



Proposed Mission: **A Climate Resilient Europe**

Prepare Europe for climate disruptions and
accelerate the transformation to a climate
resilient and just Europe by 2030

Report of the Mission Board for
Adaptation to Climate Change,
including Societal Transformation

Independent
Expert
Report



Research and
Innovation

Proposed Mission: A Climate Resilient Europe: Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030

Report of the Mission Board for Adaptation to Climate Change, including Societal Transformation

European Commission

Directorate-General for Research and Innovation

Directorate C — Healthy Planet

Unit C.3 — Climate and Planetary Boundaries

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A Climate Resilient Europe

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accelerate the transformation to a climate
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Adaptation to Climate Change, including
Societal Transformation

This document is the Mission Board's proposal to the European Commission for a mission on Adaptation to Climate Change, including Societal Transformation.

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A CLIMATE RESILIENT EUROPE

1 Vision

In a world of increasing and mutually reinforcing climate disruptions and socio-economic and environmental challenges, the vision of this Mission is to turn the urgent challenge of adapting to climate change into an opportunity to make Europe resilient, climate-prepared and just. By 2030, the Mission will:

1. **Prepare Europe to deal with climate disruptions**, and assist all citizens, communities and regions in better understanding, preparing for and managing climate risks;
2. **Accelerate the transformation to a climate resilient future**, supporting 200 European communities and regions in co-creating a vision, innovation pathways, and developing solutions for transformative adaptation within safe planetary boundaries;
3. **Build deep resilience by scaling up actionable solutions triggering societal transformations** through 100 deep demonstrations of resilience across a number of European communities and regions, with emphasis on cross-border cooperation and cohesion.

2 The Mission explained

2.1 The need for the Mission

The global climate crisis is an existential threatⁱ to the world as we know it. Without a radical abatement of greenhouse gasses, global warming will reach and exceed 3-4 °C before the end the century. We cannot continue in this trajectory without facing the risk of unleashing unstoppable planetary forces with huge socio-economic consequences. Climate change has already put additional stress on both natural and human systems and made some weather and climate extremes more frequent and severe (see annex 1 for key references). And because some additional warming is inevitable even after cessation of emissions, mitigation and adaptation are both essential for climate risk management. The COVID-19 pandemic has taught a lesson about how closely environmental, societal and human health are connected. What we have lived through and still will is a mild foretaste of the shocks that climate change may and will cause in the future. But we can break the vicious circle of living on environmental debt and restore planetary health.

The pandemic's emergency has shown unambiguously how important it is to act early upon warnings and in a coordinated way. It has shown us how compound risks affect most those who are already vulnerable, and how existing disparities across Europe are amplified. But we have also learned that rapid change is possible and that solidarity and social cohesion matters. Now, more than ever before, the European Union needs to stand by its citizens and its

common values and maintain its role as a global leader. Principles of solidarity and intergenerational justice, which have permeated public health care choices during the pandemic emergency, need to be given equal weight in investments supporting recovery from the pandemic and beyond in choices regarding environmental restoration, conservation and climate change. This time, we need to protect all, and in particular, our youth. Citizens and stakeholders engaged in the process scoping this Mission strongly emphasised this view (see annex 2).

The *European Green Deal*ⁱⁱ traces a pathway to climate change neutrality and sustainable development, transforming the EU into a low-carbon, resource-efficient and prosperous society economy. The Green Deal is a package of legislative measures, which includes the first EU Climate Law with a legally binding target of net zero greenhouse gas emissions by 2050, a new circular economy action plan, a new biodiversity strategy, and a strategy for a fair, healthy and environmentally friendly food system, to mention a few. It commits to a just and inclusive transition, putting people first and focusing on those that will face the greatest challenges. To deliver on these ambitions, the Green Deal will stimulate immense investments in green technologies, social innovation, education and societal transformations. Along the same lines, the ***Next Generation EU*ⁱⁱⁱ plan to recover from the pandemic**, driven by solidarity, cohesion and convergence, directs significant resources to build a more sustainable, resilient and fairer Europe.

The European Green Deal also includes a new and revised EU Adaptation Strategy^{iv} and recognises that more ambitious and large-scale efforts are needed for climate adaptation, climate proofing, resilience building, prevention and preparedness. The previous 2013 EU Adaptation strategy helped to mainstream adaptation into policies and funding instruments. As a result, the EU Member States have adopted comprehensive adaptation strategies and plans and the EU made sizeable investments in making cutting-edge climate risk information accessible, usable and useful. The new EU Adaptation Strategy will build and expand on these efforts to help all levels of government and stakeholders to (i) further improve knowledge of climate impacts, (ii) reinforce planning and climate risk management, and (iii) accelerate action with a focus on solutions, innovation, implementation, and prevention.

The here proposed Mission will get Europe prepared to unavoidable climate impacts and to accelerate the transformation to a climate-resilient and just Europe. It will be fundamental for the success of the new climate change adaptation strategy, testing and up-scaling innovative solutions, creating enabling conditions for societal transformations, and providing demonstrations of deep climate-resilience. Further, it will make important contributions to the achievement of the European Green Deal and the post-COVID recovery plans (see annex 3), and the Sustainable Development Goals (see annex 4). By combining impactful research and innovation, inclusive community engagement, green financial transition and coherent policy reforms, the Mission will develop and deploy innovative solutions at a scale and magnitude of impact that could not be otherwise achieved.

