



**Local & Regional
Europe**

CEMR response to the open consultation on the New EU Strategy on Adaptation to Climate Change

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Council of European Municipalities and Regions
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CEMR is the broadest organisation of LRGs in Europe, with over 60 national associations of municipalities and regions from 41 European countries. These represent some 130,000 LRGs. CEMR's objectives are twofold: to influence European legislation on behalf of local and regional governments and to provide a platform for exchange between its member associations and their elected officials and experts. Moreover, CEMR is the European section of United Cities and Local Governments, the worldwide organisation of local government.

SUMMARY

Local and Regional Governments (LRGs) are suffering the consequences and impacts of climate change, and they can provide some of the solutions if capacitated to do so in cooperation with the EU and the national governments. Therefore CEMR welcomes the opportunity to contribute to the climate debate at EU level, as in this occasion of this open [consultation](#) on the New EU Strategy on Adaptation to Climate Change.

A revised EU Adaptation Strategy should be followed by an EU Action plan on Adaptation within the framework of The European Green Deal. LRGs are already taking actions all over Europe, but will need amongst others strong supporting financing systems to meet and overcome the increasing effects of climate change.

These are CEMR's main messages:

1. The **local character of the impacts** of climate change puts the municipalities in the front line in dealing with climate change
2. LRGs are already **active on local adaptation measures in several sectors**. LRGs need an integrated, cost-effective territorial approach with adaptation and mitigation hand in hand
3. LRGs need a **supportive framework with financial support**, enabling conditions, drivers, policies and better knowledge base for a new and efficient Strategy on Adaptation which considers the different conditions and approaches in different countries
4. LRGs are ready to engage on adaptation to climate change not only at the local but also **internationally, and specially towards developing countries**, to contribute to implementing the Paris Agreement

INTRODUCTORY REMARKS - THE NEED FOR ADAPTATION

Mitigation and adaptation are the two strategies for addressing climate change. Mitigation is an intervention to reduce the emissions sources or enhance the sinks of greenhouse gases. Adaptation is an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC). Mitigation addresses the causes of climate change, whereas adaptation addresses the impact of climate change. Even with strong mitigation, the climate would continue changing in the next decades and adaptation to these changes is necessary. On the other hand, adaptation will not be able to eliminate all negative impacts and mitigation is crucial to limit changes in the climate system.

The climate is changing and in anticipation of the impacts of increasing global temperatures and rising sea levels, adaptation is becoming an increasingly important part of development policies and practices. Climate change is already affecting cities and regions in Europe and worldwide through increased heatwaves, floods, droughts, forest fires and migration. In 2050, the world population is expected to reach nearly 10 billion. This will have an even greater impact on the environment and the urgency to adapt to climate change comes in more evident than before. We adapt when we are able to anticipate the adverse effects of climate change and can take the right actions to prevent or minimise the damage they can cause. But we need to both tackle adaptation and mitigation at the same time if we wish to be efficient. LRGs are suffering the consequences and impacts of climate change, and they can provide some of the solutions if capacitated to do so in cooperation with the EU and the national governments.

A revised EU Adaptation Strategy should be followed by an EU Action plan on Adaptation within the framework of The European Green Deal. LRGs are already taking actions all over Europe but will need

amongst others strong supporting financing systems to meet and overcome the increasing effects of climate change.

There is a need to look at the challenge of adaptation when developing and transforming a city. Both adaptation and transformation refer to processes of change. While adaptation generally involves a change of something in response to something else (i.e. more heat – find more heat-tolerant crops), transformational adaptation is more profound since it challenges the drivers of change, the systems, structures and interests that keep climate change intact. Transformation involves a change from today's "business-as-usual" into something that is physically or qualitatively different.

LRGs are responsible for implementing a large share of investment and activities to combat climate change adaptation and need to be properly involved in policy development both at national and EU and non-EU countries. We need leadership of well supported local authorities to adapt, we need dialogue and enabling conditions to implement local adaptation plans. LRGs are closely linked to and can engage with the public, the business community, civil society organisations, community groups and others. In the same way, LRGs need to strengthen the dialogue and working with national government and EU to ensure the coordinated action of all levels of government, including input for the need for changes in legislation and guidance for local government.

Climate adaptation should also be mainstreamed into the regulatory system at the local and regional level. Meaning that climate adaptation / climate adapted solutions should be a prerequisite for further development. Ex life cycle analyses where climate change should be a part of the base of the lifetime analysis before investment decisions are made, and for example risk and vulnerability analyses should also be a part of the decision basis.

The [European Green Deal](#) launched on 11 December 2019 (to make Europe the first climate-neutral continent by 2050, in line with the European commitments in the Paris Agreement on Climate and the UN Sustainable Development Goals) came with a proposal for a new EU Adaptation Strategy. The Open Public Consultation is open until 20th August.

