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MISSION CE CLIMATE

STRATEGY FOR CLIMATE RESILIENT COMMUNITIES OF CENTRAL EUROPE

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A. SUMMARY

The overarching goal of this strategy is to provide comprehensive guidelines for communities across Central Europe to achieve climate resilience by 2030. As climate change continues to impose significant threats on ecosystems, economies, and social structures, it is imperative that we develop robust frameworks to mitigate these impacts and adapt to new realities. This strategy aims to equip Central European communities with the necessary tools, knowledge, and practices to not only withstand climate disruptions but also to thrive in a changing climate.
This strategy is grounded in the vision articulated by the Mission Board for Adaptation to Climate Change, including Societal Transformation, under the proposed mission "A Climate Resilient Europe" (EC, 2020). The mission aims to prepare Europe for climate disruptions and accelerate the transformation towards a climate-resilient and just continent by 2030. It emphasizes the need for a holistic approach that integrates governance, socio-economic considerations, and environmental systems to build resilience.
The strategy is structured by adapting and combining the 3 main systems (political and governance system; socio-economic and financing; environmental and climate system) with the 5 horizontal mission's area of research and information indicated as central aspects (enablers) for building climate resilience in the report (Fig. 1):

- Facilitating inclusive and deliberative governance processes for transitions (Political and governance system)
- Strengthening sustainable and circular local economies (Socio-economic and financing system)
- Mobilising funds and resources (Socio-economic and financing system)
- Providing access to data knowledge and digital services (Environment and climate system)
- Strengthening education, communications and a better understanding of behavioural change (Environment and climate system).

Since effective climate governance is crucial for coordinated and sustainable climate action, the strategy will provide inputs on establishing governance frameworks that facilitate collaboration among various stakeholders, including government agencies, private sector entities, and civil society organizations. This will involve creating inclusive decision-making processes, enhancing transparency, and fostering accountability in climate-related initiatives. Climate resilience efforts must be economically justified, taking into account long-term viability and social return on investment. Thus, the strategy will identify potential financing options to support community-based resilience projects, ensuring that financial constraints do not hinder progress. Furthermore, the strategy will promote data and knowledge access in order to plan properly the territories finding adaptation and mitigation solutions tailored on the local peculiarities fostering the implementation of integrated and intersectoral measures that can mitigate climate impacts while providing co-benefits for communities and ecosystems.

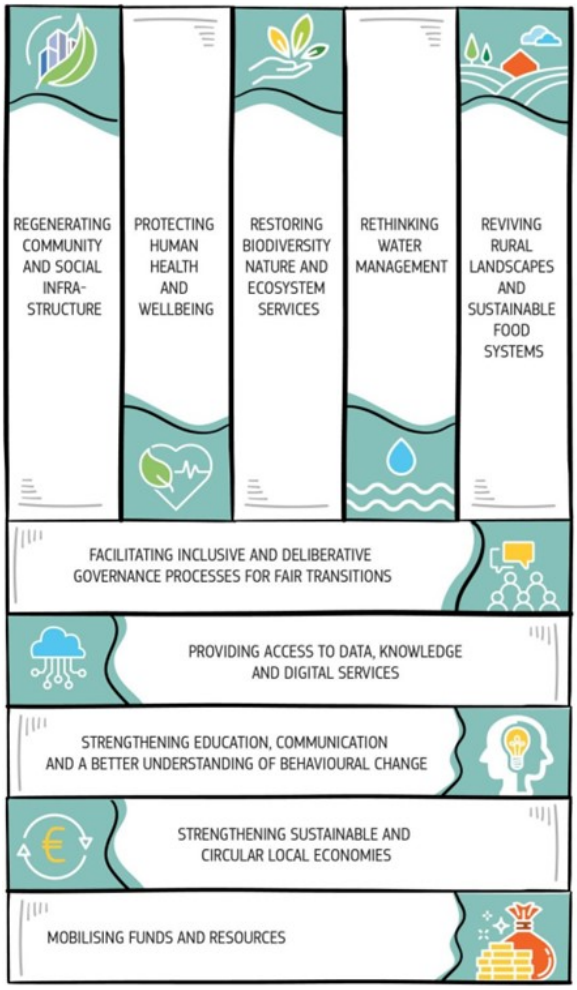

Fig. 1 The Mission's area of research and innovation for transformation (source: "A Climate Resilient Europe", EC 2020, page 11).

Based on this strategy, each partner community will design local action plans with the support of the Advisory team and through co-creation with local stakeholders. Local action plans will be developed on the vertical thematic pillars[1] and underpinned by horizontal pillars (e.i. enabling conditions):

- Community/public and social infrastructure
- Human health and wellbeing
- Biodiversity and ecosystem services
- Water management
- Rural landscapes and sustainable food systems.

The development of this Strategy represents a collaborative effort, involving partners and stakeholders through the Interreg Central Europe MISSION CE CLIMATE project's context. This co-creation process has included brainstorming sessions and workshops with project partners and the Advisory Team designed to gather diverse perspectives and expertise in

[1] For further details see the Deliverable 1.4.2 *Community Climate Resilience Action Plans*.

order to ensure that the strategy is a tool that communities can use to become climate resilient.

Once the strategy has been finalized, it will be disseminated widely across Central Europe. This dissemination will involve various channels, including online platforms, print publications, workshops, and conferences. The aim is to ensure that the strategy reaches all relevant stakeholders and that its recommendations are adopted and implemented effectively across the region.

B. WHY A CLIMATE RESILIENCE STRATEGY FOR CENTRAL EUROPE COMMUNITIES IS NEEDED?

As the world struggles with the escalating impacts of climate change, the need for robust climate resilience strategies has become increasingly evident. Central Europe, with its unique blend of developed urban centres, rich agricultural lands, and diverse ecosystems, is particularly vulnerable to the adverse effects of climate change. This region faces numerous challenges, including more frequent and severe weather events, changing precipitation patterns, and rising temperatures. These changes threaten not only the environment but also the socio-economic stability of Central European communities. The economic costs of these impacts are substantial: according to a study by the European Environment Agency, between 1980 and 2022, weather- and climate-related extremes caused economic losses of assets estimated at EUR 650 billion in the EU Member States (EEA, 2023). Without adequate resilience measures, these costs are expected to rise significantly, placing further strain on national and local economies and potentially exacerbating social inequalities. Together with these impacts, climate change threatens Central Europe's diverse ecosystems, disrupting species distribution and increasing vulnerability to invasive species; the degradation of wetlands and forests diminishes natural flood buffering and biodiversity, increasing the risk of flooding in downstream communities. The malfunction of these ecosystems not only diminishes their ability to provide critical services but also undermines the cultural and recreational value they offer to local communities.