2.2 The objectives of the Mission

To turn the urgent challenge of adapting to climate change into an opportunity to make Europe more climate resilient, prepared and just, the Mission will work with citizens, communities and regions on green innovation, transformative adaptation and resilience forging. All of which will be enabled by investments, capacity building, knowledge creation, inclusive governance, sustainable business innovation and partnerships in and between regions and communities.

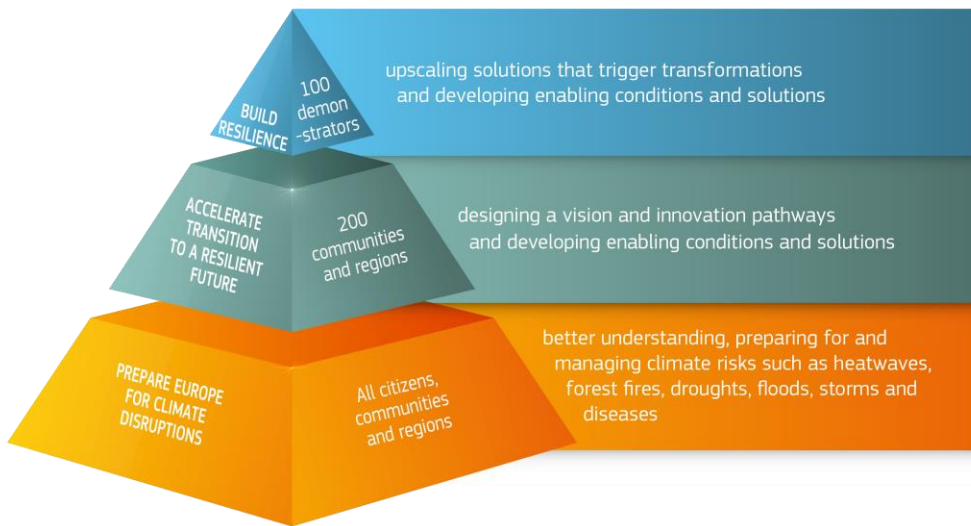


Figure 1. The vision and objectives of the Mission

By 2030, the Mission will:

1. **Prepare Europe to deal with climate disruptions**, assisting citizens, communities and regions in better understanding, preparing for and managing climate risks such as heatwaves, forest fires, droughts, floods, storms, and diseases.

Target: By 2030, all local administrative units (LAU) and regions (NUTS) will have access to climate risk profiles and enhanced early warning systems for all relevant risks, will have adopted comprehensive climate risk management plans, and will have community infrastructure and services that are safe and operable and accessible under critical conditions

2. **Accelerate the transition to a climate resilient future**, supporting 200 European communities and regions that reflect the diversity in climate and approaches to addressing climate risk in Europe, in co-creating a vision, innovation pathways and enabling conditions for transformative adaptation within safe planetary boundaries.

Target: By 2030, 200 European communities and regions will have developed their own transformative vision; co-created adaptation pathways; co-designed and tested actionable solutions; and created favourable conditions for societal transformations towards climate resilience.

3. **Build deep resilience, scaling up actionable solutions triggering societal transformations** through 100 deep demonstrations of climate resilience across a number of European communities and regions.

Target: By 2030, 100 deep demonstrations have scaled-up actionable solutions that have triggered societal transformation, building deep climate-resilience and creating value shared across borders.

2.3 *The approach of the Mission*

As we respond to the COVID-19 pandemic and the resulting unprecedented social and economic crisis, we need to ensure that Europe is prepared for climate emergencies and unavoidable impacts of climate variability and change. The Mission seeks to advance climate adaptation by building resilience as a capacity to withstand and cope with climate crises and as an opportunity to undergo transitions in a sustainable, fair and democratic manner^{v,vi}. The Mission employs an integrated and systemic approach to risk management and resilience building, moving away from piecemeal sectorial and linear cause-effect-solution focus.

A climate resilient Europe is understood to include **three fundamental and interrelated dimensions and principles** that guide the Mission and determine the success of the Mission:

1. **Resilience of environmental systems** with a commitment to long-term sustainability, in which the *precautionary* and *do no harm* principles are embedded in the efforts to regenerate critical community systems most affected by climate impacts (see section 3.1). The Mission is committed to support overarching goals of the European Green Deal, such as reaching climate neutrality, adopting circular economy principles, and preserving biodiversity and a toxic-free environment.
2. **Resilience of social and economic systems** with a commitment to equity, social and gender justice, to engage children and youth, and to leave no one behind. The Mission's approach to societal transformation^{vii} pervades all community systems and embraces social, economic, and cultural value changes. Making societies less vulnerable leads the way for building new norms, practices and habits that preserve the environment, enhance wellbeing, and shift from a market-fixing framework to a market-shaping framework redefining the meaning of public value.
3. **Resilience of political systems**, with a commitment to inclusiveness, deliberation, shared values, solidarity and respect for diversity. The Mission will foster societal transformations in a manner that involves all actors, including citizens, civil society organisations, public authorities, business and industry, academia, R&I, and other relevant stakeholders throughout all its phases. The Mission also commits to joint learning and sharing assisted by

learning communities and communities of practice, mobilisation of funds and resources, multi-level governance, and support to the most vulnerable.