1. The local character of the impacts of climate change puts the municipalities in the front line in dealing with climate change

Climate change has become more visible over the past two decades. We can observe many impacts at the local level such as the following ones: increase in temperature, changes to water resources, less snow, droughts, water stress, diseases, weather extremes, more heat stress, poor air quality, abnormally warm overall temperatures/droughts, heat waves, restrictions on water availability, disappearance of glaciers or long-lasting snowfields, forest disturbance, river and coastal floods, flash floods or landslides, seaside storm surges, coastal erosion, stormwater management, extreme wind, appearance/gradual shift of species, seasonal shifts, severe crop losses, emergence of tropical diseases that are otherwise not present in a certain area.

Due to the fundamentally different challenges faced on the local level throughout Europe the key to developing a climate robust municipality is to conduct a climate vulnerability analysis to pinpoint what risks and vulnerabilities are faced in each individual municipality or region. The analysis should be the foundation which further action is based on. The goal should always be to develop a climate resilient society, and this should be reflected in the chosen actions.

The level of change required to adapt to climate change can only be achieved by strong political commitment and leadership, at all levels of government and in partnership and dialogue with all stakeholders, citizens, business, industry and the private sector. The local and regional levels are playing a key role in achieving the goal of carbon neutrality by 2050 and must be key partners in the future Adaptation Strategy. In many Member States, the local level is at the forefront, working with

ambitious climate adaptation measures and strategies. Transformation of the society will require working on both mitigation and adaptation at the same time.

LRGs also see that a high level of climate adaptation measures - if planned for will bring many **opportunities**: It will help mitigate costs associated with climate change to the society (from e.g. extreme weather events, droughts, loss of ecosystems etc.); it will ensure a growing EU economy based on new production and consumption models (e.g. circular economy approach it will create new (green) jobs; Innovation is also an important area within adaptation, i.e. need for a lot of new solutions on how to cope with stormwater management when we get more rain or more heavily cloudbursts; it will lower pollution, improve health, make cities and buildings more liveable and thus increase the well-being of citizens; it will contribute to tackle energy poverty and reduce energy bills for households ; it will give the EU industry a first-mover advantage on global markets; it will improve energy security and reduce the EU dependency on imported fossil fuels.

Many impacts of climate change are local in nature but can have economic and social consequences that transcend borders and affect countries in addition to the direct effects of physical climate change. Transnational climate impacts also represent both risks and new opportunities. Looking ahead, towards the mid and late 21st century, it is, however, clear that in sum, potential risks far outweigh the opportunities, both in terms of magnitude, confidence and likelihood.

A lot of damage and costs both human and material are following - and this is going on now and we see already that the damages and costs are increasing.

Furthermore, it is expected that climate change will lead to a gradual weakening of global productivity, which may cause increased volatility and higher prices on several commodities in the market. Such risk is particularly evident within agriculture, a sector that is highly exposed to climate impacts. Transnational climate impacts will have major consequences.

2. LRGs are already active on local adaptation measures in several sectors. We need an integrated, cost-effective territorial approach with adaptation and mitigation hand in hand

Mitigation and adaptation are interlinked and need to be implemented simultaneously. This is increasingly done in cities. City development covering mitigation alone will not be sustainable.

Climate change adaptation is in most cases about integration. To integrate the consideration of the climate today and in the future, is paramount important especially in land use, infrastructure and buildings and management of the environment.

Increasingly more authorities are considering smart linkage of climate adaptation measures to other undertakings in the physical environment (eg. housing projects, renovation, greening, energy transition, regular maintenance, sewerage projects). Especially in urban areas, such linkage opens a host of opportunities: it may expedite the implementation of measures, reduce nuisance for residents and businesses, and yield financial benefits. We also deal with the interconnectivity with other societal taskings at the street, neighbourhood, and regional levels.

Sectors where mitigation and adaptation go hand in hand is especially within land use planning and management of the urban and rural environment. The building sector has also a potential for mutual integration of mitigation and adaptation.

LRGs are, by nature, active in sectors that are affected directly by climate change and require urgent action on adaptation. Weather patterns over the next 20 or 30 years are going to be determined by the amount of carbon dioxide that is already up in the atmosphere now. Even if we cope with the emissions within 2050, we will see an increase in climate change throughout this century, due to the accumulated large amount of greenhouse gases in the atmosphere. Therefore, adaptation is as equally important to

deal with now as mitigation. We need an integrated territorial approach among all sectors. These are sectors in which LRGs have been and will continue to be active in adapting to climate change:

- a) Urban and rural land-use planning
- b) Buildings
- c) Climate resilient infrastructure

a) Urban and rural land-use planning

Land-use planning is in many European countries a local or regional competence. This enables LRGs to develop attractive and liveable cities that reduce the need of car transport and promote walking, cycling and public transport but also address issues of climate mitigation and adaptation by taking current and future consequences into consideration when planning and developing the cities. This includes measures to manage stormwater, flooding, heatwaves etc. This will require investing in climate resilient infrastructure, maintaining and developing green infrastructure and planning for both buffering extreme weather events and have proper emergency response measures in place. Action is most needed at the local level, moreover it's the only level that actually can deliver physical changes.