Given the diverse and interconnected impacts of climate change on Central Europe, the development and implementation of comprehensive climate resilience strategies are essential. These strategies must be multifaceted, encompassing a range of measures aimed at reducing vulnerability, enhancing adaptive capacity, and building resilience across different sectors and governance levels. One key component of such strategies is the integration of climate considerations into urban planning and development (designing and retrofitting infrastructure to withstand extreme weather events, implementing Nature-based Solutions such as green roofs and permeable pavements to manage stormwater, and enhancing green spaces to mitigate urban heat islands and provide cooling benefits). In the agricultural sector, resilience strategies may include adopting climate-smart agricultural practices (i.e. crop diversification, conservation tillage, and improved irrigation techniques). Furthermore, protecting and restoring natural ecosystems is a crucial aspect of climate resilience. This includes measures to conserve biodiversity, restore degraded habitats, and enhance the connectivity of natural landscapes to facilitate species migration and adaptation: reforestation and afforestation initiatives can sequester carbon, improve soil and water quality, and provide critical habitat for wildlife, contributing to both climate mitigation and adaptation goals.

Effective climate resilience strategies also require robust policy frameworks and active community engagement. Governments at all levels must prioritize climate resilience in their policy agendas, allocating resources, and providing incentives for resilience-building initiatives. This includes developing and enforcing regulations that promote sustainable land use, reduce greenhouse gas emissions, and enhance disaster preparedness and response capabilities. Community involvement is equally important. Building climate

resilience is not just the responsibility of governments and experts; it requires the active participation of local communities, businesses, and civil society organizations. Public awareness campaigns, educational programs, and participatory planning processes can empower communities to understand their vulnerabilities, identify resilience-building opportunities, and take proactive measures to protect themselves and their livelihoods.

Therefore, developing and implementing effective climate resilience strategies is imperative to safeguard these communities and ensure their sustainable development. The path to resilience requires collaborative efforts, innovative solutions, and a long-term commitment to safeguarding the environment and the well-being of present and future generations.

C. SYSTEMS AND MISSION'S AREAS

1. Political and governance system

1.1. Facilitating inclusive and deliberative governance processes for transitions

Facilitating inclusive and deliberative governance processes is essential for effectively addressing climate challenges and ensuring sustainable development. This approach fosters broad-based engagement, harnesses diverse perspectives, and builds robust community support for climate initiatives.
Inclusive governance ensures that all segments of society, especially marginalised and vulnerable groups, have a voice in decision-making processes. This is vital for climate resilience, as climate impacts are often unevenly distributed, disproportionately affecting those with fewer resources. In Central Europe, where rural areas, ethnic minorities, and economically disadvantaged communities may face unique climate risks, inclusive governance can lead to more equitable and effective solutions, creating the enabling environment for designing climate resilience plans tailored to local needs.

Key benefits of inclusive governance:

- Equity and fairness: By involving diverse stakeholders, inclusive governance helps ensure that the needs and priorities of all community members are considered, leading to more equitable outcomes.
- Enhanced problem-solving: Diverse perspectives contribute to a broader understanding of climate issues and foster innovative solutions.
- Increased legitimacy and trust: When people feel their voices are heard, trust in governance processes increases, leading to greater acceptance and support for climate policies.

Deliberative governance emphasises thoughtful discussion and consideration of various viewpoints before making decisions. This approach is crucial for tackling complex issues like climate resilience, which require nuanced understanding and coordinated action.

Advantages of deliberative processes:

- Informed decision-making: Deliberation allows for the thorough examination of evidence and perspectives, leading to more informed and effective decisions.
- Consensus building: Through dialogue and negotiation, deliberative processes can build consensus and reduce conflicts, facilitating smoother implementation of climate policies.
- Adaptive capacity: Continuous deliberation helps communities adapt to changing conditions and emerging climate threats by regularly reassessing and updating strategies.

To implement inclusive and deliberative governance for climate resilience in Central Europe, communities need to adopt specific strategies and practices:

- Establishing participatory platforms: Create forums, city councils, and local committees that represent various community sectors, including marginalised

groups. These spaces should facilitate regular and structured dialogues on climate issues.

- Capacity building: Educate and empower community members to engage effectively in governance processes. Assess the municipal technicians' capacity-building needs as well providing resources and training on climate science, climate risks, adaptation and mitigation measures, policy-making, and promoting advocacy initiatives.
- Integrating local knowledge: Incorporate local knowledge into climate strategies in order to ensure that solutions are culturally appropriate and grounded in practical experience.
- Transparency and accountability: Ensure that governance processes are transparent and that decision-makers are accountable to the communities they serve. Regular reporting and feedback mechanisms are essential.
- Collaborative networks: Foster collaboration between local governments, NGOs, academia, the private sector and citizens to leverage resources and expertise. Such networks can enhance the scope and impact of climate resilience initiatives.
- Monitoring and evaluation: Implement robust systems to monitor the effectiveness of governance processes and climate strategies. Continuous evaluation allows for adjustments and improvements over time.

In the framework of MISSION CE CLIMATE, the *Roadmap and methodology for setting-up of missions*[2] has been provided. It collects a series of information to individuate, map and engage key stakeholders as a first step towards the setting-up of Community Climate Resilient Missions in the areas involved in the project activities.

The following boxes summarize examples of good practices of inclusive climate governance that have been implemented in various European countries.

[2] See the Annex 1 for further details.

Copenhagen's Climate Adaptation Plan - Denmark
Copenhagen's Climate Adaptation Plan is a comprehensive strategy designed to prepare the city for the impacts of climate change, particularly extreme weather events such as heavy rainfall and flooding.
Key elements:

- Stakeholder involvement: The plan was developed with extensive input from local businesses, residents, and environmental organizations. Public workshops and consultations ensured that the community's concerns and ideas were incorporated.
- Multi-agency collaboration: The City of Copenhagen worked closely with water utilities, transport agencies, and urban planners to integrate climate resilience into all aspects of city planning.
- Green infrastructure: Initiatives include the creation of green roofs, permeable pavements, and urban wetlands to manage stormwater. These not only mitigate flooding but also enhance urban biodiversity and provide recreational spaces.

Outcome: The plan has resulted in reduced flood risks, increased public awareness and engagement, and has set a model for other cities aiming to enhance their climate resilience.

Rotterdam Climate Initiative - Netherlands
The Rotterdam Climate Initiative (RCI) aims to make the city climate-proof while also reducing CO_2 emissions. The initiative is a collaborative effort between the municipality, local businesses, knowledge institutions, and the community.
Key elements:

- Integrated approach: The RCI combines measures for both climate mitigation and adaptation, addressing emissions reduction alongside flood protection and water management.
- Public participation: Through neighbourhood meetings, online platforms, and collaborative projects, residents are actively involved in planning and decision-making processes.
- Innovative solutions: Projects under RCI include floating urban districts, water plazas that double as recreational areas, and adaptive infrastructure designed to handle rising sea levels and increased precipitation.

Outcome: Rotterdam has become a leader in climate adaptation, with significant reductions in flood risk and increased capacity to handle climate impacts. The initiative has fostered a strong sense of community ownership and participation in climate resilience efforts.