The Mission understands and employs innovation as a way to catalyse systemic change. It embraces a model of innovation^{viii} designed to generate options in the face of uncertainty and diversity, and tests integrated and exponential solutions to address the complex, multi-faceted nature of the changes we need to make.

The Mission will work closely with and assist regions and communities across Europe to design and implement an ambitious transformation agenda. By focusing on regions, communities and citizens, the Mission seeks to mobilise and leverage on local innovations and responses to climate risk.

To inspire society at large, and to ensure that it has the necessary legitimacy, acceptance and relevance, the Mission will engage all relevant actors, in particular citizens, in the co-design, co-implementation, and co-evaluation of the Mission, informed by the best available science and supported by dedicated processes and mechanisms. Already the recommendations made in this report have been inspired and sustained by the citizen and stakeholder engagement conducted by the Mission Board so far (annex 2).

Co-design: To further strengthen societal ownership and long-term sustainability of the Mission's goals and objectives, the co-design phase will include the first two years of the Mission. The Mission will engage and support partner regions and communities, in order to:

- **build their own visions of climate resilience and adaptation, tailor-made to local and context-specific challenges and climate risks.** Regions and communities will choose the community systems to focus on and frame social, economic, cultural and behavioural change to work towards. This should be done while taking into account existing programmes, strategies and commitments at the regional, national and European level, in particular those of the European Green Deal (see annex 3);
- **co-design climate-resilient adaptation pathways.** Regions and communities will outline their social and economic innovation priorities and actions, make strategic choices, choose leverage points and test actionable solutions. Each pathway will result in a portfolio of innovation actions with alternative or complementary strategies, paying attention to citizens' priorities, knowledge needs, trade-offs and uncertainties, as well as principles of social and intergenerational justice.
- **sign a climate resilience contract.** Regions and communities, where necessary in agreement with and participation of higher governance bodies, will sign social (climate resilience) contracts. These contracts will show social and political commitments to work together and implement innovation portfolios that catalyse the necessary transformations. The climate resilience contracts should entail the main goals, commitments and responsibilities, as well as key performance indicators. The ownership of the resilience contract will stay with the implementing regions and communities.

Co-implementation: User-led innovation will require close engagement of citizens, businesses and industries, governments, entrepreneurs and investors as well as scientists. The Mission will engage and support partner regions and communities, in order to:

- **foster co-production of data and knowledge and co-design of climate services and innovative solutions.** The Co-implementation will focus on improving the availability and relevance of data and knowledge, usability of digital tools and services for better understanding of risks and their management. This phase will also work on enhancing the efficiency and economic relevance of transformative solutions. The Mission will engage all stakeholders in joint work with researchers, citizens, innovators and government representatives.
- **employ citizen science, citizen observatories and other means of joint knowledge gathering and monitoring.** Reaching out to community leaders and associations will be a major pillar for the co-implementation of the Mission. Citizens and stakeholders will jointly explore available evidence and state of knowledge, risk perceptions, and behavioural and social practices leading to a better understanding of science-based decision making, and possibly reconciliation of the differences in their views and value judgements. This co-implementation enhances education, awareness and communication of climate risks and solutions.
- **establish and operate living Mission Labs.** Accelerators and incubators are key co-implementation mechanisms for the Mission. The Living Labs of the Mission are spaces for deliberation and shared learning, crafting innovations, fostering dialogues, and maturing the regulatory frameworks needed for the implementation of emerging solutions.

Co-evaluation: The final stage of engaging citizens and stakeholders is joint monitoring, assessment and evaluation of the progress and outcomes of the Mission. As part of this phase the Mission will foster an agile, flexible, transparent, systemic and citizen-centred co-evaluation framework, shared learning and transfer of best practices. In close collaboration with the partner regions and communities, the Mission will:

- **provide feedback on whether the transformative vision and targets are responsive to the principles that guide the Mission and whether results have been accomplished.** It will assess to what extent results have contributed to building resilience to climate change and the Mission's outcomes are aligned with the needs, values and expectations of society. A combination of deliberative processes such as peer review, civil society organisations assessments, monitoring observatories, and standardised proxies will help to assess the performance and ensure impartiality and accountability.
- **enable new information and lessons learned to feed back to policy review and agenda setting at the European, national and local scales.** It will shed light on whether policy goals and targets are still appropriate or need to be adjusted to accommodate new knowledge and lessons learnt

accounting for societal requirements. Information and lessons will be open and accessible to all relevant stakeholders and citizens.

- **help to identify knowledge and innovation gaps, and design mechanism to create feedback loops with knowledge generated through Horizon Europe and various other innovation platforms.** Adaptation planning is often based on uncertain or an otherwise incomplete understanding of changing climate risks. Thus, a systemic and iterative co-evaluation will continuously improve existing knowledge on climate change impacts and vulnerability, and help to identify key challenges, opportunities and remaining knowledge gaps.