Planning and increasing green infrastructure such as green and open public spaces and trees can improve resilience and improve the microclimate, by reducing urban heat islands and risk of flooding. Façade and roof greening are other actions being implemented. LRGs want to convert their municipalities to climate-friendly territories. This conversion is associated with high investment costs, particularly in existing infrastructure. Therefore, measures such as **retention areas**, emergency waterways, water development, multifunctional areas for dealing with heavy rain and drought should be facilitated in particular.

Nature based solutions, in both cities and rural areas, can contribute to both decreasing emissions and adapting to climate change. Biodiversity is a crucial aspect of sustainability that has to be considered when planning green structures, such as green corridors for wildlife and areas with protection and nature consideration. Natural based solutions are often also considered as cost-efficient measures in stormwater management.

Examples and experience from CEMR members:

Reference framework for sustainable cities:

The RFSC is an online toolkit (www.rfsc.eu) for local European authorities that are more involved in or are willing to start a process of integrated and sustainable urban development. The main objective of the toolkits is to enhance the dialogue within a city and with peer cities tackling the same issues all across Europe. CEMR has been involved in the development of the RFSC from its beginning in 2008. It is now a member of the RFSC Consortium together with Platform 31 (lead partner) and ICLEI – Local Governments for Sustainability.

The UK has a National planning policy to improve biodiversity in rural and urban areas. [Link](#)

***Climate Ready Clyde** is a partnership of 15 organisations, including Glasgow City Region's eight local authorities, collaborating to develop Scotland's first **regional Climate Change Adaptation Strategy and Action Plan**. The partnership has supported economic appraisal of adaptation options including a Heat Health Warning System and property level resilience measures, explored climate risk screening approaches for infrastructure and scoped the development of an adaptation pathway. Climate Ready Clyde is also working with the European Investment Bank and others to explore the financial and economic risks associated with climate change risks to Clyde Waterfront, a large regeneration project on the banks of the river. It includes economic appraisal of adaptation options including a Health Warning System and property level resilience measures, climate risk screening for infrastructure and the development of an adaptation pathway.*

Urban Links 2 Landscape. Is an Interreg project with best practice examples and tools, resulting among other things in a handbook for green planning for cities and regions <https://www.interregeurope.eu/ul2/>

In Germany the national building code already established that climate protection needs to be taken into account when drawing up land use and spatial development plans in 2011. The city of Bremen has used this climate protection clause in their KLAS project to look for ways in which the risk of flooding and the local adaptation potential could be fed into future planning processes in Bremen. One of the results is that the integrated plan now indicates those urban areas in which future urban planning should pay particular attention to the bioclimatic situation and the handling of rainwater. Above all, extraordinary rain and heat events are considered. Furthermore, specific planning tools for these areas have been developed.

The Vienna Urban Heat Island Strategy, was developed by Vienna's Environmental Protection Department in collaboration with scientific experts and numerous specialist departments of the City. The strategy describes in detail different ways to cool the urban heat island and provides information on the effectiveness of specific actions in the city and residential areas. It also shares the benefits and possible challenges to implementation, not least the costs of construction and maintenance. [Link](#)

In Graz, Austria, there to prevent Urban Heat Islands UHI we are currently working on a modern, visionary, digital urban climate analysis which should provide the foundation to help solve climatic issues of the City of Graz. Furthermore, the city of Graz has developed an Action Plan for Climate Change Resilient in 2018 which is presently implemented. In this plan we put emphasis on funding greening the city such as green roofing, facade greening, planting trees and urban gardening.

In the Netherlands All levels of governments together drew up an Adaptation Programme. This sets out how municipalities, district water boards, provinces, and the national government intend to have the Netherlands designed in a climate-proof and water-resilient manner by 2050. The plan contains seven ambitions to this end. 1 Plan is "Mapping out vulnerabilities" by means of stress tests. 2 is for all the governments to have conducted risk dialogues by no later than the end of 2020. 3 is to draw up an implementation agenda by no later than 2020. Source: <https://ruimtelijkeadaptatie.nl/english/policy-programmes/delta-plan-sa/>

Oslo: To safeguard and further develop blue-green structure in the city, Oslo has developed a norm for blue-green factor in area plans or building matters for housing in the construction zone in Oslo. The purpose is to promote recreation, natural diversity, climate adaptation, water management and air quality. Oslo's Norm/ standard for Blue Green Factor is a calculation tool to ensure a minimum of blue/green solutions in housing projects. Mitigation and adaptation are interlinked and need to be implemented simultaneously. This is increasingly done in cities, such as in the Climate strategy of Oslo.