Freiburg's Sustainable Urban Development - Germany
Freiburg is renowned for its holistic approach to sustainable urban development, which integrates climate resilience into all aspects of city planning and management.
Key elements:

- Community engagement: The city employs participatory planning processes, engaging citizens through workshops, public forums, and collaborative projects. This ensures that the local population's needs and ideas are central to development plans.
- Local partnerships: Freiburg collaborates with local businesses, universities, and non-profits to drive innovation in sustainability and resilience. These partnerships have led to pioneering projects in renewable energy, green building, and sustainable transport.
- Policy integration: Climate resilience is embedded in local policies, covering areas such as land use, energy, water management, and biodiversity. The city's strategic plans align with national and EU climate goals.

Outcome: Freiburg's efforts have resulted in reduced carbon emissions, improved air quality, and enhanced urban green spaces. The city serves as a model of sustainable and resilient urban development, showcasing the benefits of comprehensive and inclusive governance.

Leuven 2030 - A roadmap towards a climate neutral Leuven - Netherlands

The roadmap 2025 · 2035 · 2050, drawn up by Leuven 2030 and numerous experts, serves as a guideline for achieving the goal of a climate-neutral city by 2050. In September 2019 a professional team of Program Facilitators was set up, who will translate this plan into further concrete action and impact.

Key elements:

- 13 programmes on themes such as energy, mobility and food and the steps our city needs to take are grouped on a timeline and are available on an online platform.
- The roadmap assigns a crucial role to every inhabitant, every company, every knowledge institution and every government. Their commitment, both individually and in collaboration, is crucial to evolve towards a healthy, liveable and climate-neutral Leuven by 2050.
- Leuven 2030 will continue to expand its base of support. Though it has already succeeded at bringing together a wide range of stakeholders, it should continue to grow in terms of capacity, resources, network, and exposure. It should encourage its members to create or update action plans, fold their plans into the ambitions of the roadmap, and then act on them. To succeed, the transition must bring everybody along, including societally vulnerable groups. Ensuring social justice across all sites of the roadmap is essential, and must be constantly kept in mind. Wherever necessary, supplementary measures should be taken, for example to ensure affordable housing or to ensure access to energy and transportation.

Outcome: Leuven is now accelerating the realisation of the roadmap through breakthrough projects and inciting organisations, companies, governments and inhabitants to action. Those commitments will be compiled into the first Leuven Climate City Contract.

2. Socio-economic and financing system

2.1. Strengthening sustainable and circular local economies

With increasing climate challenges strengthening sustainable and circular local economies offers a robust solution. Such economies not only mitigate environmental impact but also enhance social equity and community wellbeing.
Sustainable and circular local economies aim to minimize waste and make the most of resources. This involves reusing, repairing, refurbishing, and recycling existing materials and products. The circular model contrasts sharply with the traditional linear economy, which follows a 'take, make, dispose' approach. Central Europe's transition to such economies can drive significant environmental benefits by reducing resource extraction and waste generation, ultimately lowering carbon emissions.
Strengthening local economies builds climate resilience in several ways. First, local production and consumption reduce dependency on global supply chains, which are vulnerable to climate disruptions. By localizing supply chains, communities become more self-sufficient and adaptable to environmental changes. Second, circular practices, such as urban farming and community recycling programs, promote resource efficiency and sustainability, further protecting against climate impacts.
A crucial aspect of sustainable and circular economies is their potential to address social inequalities and vulnerabilities. Central Europe faces disparities in income, access to resources, and social services, which are exacerbated by climate change. By fostering local economies, communities can create job opportunities and support local enterprises, particularly benefiting marginalized groups. Local initiatives can include skill-building workshops, cooperatives, and social enterprises that provide employment and empower vulnerable populations. These initiatives help redistribute wealth and resources more equitably, reducing social vulnerabilities. Moreover, involving community members in decision-making processes ensures that the needs and voices of the most affected are considered, fostering inclusive growth.
The transition to sustainable and circular local economies also significantly enhances community wellbeing and health. Pollution reduction, greener urban spaces, and better waste management contribute to cleaner air and water, directly benefiting public health. Additionally, local food systems reduce the need for processed foods, encouraging healthier diets. By focusing on community-centric models, these economies promote human health and social wellbeing. Stronger community ties and local engagement foster a sense of belonging and collective responsibility, crucial for mental health. These outcomes align with the 'Good Life for All' framework, emphasizing quality of life over mere economic growth.

The Doughnut Economy Framework
The doughnut economy framework provides a compelling model for Central Europe's sustainable and circular local economies. Developed by economist Kate Raworth, this framework envisions a balance between essential human needs and planetary boundaries[3].
The inner ring represents the social foundation, ensuring that no one falls short on life

[3] The planetary boundaries concept presents a set of nine planetary limits within which humanity can continue to develop and thrive for generations to come. Crossing boundaries increases the risk of large-scale, abrupt or irreversible environmental change. Drastic changes will not necessarily happen overnight, but together the boundaries mark a critical threshold for increasing risks to people and the ecosystems we are part of.

essentials, while the outer ring sets the ecological ceiling, avoiding environmental degradation (Fig. 2). Applying this framework to Central European communities means creating economies that fulfil social needs (such as health, education, and equity, without overstepping ecological limits). This balanced approach ensures long-term sustainability and resilience.

Fig. 2 Doughnut Economics: Seven Ways to Think Like a 21st Century Economist (Raworth, 2017).

Local governments in Central Europe can play a critical role in fostering sustainable and circular local economies to enhance climate resilience through targeted policies and initiatives:

- Legislate for sustainability: Administrations can enact laws that mandate recycling, waste reduction, and sustainable resource use. Setting ambitious targets for renewable energy adoption and carbon emissions reductions will drive systemic change.
- Provide financial incentives: Subsidies and tax incentives can encourage businesses and households to adopt sustainable practices. Grants for renewable energy installations, energy-efficient appliances, and sustainable farming can accelerate the transition to a circular economy.
- Invest in infrastructure: Developing infrastructure for recycling, composting, and renewable energy is essential. Local governments can fund the construction (or provide existing public spaces) of local recycling centres, community composting sites, and renewable energy projects, such as wind farms and solar panels.
- Support research and innovation: Funding research into sustainable technologies and circular economy models can drive innovation. Governments can support startups and small businesses focused on sustainability through grants and innovation hubs.
- Promote education and public awareness: Implementing educational programs about the benefits of a circular economy can foster public support. Governments can run awareness campaigns and integrate sustainability into school curriculums.