2.4 The support structures of the Mission

The governance mechanisms of the Mission will build on existing structures, allow agile adjustments to specific circumstances in regions and communities, and promote efficiency, reflectivity, democratic deliberation and accountability.

Partner regions and communities are expected to establish **local governance platforms** to enable inclusive and deliberative processes and foster citizen engagement to navigate through the transformations. Physical and virtual interaction (e.g. climate assemblies, online consultation tools and surveys, workshops and webstivals) will make it possible to collect citizens' and stakeholders' voices in a safe and flexible way. Local governance platforms are mechanisms for facilitating co-design, co-implementation and co-evaluation of the Mission "on the ground".

Ensuring some form of **support across multiple levels of governance** is another critical structural element for the successful implementation of the Mission. Choices made in support of societal transformations in communities and regions will need to be upheld or endorsed at various governance levels. Alignment and collaboration across various regional, national and European actions on climate adaptation, disaster risk reduction and sustainable development will be essential for accomplishing societal transformation. Adhering to the principle of subsidiarity and adapting to various national contexts, such multi-level governance structures should allow for a coordinated and complementary use of European funds and coherent application of all planning instruments mobilised by the European Green Deal. By building on what already exists, the Mission will, for example, require that actions are coherent with and supported by national efforts to implement the EU Climate Change Adaptation Strategy, and foster exploitation of European and national research and innovation policies.

The Mission will provide **horizontal support** to all partner regions and communities. To this end, the Mission will organise **communities of practice across the key thematic issues** that are essential for the implementation of the Mission (see section 3.1). The communities of practice will bring together experts and practitioners, business and industry, organisations and networks to foster innovation and support the partner regions and communities. For each key community system and enabling condition, communities of practice will (i) review

and advance knowledge and innovations, (ii) support co-designing and testing of transformative solutions, and (iii) support upscaling of successful solutions.

Furthermore, the Mission will foster **shared and cooperative learning and coordination amongst regions and communities** where common needs, priorities or interests have been identified, and where it is important to ensure that objectives and instruments developed are mutually reinforcing. While success of adaptation is context dependent, regions and communities can benefit immensely from peer learning, exchange of practices and sharing of knowledge. Citizens will also learn about cross-European initiatives, successes achieved, and challenges faced elsewhere. Within this context, the Mission will establish a twinning mechanism bringing together innovation leaders and more modest performers. In general, the Mission will build upon and benefit from synergies across various European and national policies, programmes and initiatives, including the European Climate Pact, the Covenant of Mayors for Climate and Energy, Climate ADAPT, and the European Urban Initiative.

A **Mission implementation platform** should be designed to carry out day-to-day management, coordination and monitoring of the Mission. The Mission Platform should provide and coordinate the necessary technical, regulatory, financial, engagement and socio-economic expertise as well as assistance to regions and communities, in particular to (i) facilitate participatory processes underpinning the co-design, co-implementation and co-evaluation, (ii) manage the portfolio of innovation actions and test transformative solutions, and (iii) assist in mobilising additional funds, including, but not limited to, by providing a climate-resilience financing platform. This Mission Implementation Platform should be composed of organisations with large experience in managing public investments and able to attract external investments.

Because it is essential for this Mission to move forward with the urgency it deserves, we strongly recommend that the **European Commission swiftly prioritise the resources and create a project management team** that can reach out to potential partners, help defining selection criteria, and activate broad-ranging citizen engagement. Without thus anchoring the Mission solidly, we fear that the implementation of the Mission can be delayed and the momentum lost.

3 The portfolio of the Mission

3.1 Areas of research and innovation for transformation

3.1.1 Addressing key community systems

The Mission will stimulate major innovations in the management of interdependent key community systems that are central for resilience building and sustainable development and most affected by climate change (see Figure 2).