In the region of Skåne, Sweden, [some municipalities cowork with water issues](#) and have among other things released detailed flooding plans and also worked a lot with spreading information to property owners.

In Sweden, a growing number of municipalities work together within [the network of Making Cities Resilient](#), hosted by the Swedish Civil Contingencies Agency (MSB).

b) Buildings

The built environment is particularly vulnerable to climate change. If climate change adaptation in this sector is not addressed now, the predicted effects of climate change will have a profound negative impact on society.

As buildings and infrastructure assets have lifetimes from 50 to more than 100 years, they are exposed not only to the climate at the time of their construction, but also to climate variations and changes over

decades and there is a urgent need for planning and implementation now in order to avoid major maintenance costs in the future.

In the northern part of Europe, it is also about making waterproof solutions and to locate properly away from natural hazards and stormwater events. In additional greening of roof and facades for adaptation measures (lower heating conditions or delaying heavily cloud bursts) should be addressed here. Should the roof consist of solar panel or be green – energy efficiency or adaptation measures or both?

CEMR has also welcomed the announcement of the future initiative on the “Renovation wave in buildings” (of the Green Deal) due September 2020. CEMR has already sent input (see box below) to the Commission last March on questions on barriers and market-pull to scaling up the renovation of the building stock, specificities of segments of the building stock, and needs for the Open Platform and making such a platform sustainable over time.

Examples and experience from CEMR members:

EENSULATE (ongoing) on building retrofitting in the Marche Region in Italy: the objective is the development of innovative lightweight, highly insulating energy efficient components and associated enabling materials for cost-effective retrofitting and new construction of curtain wall facades.

A big success factor in Germany are the easily accessible funding programmes, which are non-credit based, direct payments. Moreover, funding programmes to cover the personal costs of “Klimaschutzmanager” (Climate protection managers) which are directly adjacent to the municipalities’ administration have also been a great way for municipalities to develop strategies as well as offering consultancy services for both the public administration, companies and citizens to find the right energy-efficient solution for their buildings.

CEMR has already contributed in March and in June 2020 to “The Green Deal – on the future proposal on the Renovation wave in buildings”. Links to responses to [roadmap](#) and [consultation](#).

Climate proof building

South-Holland (Netherlands) is facing a major construction task - until 2025, 100,000 new homes will be needed in the province. New construction sites in South Holland are built as climate adaptively as possible, so that they can withstand weather extremes as a result of climate change. This ambition has been laid down in the Climate Adaptive Building Agreement. This has been signed by, among others, construction companies, municipalities, the province, water boards, social organizations, financiers and project developers. <https://www.urbangreenbluegrids.com/bouwadaptief/>

c) Climate resilient infrastructure

Climate resilient infrastructure is key for resilient communities. Infrastructure needs to withstand a changing climate and to ensure the overall resilience of the city. For instance, in areas increasingly hit by torrential rains the roads should endure large amounts of rainwater without being damaged. At the same time, roads could be designed to retain water and safely lead the water through the city .

Infrastructure is a complex and very expensive area that involves all parts of built environment, roads, bridges, water and wastewater treatment etc. Maintenance is a keyword here (or lack of it) and so is the importance of taking climate change into account when planning new infrastructure.

Climate resilient infrastructure can also strengthen economic growth and safeguard cities, towns, municipalities from the effects of climate change. Climate resilient infrastructure should be tailored to local conditions and context as this will mean not only preparing the local level to better respond to natural disasters, but also as well to take steps to prevent disasters. Urban planning and development play a key role in this respect. If infrastructure is climate resilient, cities then will have the ability to

absorb, recover and prepare for future climate shocks (with an impact on the economy, environment, society and institutions). Climate resilient infrastructure will make cities promote sustainable development, well-being and inclusive growth.

Examples and experience from CEMR members:

Floodway map of Oslo: an ongoing project to map all roads of the city, in order to decide which roads are most suited as safe floodways through the city during torrential rains. Action point from the action plan on storm water management.

Revision of Road manual of Oslo: regulates the use and design of roads and public spaces, including nature - based solutions.

The city of Rotterdam performed a comprehensive climate risk assessment of its infrastructure and an action plan. The implementation is in tune with the 'rhythm of the city'. The city is continually developing. Utilities and urban infrastructure are maintained, renovated, redesigned and the city as a whole extended and compacted. The results of these activities are frequently long-lasting. Renovation or replacement of infrastructure occurs on average every thirty to fifty years and a lot of construction work is expected to last much longer. The 'rhythm of the city' is the basis for the planning and implementation of activities that will make the city climate proof.

<https://www.rotterdam.nl/wonen-leven/rotterdams-weerwoord/#:~:text=Om%20Rotterdam%20hierop%20voor%20te.Rotterdammers%20de%20stad%20weersbestendig%20maken.>

3. LRGs need a supportive framework with financial support, enabling conditions, drivers, policies and a better knowledge base for a new and efficient Strategy on Adaptation which considers the different conditions and approached in different countries.