Local communities and citizens in Central Europe can also significantly contribute to realizing sustainable and circular local economies, enhancing climate resilience through various actionable steps:

- Support local production and adapt consumption patterns: Prioritizing local products reduces transportation emissions and supports the regional economy. Buying from local farmers and artisans keeps money within the community and decreases dependence on global supply chains.
- Implement comprehensive recycling programs: Establishing effective recycling and composting initiatives can minimize waste. Communities can set up local recycling and/or re-using centres and encourage residents to sort waste properly, turning waste into valuable resources.
- Adopt renewable energy sources: Communities can invest in renewable energy projects such as solar, wind, and biomass. Citizens can install solar panels on their homes, reducing reliance on fossil fuels and cutting greenhouse gas emissions.
- Promote urban green spaces and sustainable transportation: Developing parks and community gardens enhances urban resilience and biodiversity. Encouraging cycling, walking, and the use of public transport reduces carbon footprints and improves air quality.
- Engage in community initiatives: Participating in cooperatives, repair cafés, and sharing economies fosters collaboration and resource efficiency. Local initiatives can provide platforms for skill-sharing and collective problem-solving. At the same time this kind of initiatives can strength social cohesion that leads to great community resilience.
- Educate and advocate for sustainable practices: Raising awareness about the benefits of a circular economy is crucial. Citizens can advocate for supportive policies and engage in educational campaigns, helping to shift societal norms towards sustainability.

2.2. Mobilising funds and resources

Climate change impacts can affect all economic activities and sectors in Central Europe, such as industries, agriculture, tourism, and energy production. Investing in climate resilience can help minimize economic losses associated with climate-related disasters and create new opportunities for sustainable development. By enhancing infrastructure resilience, diversifying economic sectors, and promoting green technologies, Central European countries can build a more resilient and adaptive economy. By investing in climate resilience and transitioning to low-carbon economies, Central European communities can contribute to international climate goals and demonstrate leadership in climate action. Mobilizing funds and resources for climate resilience is not only a matter of regional concern but also a global responsibility to safeguard the planet for future generations.

However, traditional financing mechanisms often fall short in addressing the complex and evolving challenges of climate resilience. Limited public budgets, competing developmental models and priorities, and uncertainties surrounding climate impacts hinder the scale and effectiveness of adaptation efforts. Innovative financing mechanisms offer a pathway to overcome these barriers and unlock new sources of funding for climate resilience in Central Europe.

Examples of innovative financing mechanisms:

- Green municipal bonds: Bond is a debt investment in which an investor loans money to an entity (typically corporate or governmental) which borrows the funds for a defined period of time at a variable or fixed interest rate. Bonds are issued by companies, municipalities, states and sovereign governments to raise money and finance their projects and activities. Green bonds are all those instruments which are used exclusively to fund qualifying green investments. They can be made attractive via tax-exemptions.
- Green banks: Green banks are specialised financial institutions that leverage public funds to attract private investment in clean energy, sustainable infrastructure, and climate resilience. Establishing a green bank or enhancing the role of existing development banks can catalyse investments in climate-smart projects by providing credit enhancement, risk mitigation, and financial incentives for private sector participation. Green banks can also offer technical assistance and advisory services to support project development and ensure the viability of climate resilience investments.
- Climate insurance: Climate insurance mechanisms provide financial protection against climate-related risks, such as extreme weather events, crop failures, and property damage. Governments, businesses, and farmers can use climate insurance to manage risk and recover losses from climate-related disasters, thereby increasing their resilience to future shocks. Parametric insurance products, index-based insurance schemes, and risk pooling mechanisms can help mitigate the financial impacts of climate variability and promote adaptive decision-making in vulnerable sectors.
- Carbon pricing: Carbon pricing mechanisms, such as carbon taxes and emissions trading systems, create economic incentives to reduce greenhouse gas emissions and incentivise investments in low-carbon technologies. Central European countries can introduce carbon pricing policies to internalise the social and environmental costs of carbon pollution and generate revenue for climate resilience activities. Revenue from carbon pricing can be earmarked for climate adaptation funds, green infrastructure projects, and community-based resilience initiatives, providing a sustainable source of financing for climate resilience in the region. Cities can most effectively push for action on a national or regional level by lending their voice to international campaigns. In Europe, cities have joined campaign groups such as the Coalition for Higher Ambition and the European Committee of the Regions with a view to increasing the reach and ambition of emissions trading and to make the European Union's Emissions Trading System and Carbon Border Adjustment Mechanism work better for cities[4].
- Public-Private Partnerships (PPPs): PPPs are collaborative arrangements between government entities and private sector actors to finance, develop, and operate infrastructure projects. Governments can leverage PPPs to mobilize private investment for climate resilience initiatives, leveraging the expertise and resources of the private sector to implement cost-effective and innovative solutions. PPPs can facilitate the development of climate-resilient infrastructure, technology innovation, and capacity-building programs, while sharing risks and rewards between public and private stakeholders.

[4] Further details are available here: How cities can put a price on carbon – C40 Knowledge: https://www.c40knowledgehub.org/s/article/How-cities-can-put-a-price-on-carbon?language=en_US

- Climate City Capital Hub: The Capital Hub is an innovative initiative aimed at facilitating both public and private finance for sustainable urban development, to advance Europe's transition to climate neutrality. As part of the Cities Mission Platform managed by NetZeroCities, it aims to provide the technical and financial assistance to Mission Cities that have received the Cities Mission Label to facilitate capital flows to ensure the full implementation of Climate Action Plans. The Capital Hub also provides support in relation to actions aimed at climate adaptation, with support from the EU Mission on Adaptation to Climate Change and its Platform MIP4Adapt[5].

For more information on funding schemes for climate adaptation projects and activities, consult our guide 'Climate resilience – (innovative) funding schemes on the municipal level'. It can be downloaded from the MISSION CE CLIMATE website (www.interreg-central.eu/projects/mission-ce-climate/) or from the www.climatehub.si platform.

[5] Further details are available here: NetZeroCities - Climate City Capital Hub: https://netzerocities.eu/capital-hub/ and https://netzerocities.app/QR-Finance

Warsaw Green City Bond - Poland

The city of Warsaw issued a green city bond to finance climate-resilient infrastructure projects, including flood protection measures, green spaces development, and energy efficiency upgrades. The bond proceeds were used to fund the construction of sustainable urban infrastructure that enhances climate resilience and improves the quality of life for residents.

Key elements:

- Transparent reporting: The Warsaw Green City Bond included transparent reporting mechanisms to track the use of proceeds and measure the impact of funded projects on climate resilience.
- Stakeholder engagement: The city engaged with investors, residents, and civil society organizations to raise awareness about the bond issuance and solicit feedback on project priorities and design.
- Multi-Sectoral collaboration: The bond financing involved collaboration between government agencies, financial institutions, and environmental NGOs to leverage expertise and resources for climate resilience projects.

Czech Green Investment Bank - Czech Republic

The Czech Green Investment Bank (CzGIB) was established to facilitate investments in renewable energy, energy efficiency, and climate resilience projects across the Czech Republic. CzGIB provides financial products and advisory services to support the development and implementation of green infrastructure projects that contribute to climate resilience and sustainable development.

Key elements:

- Project pipeline development: CzGIB works closely with project developers, local governments, and businesses to identify and develop a pipeline of climate-resilient infrastructure projects eligible for financing.
- Risk mitigation instruments: The green bank offers credit enhancement, loan guarantees, and risk-sharing mechanisms to mitigate the financial risks associated with climate resilience investments and attract private capital.
- Capacity building: CzGIB provides technical assistance and capacity-building support to project developers and local authorities to enhance their ability to develop, finance, and implement climate resilience projects.