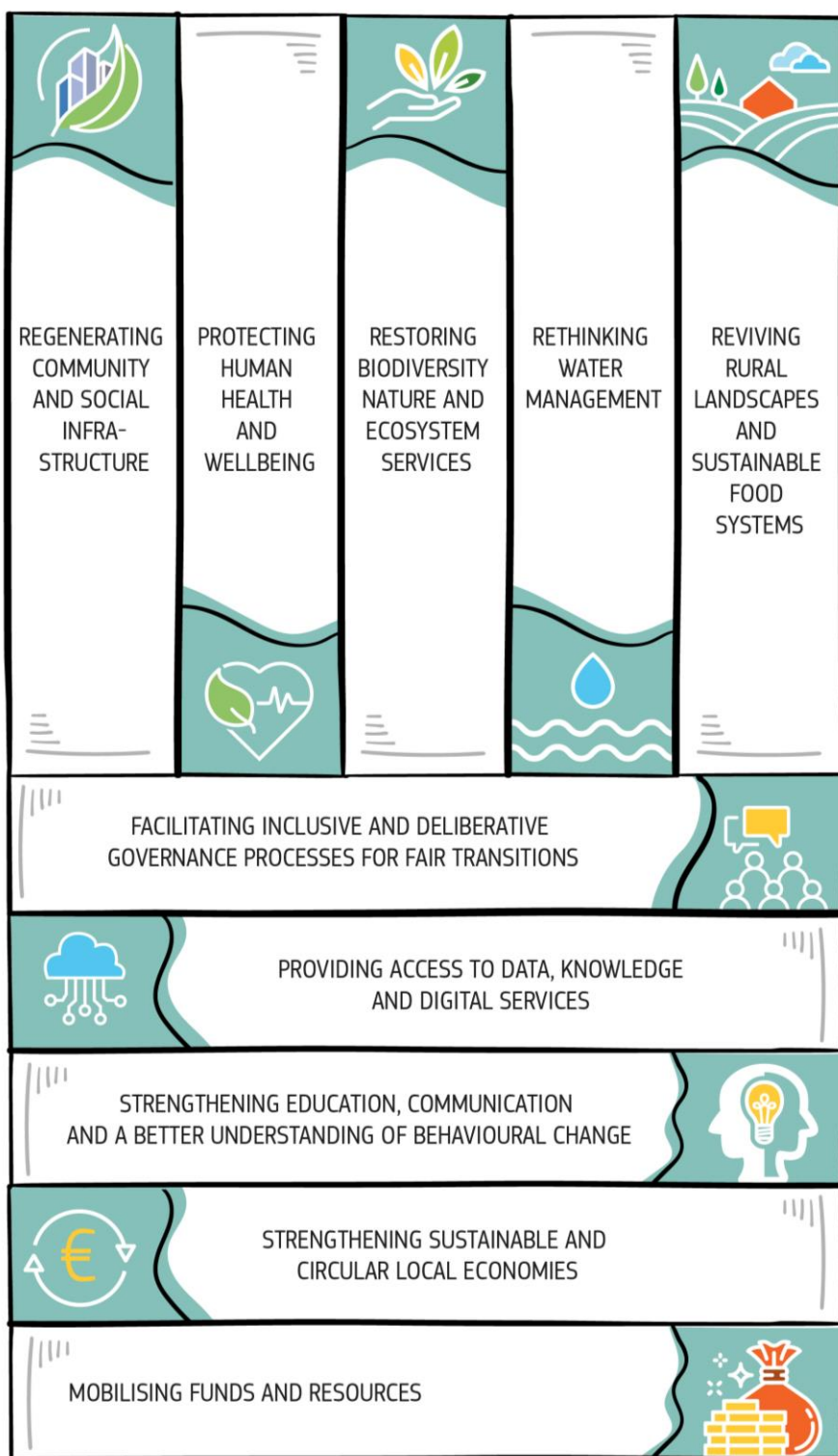


Figure 2. The Mission's areas of research and innovation for transformation

Regenerating community and social infrastructure

Urban and rural communities with well-functioning social infrastructure, such as schools, libraries, health care, shelters, parks, social protection systems and housing, and safe and reliable access to transport, energy and other basic services, are more resilient and better prepared to cope with environmental and human-made risks and shocks. Public investment in social infrastructure can catalyse innovative community welfare systems, promote social inclusion and improve living conditions in disadvantaged neighbourhoods. Public services that are affordable and accessible to all, including disadvantaged groups and youth at risk of exclusion, support individual and community fulfilment, foster personal development, and form lasting social relationships and collaborations. However, in many places the community infrastructure is underinvested, degraded, or not adequately provided for^{ix}.

The Mission will foster regenerating public spaces and community facilities for inclusive, healthy and climate-resilient neighbourhoods, and resilient social protection mechanisms. As a result, the Mission will contribute to making the social and community infrastructure safe, accessible, resource and energy efficient, and compliant with principles of circular economy. Research and innovation will address, among others, ways to climate proof buildings in energy and resource efficient ways, optimal use and greening of public spaces, new modes of social innovation and partnerships, blended financial instruments such as social impact bonds, and institutional frameworks such as national and regional promotional banks.

The Mission will establish links to the Urban Greening Plans, supported by the LIFE Program, to bring nature back to cities; and the Green Deal quest to promote energy and resource efficient renovation in public buildings and social housing, schools and hospitals (including innovative financing schemes under InvestEU). It will contribute to the 'renovation wave' that Member States are encouraged to undertake to make buildings climate-proof and energy and resource efficient, and which is also supported by sizeable funds from the 'Next Generation EU' recovery package. It will also contribute to further strengthen European social protection systems providing insights and solutions how to promote social cohesion and equality through adequate, accessible and financially sustainable social protection systems and social inclusion policies that are climate resilient.

Protecting human health and wellbeing

Climate risks are affecting health, wellbeing and quality of life of European citizens. Health risks include morbidity and mortality from for example heatwaves, forest fires, storms, floods but also from air pollution, illnesses from food, vector- and water-borne infectious diseases, and mental health impacts including trauma related to extreme events as well as distress, anxiety and feelings of disempowerment. Also, climate risks have the potential to exacerbate long term chronic illnesses such as respiratory, cardiovascular and endocrine diseases and cancer, further increasing existing health inequalities in society. The Mission will help communities to stay healthy in a changing climate including with planning, early-warning and surveillance systems.

The research and innovation will address inter alia integration of climate risks into health preparedness systems, development and adoption of early warning systems to ensure a rapid response from health services, and development of robust epidemiological surveillance and modelling tools for assessing and predicting impact of extreme events and disasters associated with climate change including impacts on mental health. The Mission will foster adoption of health plans and adequate response to address all relevant hazards, to protect people at high risk such as children, senior citizens, people with chronic diseases, socially disadvantaged groups.