Action on climate change adaptation also needs to be part of a **balanced approach** considering all three dimensions of sustainable development, and conflicts and synergies with social justice. To achieve the climate goals, no one must be left behind, poverty being one of the largest obstacles to achieve climate neutrality. CEMR supports the global climate agendas and the achievement of their objectives through **the localisation of the SDGs** and in dialogue with the local level.

In order to adapt to climate change, LRGs need the following enabling conditions:

- a) Improved EU policy and legislative process to mainstream local climate adaptation action in EU and national policies and frameworks on adaptation
- b) Ambition accompanied by appropriate financial resources and frameworks
- c) Capacity building on adaptation, skills, knowledge, research and innovation

a) Improved EU policy and legislative process to mainstream local climate adaptation action in EU and national policies and frameworks on adaptation

Adaptation should be more mainstreamed into territorial cohesion policies (Territorial Agenda post 2020) and in general all other EU strategies, policies and directives. There is also a need to strengthen links and dialogue in the transposition of national strategies, between the Commission and Member States, but also with full involvement of LRGs.

Appropriate frameworks on innovative adaptation policies and instruments and mainstream climate adaptation into all policies are the key factors to adapt to climate change (and of course to combat climate change). National governments must accelerate their efforts on climate adaptation not only by providing better support (finance as well as guidance) but also by formally recognising the role of local governments in the decision - making processes on climate adaptation issues, and acknowledge them as relevant components of the State structure.

Examples and experience from CEMR members:

Oslo: Criteria for considering the climate in the planning process: *The climate criteria have been developed to help quality assure that development is done in the most climate-friendly and climate-adapted way possible. [Link](#)*

b) Ambition accompanied by appropriate financial resources and frameworks

Actions of the local and regional level need to always be accompanied by appropriate political frameworks, deployment of innovative financing instruments, funding of climate adaptation policies and actions, and application of instruments such as public procurement (as a voluntary instrument to stimulate sustainable growth and eco-innovation) to enhance the transition towards a decarbonized and adapted society and economy. There is also a need for national and EU financial instruments for awareness-raising, capacity-building and investment to implement policies on adaptation. The new EU multiannual financial framework needs to recognise that more EU funding and investments are needed for local actors to implement actions and develop projects on climate change adaptation. The EU recovery plan presented by the Commission last 27th of May and in particular the new recovery and resilience facility of € 560 billion which will be allocated to Member States with a mix of loans and grants must also benefit to LRA policies and projects on climate adaptation.

LRGs are willing to make a difference and assist Member States and the EU in the implementation of the Green Deal. But actions need to be feasible and always accompanied by appropriate financial resources and frameworks. The speed and scale of the EU's and Member States' reaction to the Covid-19 crisis shows that there is capacity to mobilise resources once there is enough understanding and political support for the need for transition. Financing the recovery from the pandemic crisis should not lose sight of the objectives of the Green Deal, with resources available immediately to pave the way towards recovery in a sustainable way. These resources need to be tailored for all LRGs, regardless of size and geography, to trigger an economic reconstruction based on a sustainable transition and the climate goals.

There is also a need for **national and EU funding instruments** for investment, capacity-building and awareness-raising to implement policy on adaptation to climate. The new EU multiannual financial framework needs to recognise that more EU funding and investments are needed for local actors to implement actions and develop projects on climate adaptation. We also invite the Commission to pay attention to the coordination of the many funding tools and initiatives that are developed and lead to a more and more complex panorama. The Green Deal's measures and realisations will be supported by the European Green Deal Investment Plan, the renewed Sustainable Finance Strategy and the Just Transition Mechanism. The EU recovery plan presented by the Commission on the 27th of May and in particular the new recovery and resilience facility of € 560 billion which will be allocated to Member States with a mix of loans and grants **must also benefit LRGs policies and projects**.

Support to LRGs through **the Just Transition Fund** is crucial but still insufficient; the announced €7.5 billion of fresh money will have to be complemented from the European Structural and Investment Funds, the European Regional Development Fund (ERDF) and the next European

Social Fund (ESF+). It means that part of the budget initially foreseen for ERDF and ESF+ will only be available through the Just Transition Fund. If Member States wish to benefit from the Just Transition Fund, it will reduce the room for manoeuvre on where to target investments.

Innovative funding instruments need to be assessed and experimented at local level. CEMR propose to coordinate such strategic reflection, including relevant stakeholders.