Budapest Climate Resilience PPP - Hungary

The city of Budapest partnered with private sector investors and technical experts to develop and implement a climate resilience PPP aimed at enhancing the city's resilience to flooding and extreme weather events. The PPP project involved the construction of green infrastructure, such as rain gardens, permeable pavements, and rooftop gardens, to absorb stormwater runoff and reduce flood risk in urban areas.

Key elements:

- Risk sharing: The Budapest Climate Resilience PPP adopted a risk-sharing mechanism to allocate project risks between the public and private sector partners, ensuring that risks are managed effectively and transparently throughout the project lifecycle.
- Performance-based contracts: The PPP project utilized performance-based contracts to incentivize private sector partners to deliver high-quality infrastructure that meets predefined resilience and sustainability standards, while aligning financial incentives with project outcomes.
- Community engagement: The PPP project engaged with local communities, residents, and stakeholders to solicit feedback on project design, address concerns, and build support for climate resilience initiatives, fostering a sense of ownership and accountability among project beneficiaries.

The city of Gothenburg Green bonds - Sweden

In 2013, Gothenburg became the first city in the world to use green bonds developed by SEB with the support of the World Bank Group and other Swedish investors. The initial issue of SEK 500 million is part of a programme that could reach SEK 2 billion. In May 2014, a second issue of SEK 1.8 billion was announced, which attracted a lot of interest. The Green Bond funds will mainly be used for climate change mitigation and adaptation projects.

Key elements:

- Transparency is a key feature of these bonds, as investors can understand how the funds will be used.
- The City of Gothenburg has engaged with the United Nations Environment Programme and has been a speaker at an international conference on sustainable and responsible capital.
- The City continues to issue bonds for environmental projects in renewable energy, public transport, water treatment, energy efficiency, smart grids and waste management.

Eligible projects are selected jointly by the City of Gothenburg's Finance department and the Group's environmental managers. These are then reported to the investors. The selection criteria for investment have been assessed by the Centre for International Climate and Environmental Research (CICERO).

3. Environmental and climate system

3.1. Providing access to data knowledge and digital services

This section outlines the importance of providing local public administrations, citizens, and associations with such data and digital services to enhance climate resilience. Access to comprehensive, updated, and reliable environmental and climate data is essential for Central European communities. The empowerment of various key stakeholders with the necessary information can have a critical role in mitigating the adverse effects of climate change in order to foster a resilient future. Environmental and climate information encompass a wide range of factors, including temperature fluctuations, precipitation patterns, and the frequency and intensity of extreme weather events such as floods, droughts, and heatwaves. Understanding these impacts is the first step in developing effective strategies to mitigate and adapt to climate change. At the city level, for example, updated weather data can help predict rapid changes in rainfall and, when combined with knowledge of local vulnerabilities (e.g. localised weaknesses in the drainage system), can also enable emergency services to prepare and coordinate to better manage the potential impact of flooding in specific areas of the city centre. In fact, once the impacts are understood, communities can leverage this knowledge to implement solutions tailored to their specific needs. Access to comprehensive data enables the development of targeted adaptation and mitigation strategies. These strategies can range from infrastructural improvements to community-based initiatives that enhance resilience. One effective approach is the implementation of Nature-based Solutions (NbS) which involve using natural processes and ecosystem services to address climate challenges. Indeed, NbS offer numerous benefits, including biodiversity conservation, enhanced ecosystem services, and increased community resilience. For instance, restoring wetlands can mitigate flooding, while urban green spaces can reduce heat island effects and improve air quality. Access to up-to-date environmental data ensures that these solutions are implemented in the most effective locations and are tailored to the specific climatic conditions of the area. However, as for other kind of climate change solutions, the implementation of NbS requires detailed knowledge of local environmental conditions and climate projections. Digital services and data platforms can provide this information, helping communities to identify and implement the most effective NbS. Furthermore, Decision Support Systems (DSS) are another valuable tool in this regard. These systems use data analytics, modeling, and simulation to help decision-makers evaluate different adaptation and mitigation options. By integrating environmental and climate data, DSS can provide tailored recommendations that account for local conditions and projected climate impacts. For example, a DSS might help urban planners decide where to plant trees to maximize cooling benefits and reduce stormwater runoff.

When adaptation measures unintentionally increase vulnerability to climate change maladaptation occurs. This can happen when solutions are implemented without considering long-term climate projections or the specific local context. This is why it is fundamental to have access to updated climate data and accurate information on future climate scenarios and their potential impacts. Such data and information should guide planners to design solutions that are robust and flexible enough to handle a range of future conditions. For example, rather than relying solely on hard infrastructure, communities might combine it with NbS to provide multiple layers of protection. Indeed, proper and effective climate resilience requires integrating adaptation and mitigation measures into

urban and territorial planning. It ensures that planning decisions are based on the best available science and reflect current and projected climate conditions. For instance, urban planners can use climate data to design green infrastructure that reduces heat stress and manages stormwater prioritising those spots in the city in which is more urgent to implement this kind of solutions. Taking into account climate projections into land-use plans, territorial planners can ensure that development occurs in areas less vulnerable to flooding or other climate risks. This integrated approach helps create communities that are better prepared to face future climate challenges. Of course, developing effective adaptation plans requires a detailed understanding of local climate risks and vulnerabilities, which can be achieved through thorough risk and vulnerability assessments (RVA), necessarily based on reliable climatic data and local socio-economic information. Once local vulnerabilities and climate change impacts have been studied, it is possible to evaluate adaptation and mitigation solutions that are necessarily tailored to the unique local characteristics and issues that each community faces. Clearly, the more tailored the solutions are to local needs, the more likely they are to be successful, gain community support and help communities build resilience in a more effective and sustainable way. An example of a possible approach for implementing risk and vulnerability assessment is the methodology developed in the context of the Interreg Central Europe project MISSION CE CLIMATE, *Climate Change Vulnerability Assessment of communities*. This RVA is based on a broad set of provided indicators pointing to each territory's relative strengths and weaknesses and it aims to provide a sound, science-based framework that will support local teams in exploring multi-dimensional and interrelated local risk and vulnerability context, across four core dimensions with the support of the MISSION CE CLIMATE Indicator Framework (hazards, exposure, vulnerability, and adaptation response).

Climate resilience is crucial in today's rapidly changing environment, but its true significance is best understood when viewed within the broader context of biodiversity, ecosystems, and sustainable resource use. These interconnected aspects create a comprehensive framework that enhances overall environmental health and sustainability. The variety of life on Earth, plays a vital role in fostering climate resilience. Diverse ecosystems are more robust and adaptable to changes, as they possess a wider range of species that can perform various ecological functions. For instance, forests with diverse plant species are better at sequestering carbon, which helps mitigate climate change. Additionally, diverse ecosystems provide natural buffers against extreme weather events, such as floods and droughts, thereby protecting human communities and infrastructure. Healthy ecosystems are the foundation of climate resilience. Wetlands, for example, act as natural sponges, absorbing excess rainfall and reducing flood risks. Coastal ecosystems like mangroves and coral reefs protect shorelines from storm surges and erosion. These ecosystems also support livelihoods, such as fisheries and tourism, which are vulnerable to climate impacts. Maintaining ecosystem health through conservation and restoration efforts ensures they can continue to provide these critical services, thus enhancing resilience. Sustainable resource use is integral to climate resilience. Overexploitation of natural resources, such as deforestation and overfishing, weakens ecosystems and reduces biodiversity, making them less resilient to climate change. Sustainable practices, like agroforestry and sustainable fisheries, promote the long-term health of ecosystems and the services they provide. These practices also ensure that resources remain available for future generations, supporting both ecological and human resilience.