The Mission will help define and assess the resilience goals that have been proposed as a part of risk management capacities under the Union Civil Protection Mechanism (UCPM) and contribute to improving the understanding of and societal preparedness for health risks. Also, it will contribute to the EU4Health 2021-2027 programme by strengthening health systems and stimulating disease prevention, as well as improving access to health care for vulnerable groups.

Restoring nature, biodiversity and ecosystems services

The loss of nature threatens livelihoods, health and wellbeing, and long-term viability of communities. Climate change accelerates environmental deterioration, which may in turn further amplify climate change and exacerbate impacts of climate risks. Ecosystem degradation affects us all and is disproportionately felt by the poor, presenting obstacles to social and economic wellbeing, poverty alleviation and sustainable development. Nature-based solutions provide means for mitigating climate risks and boosting societal resilience, locally or regionally, stimulate innovation, and produce multiple co-benefits, including for people's health.

To harness the power of nature for climate resilience the Mission will boost nature-based solutions and green-blue multipurpose infrastructure investments in ecosystems. Research and innovation will address, among others, incentives and financial schemes encouraging cooperation among landowners and high degree of ecological connectivity, transferability of knowledge and evidence within and across context-specific domains, demonstrated performance and efficiency of nature-based solutions at large scales, connections between ecosystem quality and human health.

In aiming to reach its objective, the Mission supports and leverages efforts directed to meeting the commitments under the Biodiversity Strategy 2030, which include, among others, the scaling up of restoration of nature as a key nature-based solution to increase the EU's resilience and contribute to climate change mitigation and adaptation, the increase of high-diversity landscape features of agricultural areas to at least 10%, the afforestation and reforestation to adapt forests to climate change in full respect of ecological principles, the restoration of at least 25,000 km of rivers into free-flowing rivers, and the establishment of a true Trans-European Nature Network including high quality and well-connected green and blue (water-related) infrastructure.

Rethinking water management

As a result of climate change, millions of people and many water-intense industries in Europe will be short of sufficient water every so often and many regions will suffer from chronic water stress and accelerated desertification. At the same time, intense rainfalls will become more regular, increasing the frequency and severity of inland and coastal floods, which are already now among the costliest climate change-related hazards in the EU. These challenges will not be effectively addressed without a step change improvement in sustainable water consumption, resource management and adequate protection against water-related risks. Embracing these new water realities, the Mission will foster innovations towards smart, reliable, and efficient access to water and reduced vulnerability to water-related risks.

Research and innovation will develop incentive schemes fostering efficient use and allocation of water, propose novel metering and monitoring systems for water use/reuse and quality of aquatic ecosystems, design and test smart, low-energy water technologies and improve assessment, monitoring and management of water-related risks. In doing so, it will contribute to achieving the water-related environmental and risk management objectives, promote water security and sustainable community water management principles, as well as negotiated water agreements and governance schemes such as water contracts.

The Mission will support efforts to meet the EU water-related environmental policy objectives, in particular achieving and preserving good ecological and chemical status of water bodies, as well as ensuring that a sufficient quantity of good quality water is available to meet the needs of citizens, the economy and the environment. Recycling and reuse of water are central to a circular economy and provide an alternative type of water supply. In line with the risk assessment and planning processes established under the Water Framework Directive and the Marine Strategy Framework Directive, the Mission will encourage adoption of local environmental agreements such as river or coast contracts empowering local communities to co-manage water resources and water-dependent ecosystems.

Reviving landscapes and sustainable food systems

Rural and urban landscapes are an expression of the European cultural heritage and reflect how local communities have adapted to and transformed the natural environment to produce food, fibre, raw materials and renewable energy from agricultural crops, forests, and aquatic bodies or fisheries. The diversity and resilience of productive landscapes and sustainable livelihoods are undermined by climate risks, non-sustainable agricultural practices, migration to urban areas or urban sprawl. The Mission will support the transition to a resilient food system, mindful of the interrelations between human and ecosystem health, supply chains, sustainable consumption, and cultural heritage.

Research and innovation will promote sustainable business model innovation for income diversification, organic farming and community agriculture, sustainable and circular supply chains, design schemes for fair distribution of economic and social benefits from tourism throughout the recipient community, find adequate

substitutes of synthetic fertilisers and increase nitrogen efficiency, and design strategies to overcome cultural, technological, market and regulatory barriers to circular economy. The Mission will contribute to adoption of conservative management practices protecting soils and employing bioremediation, promote diffusion of smart agroecological and technological innovation, foster environmental stewardship, effectively reduce carbon dioxide emissions and expand natural carbon sinks, and accelerate the transition towards circular economy.