Funding must be available with reasonable administrative cost, especially when combining different sources. EU support should be adapted to the diversity and capacity of LRGs. The EU has lately developed several financial tools (FEDER, Interreg, LIFE, Horizon2020, Elena, PDA, BEI facilities) that have supported projects linked to awareness raising, governance, finance, cooperation etc. An evaluation of these tools should be conducted to draw lessons for the future. Different factors complicate the process: complex procedures within Cohesion funding issues (different e-submission in different countries that cause problems within time-limitations for submission, huge data sets to be appended, interruptions during submission etc.); a complex system for implementing a comprehensive and modern/innovative building renovations resulting from fragmented sources of funds, loans and other financial options and conditions of their use (different financing mechanisms for different renovations, ex. R&D pilots in innovative programs such as Horizon 2020 and UIA, studies and strategies with demo pilots in Interreg, LIFE, PPP, EPC-approach etc.) or lack of supporting legislation and own funding in beneficiary countries.

CEMR and LRGs wish to be involved in the discussions on financing at the EU level and in this case affecting adaptation policies, strategies and measures.

Example:

UK government strategy: Paper from ARUP “You have declared a climate emergency,....what next? – guidance for local governments. Link [here](#)

c) Capacity building, skills, knowledge, research and innovation

There is a strong need for EU and national governments to build and disseminate knowledge, capacitate and finance LRGs on climate change adaptation and adopt new skills at the local level to deal with adaptation issues. The challenges are simply too big for each municipality to deal with alone. We need all types of support and commitment from EU and national government to meet the climate change that is evolving. We need knowledge from climate change science (need to be downscaled and facilitated for regional and local use especially in land-use planning and water and stormwater management).

We consider that more research and innovation are needed to achieve a better climate adaptation with a view to achieving a climate neutral EU by 2050 in the following options: energy efficiency, renewable energy, sustainable and smart mobility, smart and sustainable buildings, socio-economic and behavioural research and innovation, climate science, circular/zero-carbon industry, bio-economy, agriculture and forestry, nature-based solutions on land and sea and technology integration, infrastructure and digitalisation.

Examples and experience from CEMR:

“In-Front”- network (2020-2025) in Norway: This is a national driven network for the 13 biggest cities in Norway administrated and financed by the Norwegian Environment Agency. The main goal of this network is capacity building and sharing of knowledge among the cities and to be in front for new initiatives within climate change adaptation. As an integral part of the network there are different

teams dealing with different challenges, i.e. nature-based solutions in management of storm water systems, local climate risk management, climate adaptation in community and land-use planning, etc. The cities are also considered as beacons sharing knowledge, experiences and examples to other municipalities within their region. The network meets 2 - 4 times a year.

The Norwegian Association of LRG, KS, is administrating a Local network for natural hazard and climate change adaptation (2019-2020). The network consists of 10 municipalities countrywide and is financed by the participants. The network is offered to municipalities that wish to increase the knowledge of the municipality's responsibility and possible action on natural hazards and climate change adaptation. Central in the work is the anchoring of risk- and vulnerability-analysis and the consideration of natural hazards as base for planning and development within each municipality. The KS' facilitators use methodological approaches to establish an arena for open reflection and sharing of experiences. Academic presentations are always processed afterwards in groups. Participants receive challenges to his/hers own processing ("homework" between the gatherings). The network meets five times over a two-year period. A new network will be implemented in 2021-2022.

CEMR has been leading an action on "training academy for politicians on adaptation" within the Urban Agenda partnership on adaptation.

CEMR has also coordinated the [Covenant of Mayors in Sub Saharan Africa](#) where one of the pillars was addressing capacity building in Sub Saharan African cities.

LIFE SEC ADAPT (ongoing) on climate adaptation: LIFE SEC ADAPT project aims to study strategies for adapting to climate change at the municipal and regional level, in the framework of Mayor Adapt Convention, for the exchange of good practice among partners. Among objectives there is increased awareness of local decision makers on importance and urgency of adaptation strategy and the adoption of Climate Change Adaptation Strategies and Plans by the 17 Beneficiary Municipalities. Among the participants: 2 municipalities of the Marche, 6 Croatian municipalities in the Istrian region, one municipality in the Murcia region and the Development Agency of the municipality of Patras (Greece).

Lielupe ECO training helps prepare and prevent ecological disasters. Interreg (Lithuania, Latvia). An ERDF-funded project has set up a **joint rescue team and early warning system**, improving the response rate to ecological disasters around the Lielupe Basin.

AFLRA's project KUJA - The continuity management of municipalities implemented in 2014-2016. The objective of the project was to develop the capacity of the local actors to ensure the disruption-free handling of their basic tasks (like social and health, education, rescue and technical services) in all exceptional situations. **KUJA2** was completed until 2019. www.kuntaliitto.fi/kuja

Norway's Climate Risk Commission: Better climate risk management Understanding the climate risks – physical risks and transition risk - of society and the economy: <https://www.regjeringen.no/en/whatsnew/Ministries/fin/press-releases/2018/report-from-the-climate-risk-commission/norways-climate-risk-commission-better-climate-risk-management/id2622294/>

The climate strategy of Oslo towards 2030: The five targets of Oslo's new climate strategy cover both what we need to do to cut greenhouse gas emissions as well as how we should adapt to a changing climate <https://www.klimaoslo.no/2020/06/10/oslos-new-climate-strategy/>

Oslo's Action plan on storm water management: 18 action points in the areas of developing knowledge, solutions, regulations, cooperation and coordination, and communication.