The interconnectedness of climate resilience, biodiversity, ecosystems, and sustainable resource use highlights the need for holistic environmental management. Addressing

climate resilience in isolation is insufficient; integrated approaches that consider all environmental aspects must be adopted. This broader perspective ensures that efforts to build climate resilience also support biodiversity conservation, ecosystem health, and sustainable resource use, creating a more sustainable and resilient planet for future generations. It is evident that in order to gain a comprehensive understanding of the interconnections that facilitate and reinforce climate resilience, it is essential to have access to data and knowledge pertaining to the various processes and the potential consequences of climate change on their functionality.

Policy recommendations for enhancing data access and utilization

- Municipal governments are key in collecting, managing, and publishing climate data from a very localized vantage point. Though more work needs to be done to integrate the data from cities and regions into national datasets, there are some positive developments in this direction.
- Investing in data infrastructure is crucial for improving the collection and dissemination of environmental and climate data. This includes investing in monitoring networks, data processing facilities, and digital platforms that allow easy access to data, analytics and data aggregation.
- Public-Private Partnerships can play a significant role not only in the funding schemes but also in enhancing data access and utilization. By leveraging the expertise and resources of both sectors, these partnerships can drive innovation in data collection and analysis, as well as the development of user-friendly data platforms.
- Supporting community-based data initiatives can enhance local resilience efforts. These initiatives, which involve local communities in data collection and analysis, can provide valuable insights into local conditions and empower residents to take action. Governments and other stakeholders should provide funding and technical support for these initiatives.

The MISSION CE CLIMATE partnership is working on community-based data collection solutions in the context of regional pilots. A digital solution ready for uptake by further communities will be developed by the end of the project. Follow our activities on the MISSION CE CLIMATE website (www.interreg-central.eu/projects/mission-ce-climate/) and the www.climatehub.si platform.

3.2. Strengthening education, communications and a better understanding of behavioural change

Providing access to comprehensive and reliable environmental and climate data, is not enough if it is not combined with the process of strengthening education, enhancing communication, and understanding behavioural change in environmental systems. Educating individuals and communities about climate change, fostering effective communication strategies, and promoting behavioural changes can lead to more informed decision-making, increased public support for climate initiatives, and the adoption of sustainable practices.

Strengthening education for climate resilience

Climate literacy involves not only understanding the science of climate change but also the socio-economic and political factors that influence climate policies and actions. Strengthening climate literacy can be achieved through a variety of educational initiatives, including:

- School programs: Integrating climate science and sustainability topics into primary and secondary school curricula. This can include hands-on projects, such as school gardens, laboratories, or climate monitoring activities, that engage students in practical learning experiences.
- Higher education: Offering specialized courses and degree programs focused on climate science, environmental policy, and sustainability. Universities can also promote interdisciplinary research that addresses the complex challenges of climate change.
- Community education: Organizing workshops, seminars, and public lectures on climate change and resilience. These events can provide valuable information to residents and encourage community-wide participation in climate initiatives.
- Municipal technicians and decision-makers: Specific capacity-building activities also need to be foreseen at this level and could also be open to other key stakeholders (i.e. public service managers, etc.) focusing on innovative adaptation and mitigation solutions and tools to be implemented at city level.

In addition to raising awareness, education can also help develop the skills needed to implement effective climate resilience measures. This includes technical skills related to environmental monitoring, data analysis, and implementing Nature-based Solutions. It also includes soft skills such as problem-solving, critical thinking, and collaboration. vocational training programs can prepare individuals for careers in green industries, such as renewable energy, sustainable agriculture, and environmental management. By equipping individuals with the skills needed for these jobs, Central European communities can build a workforce capable of driving the transition to a more resilient and sustainable economy.

Enhancing communication for climate resilience

Effective communication is essential for raising awareness about climate change, promoting sustainable behaviours, and fostering public support for climate resilience initiatives. Clear and consistent communication helps bridge the gap between scientific knowledge and public understanding, making complex climate information accessible and actionable. To enhance climate resilience, it is important to adopt communication strategies that resonate with diverse audiences. Some key strategies[6] include:

- Tailoring messages: Different audiences have different concerns and priorities. Tailoring messages to address these specific concerns can make communication more effective. For example, farmers may be more interested in how climate change affects crop yields, while urban residents may be concerned about heat waves and air quality.
- Using multiple communication channels: Utilizing a variety of communication channels, such as social media, traditional media, community meetings, and public

[6] Detailed in the guidelines provided by the MISSION CE CLIMATE project (*Community Climate Missions communication campaign*, March 2024).

displays, can help reach a wider audience. Each channel has its own strengths and can be used to reinforce messages in different ways.
- Engaging storytelling: Storytelling can make climate information more relatable and memorable. Sharing personal stories of how individuals and communities are affected by climate change and how they are adapting can inspire others to take action.
- Visual communication: Visual tools such as infographics, maps, and videos can make complex climate data more understandable. Visuals can also highlight the local impacts of climate change, making the issue more immediate and relevant.

Trust is a crucial component of effective communication. Building trust requires transparency, consistency, and engagement with the community. Authorities and organisations should strive to provide accurate and timely information, acknowledge uncertainties, and involve community members in decision-making processes. Engaging local leaders and trusted community members as climate communicators can also enhance credibility. These individuals often have established relationships and can effectively convey messages within their communities.

Understanding behavioural change

While technological solutions and policy measures are essential, the actions and behaviours of individuals and communities play a significant role in determining the effectiveness of these solutions. Understanding the factors that influence behaviour can help design interventions that encourage sustainable practices and reduce vulnerabilities to climate impacts. Encouraging sustainable behaviours requires strategies that combine education, incentives, and social norms:

- Education and awareness campaigns: Informing individuals about the environmental and economic benefits of sustainable practices, such as energy conservation, waste reduction, and sustainable transportation, can motivate behaviour change.
- Incentives and rewards: Financial incentives, such as subsidies for energy-efficient appliances or tax breaks for green building practices, can encourage individuals and businesses to adopt sustainable behaviours. Reward programs that recognize and celebrate sustainable actions can also reinforce positive behaviours.
- Social norms and peer influence: Promoting sustainable behaviours as the norm within communities can encourage individuals to follow suit. Peer influence can be leveraged through community-based initiatives and social networks to spread sustainable practices, such as: community gardening projects; waste reduction challenges within the neighbourhood; carpool programme in workplaces; sustainable fashion events, as clothing swap parties; social media campaigns, like creating hashtag by a community promoting sustainable actions; collective initiatives for renewable energy (if a group of households installs solar panels together, it can create a trend. Seeing neighbours take the plunge may motivate others in the community to consider renewable energy options for their own homes, establishing a new norm regarding energy usage).