Policies to promote the establishment of centres of excellence in rural Europe can help to create critical mass of activity and expertise that can promote diversification of agricultural activity and resource efficiency on the farm. The updated EU Bioeconomy Strategy and its action plan generate new economic opportunities for farmers, foresters and fishers by using research and innovation to modernise primary production systems in a sustainable way and create novel biobased value-chains. The circular economy promotes the retention of materials in the materials cycle for as long as possible, the use of short or inner loops in manufacturing: this is appropriate for food production systems where by-products, residues, and side streams generated on the farm or at food processing facilities can be converted into products of value. The integration of food and non-food products is a major opportunity to build efficiency and resilience into the food production system. The Mission will help to meet the commitments under the Farm to Fork Strategy, ensuring that (i) the food chain from food production to consumption has a neutral or positive environmental impact (with at least 25% of agricultural land under organic farming management), (ii) everyone has access to sufficient, nutritious and sustainable food (ensuring food security and public health), and (iii) most sustainable food becomes the most affordable (promoting sustainable food consumption and facilitating a shift to healthy and sustainable diets).

3.1.2 Creating enabling conditions

Dealing with complex systems, it is not possible to know beforehand which solutions will deliver on the envisaged transformative change. **Creating enabling conditions for this change to happen** is therefore a central task of the Mission, which includes:

Facilitating inclusive and deliberative governance processes for just transitions

The success of this Mission will depend on engagement of stakeholders, from civil society organisations, to business communities, professional organisations, industries, and citizens. The Mission will spur social, institutional and cultural change employing deliberation and co-design, co-production and co-assessment of transformative solutions, and will support partner regions and communities in establishing innovative local governance platforms to steer the transformations. It will encourage inclusive and participatory processes to engage citizens and stakeholders, foster social learning and culture of civic engagement, develop capacities and capabilities, and provide mechanisms ensuring a just transition, securing support for those that are most vulnerable to climate change, as well as those that may be most negatively affected by the transition.

Research and innovation will include actions responding to knowledge needs and benefiting civil society organisations and local governance bodies such as climate assemblies that will design, test and monitor performance of experimental modes of participatory governance and environmental stewardship. Adequate strategies and mechanisms will be developed to manage structural changes that emerge during the transformations, and to resolve tensions as well as redistributive and intergenerational social conflicts undermining a just transition.

To facilitate inclusive and deliberative governance processes, the Mission will help mobilise grants from Horizon Europe, and will contribute to efforts undertaken in the context of the Climate Pact and the European Skills Agenda for sustainable competitiveness, social fairness and resilience.

Providing access to data, knowledge, and digital services

Data and knowledge are critical for better understanding and managing climate risks, enhancing adaptive capacities and supporting transformative innovations towards a more climate resilient society. Building on available data services and capacities, the Mission will mobilise research and innovation to improve and fill knowledge gaps at regional and local levels and unlock the benefits of the digital transformation for and within the regions and communities. Partner regions and communities will be assisted in scenario building and modelling needed to develop context-specific adaptation pathways, visualising possible futures. The Mission will also facilitate the co-production of data and knowledge and the co-design of climate services and solutions with citizens and stakeholders to improve the local saliency of data, usability of digital services and practicability of solutions.

Research and innovation will harness the advancements in climate risk assessment and management, building upon cutting-edge earth system modelling and assessment of compound, cascading and spill-over risks as well as crowdsourcing and citizen observatories, integration of climate and non-climate (social, economic, behavioural, institutional, historical and/or cultural dimensions, perceptual aspects of) knowledge and fomenting synergies across different types and sources of knowledge, and exploring possible futures by modelling and foresights. Further research will also address how social and cultural processes that shape how risks and solutions, including their associated uncertainties, are perceived and responded to. The Mission will contribute to filling the knowledge gaps hampering the adoption of transformative adaptation solutions and map the needs and opportunities for systems innovation and societal change.

In delivering on the provision of access to data, knowledge and digital services, the Mission will mobilise grants from the EU Framework Programme for Research and Innovation Horizon Europe. The Mission will also contribute to and leverage efforts undertaken to shape Europe's digital future, for example the establishment of EU-wide digital data spaces, aiming to overcome legal and technical barriers to data sharing across organisations, and the 'Destination Earth' initiative bringing together scientific and industrial excellence to develop a very high-level precision digital model of the Earth (both initiatives under the EU's strategy for data).

Strengthening education, communication and a better understanding behavioural change

The Mission will support partner regions and communities in fostering education, skills and capacities to improve understanding and developing new skills that are necessary to retain the benefits of the transition. To strengthen education, skills and capacities, the Mission will tap into efforts outlined in the European Skills Agenda intended to strengthen sustainable competitiveness, ensure social fairness and build resilience. The Mission will also benefit from the EU plans on Youth Employment Support that will reinforce the Youth Guarantee programme and future-proof the EU's vocational education and training making them adaptable to future challenges.

Research and innovation in this regard should, for example, address the need to develop and operate a skills forecasting systems that would provide information on upskilling and reskilling needs, design master courses to train green skills, or develop community adult learning centres, where people of all ages can learn and exchange, building a resilient and cohesive society.

The European Social Fund+ will play an important role in helping Europe's workforce acquire the skills they need to transfer from declining sectors to growing sectors and to adapt to new processes. Also, the Recovery and Resilience Facility yields unprecedented opportunities in this regard. The Mission will support partner regions and communities also in better understanding and nudging behavioural change, mobilising grants from relevant pillars under Horizon Europe.