The «Climate in Norway 2100» report (2015) form a basis for climate adaptation in Norway, but they are too comprehensive to be used directly in management and land-use planning in counties and

municipalities. Thus, based on information in the second report, 8-page “Climate factsheets” (“Klimaprofiler”) have been developed for each county (19/11). The Climate factsheets identify the main climate related concerns for each county, and suggests “climate factors” for heavy precipitation, river floods and storm surges based upon projections under high emission scenario (RCP8.5). This high scenario is emphasized to state that “to be precautionary, the government wants risk assessments of climate change to be based upon the high climate projections”. <https://cms.met.no/site/2/klimaservicesenteret/klima-i-norge-2100/attachment/11592?ts=15c10419731>

Climate change vulnerability assessment of Oslo: Based on the recent research on climate change in Norway, the Agency for Climate in Oslo assessed how the climate of today and in the future will affect the key sectors of the City; land use, buildings and infrastructure, health and emergency response and the environment. Then, the adaptation capacity of each sector was assessed in terms of organization, resources, knowledge and priorities. Version in Norwegian: https://www.klimaoslo.no/wp-content/uploads/sites/88/2020/05/Klimatilpasning_Klimasaarbarhetsanalyse_Kortversjon.pdf
The short version of the assessment in English can be found [here](#).

Innlandet County, Norway: Gudbrandsdalen, one of the longest valleys in Norway, has been hit hard by several large floods, resulting in severe and costly damages. Therefore a regional master plan for the river and its tributaries was prepared (2018) by Oppland (now Innlandet) County in cooperation with several other actors including 14 municipalities. Links to the plans: https://innlandetfylke.no/f/p1/i94f8ebaa-7abd-40e8-a44b-e8d3751153f6/lagen-plan_english_action-program.pdf and https://innlandetfylke.no/f/p1/i34056176-b265-41c3-a53b-e63f4b9ab5cb/lagen-plan_english_main-document.pdf

The masterplan contributed to Innlandet County being a part of the Phusicos project funded by the EU Horizon 2020 program. Together with 15 partners from 7 different countries, where the river system of Gudbrandsdalen is one of three demonstration areas. The aim is to demonstrate how nature-based solutions provide robust, sustainable and cost-effective measures for reducing the risk of extreme weather events in rural mountain landscapes. <https://phusicos.eu/>
<https://phusicos.eu/wp-content/uploads/2018/06/PHUSICOS-Poster-workshop-Gudbrandsdalen-Kick-off-oppdat.pdf>

In Denmark there is the example of a cross-border project involving the Central Denmark Region, 7 municipalities along the River Gudenå and one utility: Case: Gudenåen. The Central Denmark Region and the seven key municipalities around the catchment of Gudenåen has formed a committee to address the periodic flooding. The project is financed by EU Life program, and has enabled a cross-administrative approach for the entire catchment. The project promotes upstream water parking, which helps solve the flooding of the entire catchment. Water parking often demands storing the water in another locality than where the cost of flooding would incur. Therefore a catchment wide solution demands an enabling framework and a common understanding of the challenge at hand.

Climate Impact Atlas in The Netherlands: The Climate Impact Atlas provides an initial impression of the (future) threats of flooding, waterlogging, drought, and heat in your area. The zoom function allows you to zoom in on your own municipality. The Atlas is based on national data and provides an indication of the order of magnitude of the potential impact on an area. Use of the Atlas is free. It is a logical point of departure for conducting a climate stress test. In addition to local and regional governments, the Atlas is of relevance for, e.g., educational establishments, students, businesses, and residents. [Go to the Climate Impact Atlas.](#)

Climate-proof Together in the Netherlands: Climate-proof Together is a network of professionals (Climate Workers) from various sectors. They are utilising each other's expertise, experience, and contacts. The Climate-proof Together team constitutes the basis of the network and facilitates the growth, the involvement, and the activities within the network. Rather than occupying central stage,

the team members endeavour to expand the Climate-proof Together movement. By compiling practical experience and joining forces, we are devising more efficient and faster solutions, which saves us from having to reinvent the wheel time and again. <https://ruimtelijkeadaptatie.nl/english/climate-proof/together/>

In Finland: The social services and health care at the City of Helsinki established a working group on climate change adaptation in autumn 2018 in order to ensure the disruption-free handling of their basic tasks. The participants include e.g. safety and risk management, the biggest estate owners, facilities services, basic functions experts.