Understanding and addressing barriers to behaviour change is essential for designing effective interventions. Common barriers can include a lack of awareness among many people about the specific actions they can take to reduce their climate impact. Providing clear and actionable information can help overcome this barrier. In addition, the perceived financial or time cost of sustainable behaviour can deter individuals from adopting it. Demonstrating the long-term benefits and providing support to offset initial

costs can address this concern. Established habits and the convenience of unsustainable behaviours can also be difficult to change, so designing interventions that make sustainable behaviours more convenient and integrate them into daily routines can facilitate change. Behaviour can also be influenced by social and cultural factors, so understanding these factors and working within cultural contexts to promote sustainable practices can increase the effectiveness of interventions.

Policy recommendations for enhancing education, communication, and behavioural change

- Integrating climate education into national curricula: National governments should mandate the integration of climate education into school curricula at all levels. This includes providing resources and training for teachers, developing age-appropriate educational materials, and incorporating hands-on learning experiences. Municipal governments should push for action on a national or regional level.
- Supporting lifelong learning and professional development: Climate education should extend beyond the formal education system to include lifelong learning opportunities for adults. This can be achieved through community education programs, online courses, and professional development workshops that provide up-to-date information on climate science and resilience strategies.
- Developing comprehensive communication strategies: Local governments and organisations should develop comprehensive communication strategies that use a variety of channels and approaches to reach diverse audiences. These strategies should emphasise transparency, consistency, and engagement with the community.
- Leveraging technology for effective communication: Technology can enhance the effectiveness of climate communication by making information more accessible and engaging. Governments and organisations should invest in digital platforms, interactive tools, and social media campaigns that provide timely and accurate climate information.
- Designing behavioural interventions: Policy-makers should design behavioural interventions that address the specific barriers to sustainable behaviours. This includes providing clear and actionable information, offering financial incentives, and leveraging social norms and peer influence.
- Promoting community-based initiatives: Community-based initiatives can play a crucial role in promoting education, communication, and behavioural change. Governments and organisations should support these initiatives by providing funding, resources, and technical assistance.

Climate Adaptation Knowledge Portal of the Netherlands
This portal provides comprehensive information, tools, and best practices to assist policymakers, businesses, and citizens in understanding and addressing the impacts of climate change.
Key elements:

- Extensive database of case studies and practical examples from various sectors, including agriculture, water management, infrastructure, and urban planning. These case studies illustrate successful adaptation strategies and highlight lessons learned, offering valuable insights for replicating similar initiatives.
- Interactive tools and maps that allow users to explore climate scenarios, assess vulnerabilities, and identify adaptation measures. These tools are crucial for planning and decision-making processes, enabling users to visualize potential climate impacts and develop effective strategies to mitigate risks.
- Access to research publications, policy documents, and guidelines, fostering an informed community of practice. Users can stay updated with the latest developments and innovations in climate adaptation through regular updates and news articles.

Educational resources and training modules available on the portal further support capacity building, helping individuals and organizations enhance their understanding and skills in climate adaptation. By offering these resources, the portal ensures that stakeholders at all levels are equipped to respond to the challenges posed by climate change.

For further details see: https://klimaatadaptatienederland.nl/en

Environmental Information System (EIS) of Prague - Czech Republic
The EIS is a comprehensive platform dedicated to providing real-time and historical environmental data. It serves as a crucial tool for both citizens and policymakers, offering insights into various environmental aspects such as air and water quality, noise levels, and meteorological conditions.

EIS Prague is designed to be accessible and user-friendly, ensuring that anyone can easily obtain the information they need. The system collects data from numerous monitoring stations across the city, which are then processed and displayed on the platform. This includes detailed maps, graphs, and reports that help users understand the current state of the environment in Prague.

One of the standout features of EIS is its focus on real-time data. Users can access up-to-the-minute information on air quality indices, allowing them to make informed decisions about outdoor activities. This is particularly important for vulnerable populations, such as individuals with respiratory conditions, who can benefit from avoiding areas with high pollution levels. Additionally, EIS Prague supports long-term environmental planning and policy-making. By providing historical data, the system enables analysis of trends and patterns, aiding in the development of effective environmental strategies and interventions. This data-driven approach ensures that policies are based on solid evidence, contributing to the city's overall sustainability goals.

For further details see: https://praha.eu/web/portalzp/w/index_1741977

The REScoop Model – Belgium based

REScoops, or energy cooperatives, represent a business model where citizens collectively own and democratically manage enterprises focused on renewable energy or energy efficiency projects. Often referred to as citizen or renewable energy communities, REScoops prioritize a democratic business approach over legal cooperative status. They adhere to seven principles from the International Cooperative Alliance: voluntary and open membership, democratic member control, economic participation through direct ownership, autonomy and independence, education, training and information, cooperation among cooperatives, and concern for community.

Citizens can join a REScoop by purchasing a share, becoming co-owners of local renewable energy projects. Members share profits, can buy electricity at fair prices, and participate in investment and pricing decisions.
REScoops offer several key advantages:

- Local Economic Impact: By utilizing local energy sources and involving local citizens, REScoops retain financial resources within the community, stimulating local employment and economic growth.
- Social Acceptance: Local opposition to renewable energy projects decreases when citizens are investors and co-owners, especially when involved from the project's inception.
- Affordable Investments: Shared ownership of production installations makes individual investments more affordable, enabling broader participation regardless of personal financial capacity.
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For further details see: https://www.rescoop.eu

Som Energia: Catalonia's First Renewable Energy Cooperative - Spain

Som Energia, Catalonia's pioneering renewable energy cooperative, draws inspiration from successful models in the EU, where non-profit cooperatives provide affordable electricity from wind turbines, solar panels, and biogas plants to hundreds of thousands of homeowners. These renewable projects are usually too costly for individuals to manage alone, so Som Energia unites thousands of supporters to bring locally generated, clean, and sustainable electricity to their homes.

Established as a non-profit cooperative, Som Energia began selling green energy from existing sources in October 2011. This energy is bought from the market and sold to members, while the cooperative develops its own renewable energy projects. This model allows members to use affordable eco-electricity in their homes, contributing to Spain's sustainable transformation. No changes to the home electricity setup are needed, as Som Energia handles all necessary administrative adjustments to ensure the energy is renewable.

Members benefit from: access to renewable energy; direct investments in renewable projects, promoting a sustainable economy; equal ownership with equal voting rights through a refundable €100 deposit; independence from large energy companies; transparent information and personalized service. The cooperative operates without advertising costs and large management salaries, maintaining modest, efficient offices and primarily communicating and managing via the web. Members contribute to a social movement supporting renewable energy, public participation and climate resilience.

