will be essential to bridge the gap through, for instance, blueprints and grants directed to cities to set up initiatives to subsidise privately-owned green roofs, gardens, green façades, etc.

There is a need to continue raising awareness, especially on the costs of inaction, on the co-benefits of adaptation actions and the risks of maladaptation. Similarly, more research is needed on the cost of maladaptation measures and on the impact of climate change at local level. The outcomes of such research should be strongly promoted to ensure a wider and better understanding of the need for coherent and concerted climate change adaptation planning.

As highlighted by the evaluation of the current EU adaptation strategy, national regulation is an important catalyst for action at subnational level and has a significant impact on local climate planning. Member states need to include local governments in the design and implementation by including co-creation and consultation mechanisms to ensure the effectiveness of National Adaptation Plans.

Adaptation to climate change requires better coordination between sectors and levels of government. The Commission can be a strong facilitator of structured discussion forums on bottom-up and co-designed adaptation options, within the framework of the European Climate Pact¹¹, increasing co-creation and engaging all relevant stakeholders.

¹⁰ <https://climate-adapt.eea.europa.eu/>

¹¹ Reaction of EUROCITIES to the European Climate Pact: <https://bit.ly/2ZJa9pQ>