In Finland: The Helsinki Metropolitan area cities and regional authorities are implementing adaptation actions. Helsinki Region Environmental Services Authority HSY is monitoring the implementation of the Helsinki Metropolitan Area climate change adaptation strategy. The monitoring results are collected in a report and the information will be updated annually. To understand and assess the need for adaptation and the effectiveness of measures adaptation indicators have been developed for the metropolitan area.

In Finland: Climate-Proof City – The Planner’s Workbook provides a collection of tools, best practices and reports about the impacts of climate change and how to implement the adaptation activities. The workbook is designated for urban planners and city officials who have to deal with the consequences of climate change. It also provides vital information for land owners, city residents and companies operating in fields of construction and green building. The workbook was created in the ERDF-funded ILKKA-project coordinated by the City of Helsinki.

The Swedish Association SALAR, released a report last year with examples on how some Swedish municipalities are affected. The report was discussed a lot in the media, since it highlighted the fact that behind the averages the actual impact on a local level might be much stronger. The [report is found here](#) (unfortunately only in Swedish). The number of very warm days in the City of Norrköping is expected to go from 5-10 per year to 30-50 depending on different scenarios, with a lot of problems due to draught, health problems, lack of drinking water, risks of fire etc.; in the region Härjedalen, depending a lot on ski tourism, the number of days with snow is now halved and quickly diminishing, put the whole economy at risk; the city of Malmö in south of Sweden is facing a rising sea level and this, combined with some great cloudbursts, have put climate effects on the agenda at many levels.

Sweden: A film that describes some Swedish examples of adaptation actions (English text can be chosen): <https://vimeo.com/403239928>.

The Swedish city of Gothenburg has [a free map, open for everyone](#) to visualize what happens when the sea level rises or heavy rains come and how water spreads at different scenarios.

4. LRGs are ready to engage on adaptation to climate change not only at the local but also internationally, and specially towards third countries, to contribute to implement the Paris Agreement

We need to encourage the link between the EU Adaptation Strategy at the local level and the international development agendas, in line with the principle of policy coherence for sustainable development. The experience developed by European municipalities to adapt to the effect of climate change can be precious for municipalities in partner countries. Links to similar International climate initiatives like the Global Covenant of Mayors for Climate and Energy (GCoM) or the European and Sub Saharan African Covenant (CoMSSA), which also cover adaptation dimension of climate. We call on

the EU and the international community, which have ratified the Paris Agreement to facilitate (**Talanoa**¹) **dialogue** with towns, cities and regions in the Member States. There is a need also to stress that the revised adaptation strategy needs to address and emphasize on consequences for EU of transnational impact.

Among the most critical risks identified are the **humanitarian consequences** of climate change that are causing a growing need for development assistance and emergency relief. There is ample evidence of the links between climate impacts, humanitarian crises and poverty among people living in vulnerable areas. In addition, climate change can also act as a driver for social and political destabilization, and in extreme cases violent conflict.

CEMR Platforma is also following the climate policy at EU level and beyond the EU borders. For Platforma, climate diplomacy and development assistance and climate financing in third countries remind a priority. For this we advocate for a decentralised cooperation to foster the real implementation and respecting the specificities of each territory and should be systematically considered in climate adaptation discussions. CEMR supports the global climate agendas and the achievement of their objectives through [the localisation of the SDGs](#) and in dialogue with the local level. The outcomes of COP22 in 2016 were closely linked to the implementation of the SDGs and the Urban Agenda of Habitat III.

Examples and experience from CEMR:

CEMR, through PLATFORMA (the pan-European coalition of towns and regions – and their national, European and global associations – active in city-to-city and region-to-region, cooperation), is working with peers to implement climate projects in developing countries and on south-south, north-south and north-north decentralised cooperation also. As a hub of expertise on European local and regional authorities international action, PLATFORMA aims at boosting European local and regional governments' contribution to EU development cooperation policies and international frameworks, especially on [climate issues](#).

Consequences for Norway of transnational climate impacts. Many impacts of climate change are local in nature, but can have economic and social consequences that transcend borders, and affect countries in addition to the direct effects of physical climate change on the ground. For Norway, transnational climate impacts represent both risks and new opportunities. Executive summary of the report: <https://www.miljodirektoratet.no/globalassets/publikasjoner/m968/m968.pdf>

About CEMR: CEMR is the broadest organisation of local and regional governments in Europe, with over 60 national associations of municipalities and regions from 41 European countries. These represent some 130,000 local and regional governments. CEMR's objectives are twofold: to influence European legislation on behalf of local and regional governments and to provide a platform for exchange between its member associations and their elected officials and experts. Moreover, CEMR is the European section of United Cities and Local Governments, the worldwide organisation of local government.

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¹ The Presidencies of COP 22 and COP 23 presented the outcome of their consultations on the dialogue and on this basis the COP welcomed with appreciation the design of the 2018 facilitative dialogue, to be known as the Talanoa Dialogue, and launched the dialogue, which has started in January 2