Once a member, they can purchase renewable energy at the same price as conventional electricity. Members can also invest in renewable projects, with expected returns between 4% and 7%. Project development times vary, with smaller PV projects progressing quickly and larger wind turbine projects taking several years.

For further details see: https://www.somenergia.coop/es/welcome-to-som-energia/

D.MONITORING AND EVALUATION

Key Performance Indicators (KPIs) are critical in measuring the effectiveness of the implemented climate-resilient strategies. They provide quantifiable data that reflects the progress and impact of the strategies.
Below are listed examples of generic KPIs identified for this purpose, to be adapted to local needs:

Name	Metric	Measurement frequency	Data source
Reduction in vulnerability scores	Decrease in community vulnerability index scores (%)	Annual	Baseline and follow-up vulnerability assessments
Improvement in adaptive capacity (citizens)	Increase in the number of households adopting adaptive measures (%)	Biannual	Household surveys and agricultural records
Improvement in adaptive capacity (Municipalities/Regions)	Increase in the number of adaptive measures implemented (%)	Biannual	SECAP monitoring and Municipal/Regional reports
Community awareness and engagement	Population aware of climate resilience strategies (%)	Quarter	Community surveys and outreach program participation records
Economic impact	Change in income levels and economic stability in climate-affected areas	Annual	Economic surveys and financial reports
Environmental indicators	Improvement in environmental quality (e.g., soil health, water availability)	Semi-annual	Environmental assessments and scientific measurements
Disaster response time	Reduction in response time to climate-related disasters	After each disaster event	Emergency response records and incident reports
Infrastructure resilience	Infrastructure projects completed that meet resilience standards (%)	Annual	Infrastructure audits and project completion reports

Health outcomes	Decrease in climate-related health issues (e.g., heatstroke, vector-borne diseases) (%)	Biannual	Health surveys and medical records
Biodiversity	Stability or increase in local biodiversity indexes (%)	Annual	Biodiversity surveys and environmental monitoring reports
Policy implementation	Number of policies and regulations enacted and enforced to support climate resilience (n°/year)	Annual	Government records and policy reviews

As concerns continuous monitoring for collecting feedback on the strategy implementation hereafter are listed some methods that can be used for this purpose:

- Household surveys: Regular surveys conducted biannually in randomly selected households to assess awareness, adaptive measures, and feedback on resilience strategies. This method can provide direct insight into household-level impact and effectiveness
- Community meetings and focus groups: Organized sessions where community members discuss the impact of resilience strategies and suggest improvements. These meetings can encourage community participation and provide qualitative data.
- Mobile feedback systems: Use of mobile apps and SMS-based platforms to collect real-time feedback and reports from the population. It can be done in a continuous manner and has the advantages of high accessibility and have immediate feedback.
- Participatory monitoring: Engaging local communities in the monitoring process by training them to collect data and report on specific indicators. This monitoring system has also the benefit to empower communities and ensures local relevance of data.
- Social media and online platforms: Leveraging social media and dedicated online portals to gather feedback and suggestions from a broader audience. It can be continuously active with a potential broad reach and real-time feedback collection.
- School and youth programs: Implementing educational programs in schools to teach about climate resilience can have also the advantage to collecting feedback from students and teachers during this kind of activities implementation. In accordance with school terms and regulations, it can be a way for engaging younger populations and promotes long-term awareness.
- Feedback boxes: Placing anonymous feedback boxes in community centres, health clinics, and public offices. With a monthly collection it can be an opportunity for gathering anonymous and potentially more honest feedback.
- Field observations: Regular site visits and observations by field officers to assess implementation and gather informal feedback. It provides on-ground reality checks and immediate observations.

- Interactive workshops: Conducting interactive semi-annual workshops with various stakeholders, including local authorities, NGOs, and community leaders. This approach can foster multi-stakeholder engagement and collaborative problem-solving.

The effective monitoring and evaluation of climate-resilient strategies require a robust framework of KPIs, continuous monitoring methods, and comprehensive feedback mechanisms. By implementing these measures, Central European communities can ensure that their strategies are not only effective in the short term but also adaptable and resilient in the face of evolving climate challenges. Continuous engagement with the community and stakeholders will be essential in refining these strategies and achieving sustainable climate resilience.

E. CONCLUSIONS

The Strategy for Climate Resilient Communities of Central Europe aims to equip communities with the necessary tools, knowledge, and practices to withstand and thrive amidst climate disruptions. Effective climate resilience requires a holistic approach that integrates governance, socio-economic considerations, and environmental systems. This integrated method ensures coordinated action and sustainable outcomes. Facilitating inclusive and deliberative governance processes is particularly essential. Involving diverse stakeholders, especially marginalized and vulnerable groups, leads to equitable and effective solutions tailored to local needs. This inclusivity ensures that climate resilience strategies address the unique challenges and opportunities within each community. Strengthening sustainable and circular local economies is another crucial aspect. These economies can mitigate environmental impacts while enhancing social equity and community well-being. Such measures reduce dependency on global supply chains, making communities more self-sufficient and adaptable to environmental changes. Traditional financing mechanisms often fall short in addressing the complex and evolving challenges of climate resilience. Therefore, innovative approaches, such as green municipal bonds, green banks, climate insurance, and public-private partnerships, are necessary. These mechanisms can mobilize the funds and resources required to support climate resilience projects, ensuring that financial constraints do not hinder progress. Access to comprehensive, updated, and reliable environmental and climate data is fundamental. Empowering citizens, key stakeholders, technicians and decision-makers with this information enables the development of targeted adaptation and mitigation strategies. Strengthening climate literacy and effective communication strategies promotes informed decision-making and public support for climate initiatives. Education should extend beyond schools to include community-wide programs and vocational training.

Building climate resilience is a collective effort that requires active participation and collaboration among communities, local governments, businesses, NGOs, academia and civil society organizations.

To achieve long-term climate resilience, local governments must prioritize climate resilience in their policy agendas. This includes developing and enforcing regulations that promote sustainable land use, reduce greenhouse gas emissions, and enhance disaster preparedness. Policies should be adaptable to evolving climate conditions and support innovative solutions tailored to local contexts. Establishing participatory platforms such as forums, city councils, and local committees facilitates regular dialogues on climate issues.

Continuous monitoring and evaluation are essential for ensuring the effectiveness of governance processes and climate strategies. Robust systems should be implemented to allow for adjustments and improvements over time. Household surveys, community meetings, mobile feedback systems, and participatory monitoring are effective ways to gather comprehensive feedback on strategy implementation.

By following this comprehensive strategy and long-term vision, Central European communities can build a resilient future that not only withstands climate disruptions but thrives in a sustainable and equitable manner. This collective effort will ensure that present and future generations can enjoy a high quality of life within the planet's ecological limits.

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ANNEX 1

In the separate Annex 1, it is possible to consult the *Roadmap and methodology for setting-up of missions*, which was developed and delivered during the implementation of the MISSION CE CLIMATE project (Deliverable 1.1.1, Activity A.1.1).