Strengthening sustainable and circular local economies

The resilience and adaptive capacities of communities and regions depend on, among others, how well their economies perform. Transformative innovations need to address financial and economic vulnerability as well as the underlying drivers of inequality and poverty. The Mission will work with partner regions and communities to renew and restore local economies in a sustainable manner centred on smart specialisation, collective wellbeing and local resilience, and exploit the potential of a circular economy for building climate resilience. The Mission will also support the partner regions and communities to develop financial risk strategies against damage and losses from extreme climate events to close the climate protection gap.

Research and innovation will address collective wellbeing and local resilience, strengthening the plural forms of business entrepreneurship, new forms of social enterprises and community owned small-medium enterprises (SMEs), and more dense local supply chains that are more resilient to shocks in the system. Innovation will also address measurement, modelling and performance assessment of policy tools to exploit synergies between circular economy and climate change mitigation and adaptation strategies at various levels.

To strengthen local economies, the Mission would mobilise grants from relevant pillars under Horizon Europe, and should contribute to and leverage efforts undertaken in the context of the Circular Economy Action Plan leveraging Cohesion policy funds, and the Just Transition Mechanism promoting a transition

towards low-carbon and climate-resilient activities and striving to protect the citizens and workers most vulnerable to the transition. Synergies will be created with the updated EU Bioeconomy Strategy and its action plan. It will also increase the understanding of the ecological boundaries of the bioeconomy, which is central to many areas of this Mission. To unlock the benefits of the digital transition, the Mission will tap into efforts accelerating investments in Europe's 'Gigabit Connectivity' to strengthen the regions' digital infrastructure and networks.

Mobilising funds and resources

The Mission will support the partner regions and communities in crowding-in and mobilising multiple forms and sources of funding and finance. The EU budget will play a key role, with a proposed 25% target for climate mainstreaming across all EU programmes and at least 30% of the InvestEU Fund to contribute to fighting climate change. The Mission will assist partner regions and communities in accessing the EU funds and programmes, and loans from the European Investment Bank and the European Bank for Reconstruction and Development. National and regional funds, as well as progressive Green Procurement policies and environmental taxation will also play a role, as well as research on how insurance and other financial instruments can be harnessed to protect and regenerate ecosystems and the regulating services these provide.

3.2 Meeting the objectives of the Mission

3.2.1 Prepare Europe

The first objective of the Mission is to raise the bar on safety and security of the key community systems and ensure continuity of essential community services under all-hazard conditions. The Mission will help citizens, communities and regions to better prepare for climate change related shocks and disruptions (see annex 5 for a proposed timeline for the Mission).

By 2030, all local administrative units (LAU) and regions (NUTS) will have easy access to climate risk profiles and reliable early warning systems for all relevant risks, will have adopted comprehensive climate risk management plans, and will have community and social infrastructure and services that are safe, operable and accessible under critical conditions.

To meet the above ambitious objective, it is critically important to mobilise existing information, data and knowledge, and capacities to use them in a way that brings positive results to the community.

To foster a better understanding of the climate risk exposure, the Mission will:

- **improve availability, accessibility and usability of climate risk knowledge and digital knowledge services** that are useful to identify local "reasons for concern" and to reveal gaps in local risk management capacities and capabilities;

- **provide access to climate risk assessments** built upon cutting-edge climate and environmental information from European Earth Observation Programmes;
- **support adjustments of existing early warning systems** to take into account the changing patterns of climate extremes and ensure a rapid response protecting people at high risk such as children, senior citizens, people with chronic diseases, socially disadvantaged groups; and developing robust epidemiological surveillance and modelling tools.

The Mission will build upon existing capacities and stimulate use and exploitation of available data and services, and help overcome legal and technical barriers to data sharing, re-use and interoperability. The Mission will collaborate with the Disaster Risk Management Knowledge Centre; Galileo, Copernicus and Space Situational Awareness Programmes, European Environment Agency, EUROSTAT and others. The functionality and services of the existing datahubs and clearinghouses such as Climate Data Store and Climate-ADAPT will be further developed to allow users to explore risk profiles at various geographic scales, and combine and visualise the data in the most meaningful and engaging way.

A dedicated project will lay the groundwork for a European Climate Risk Assessment (ECRA) Framework, built upon open access research and innovation. Pioneering work of the Copernicus Climate Change Service and the progress made under the European Roadmap for Climate Services will be shared and made accessible for re-use and exploitation. The insights and users' requirements collected from the co-generation of knowledge within the 200 partner regions and communities mobilised as accelerators for transformative solutions (section 3.2.2) will inform the development of ECRA data and services.

To facilitate the adoption of climate risk management and community-based emergency plans and ensure that social infrastructure is safe and essential services operable and accessible under critical conditions, the Mission will support communities and regions and:

- **provide training, assistance, and equipment to understand, make sense of and respond to climate risks** threatening the safety of lives and social infrastructure, reliability of lifeline networks, performance of public services, viability of local livelihoods, and conservation status of natural community environment;
- **guide formulation of comprehensive climate risk management plans** along a single framework for managing fast-onset climate extremes such as floods and storms and gradual changes such as desertification and sea level rise; and based on inclusive and deliberative processes, making transparent and accountable how risks are prioritised and managed, and how the vulnerable, disadvantaged and marginalised are protected;
- **support mobilisation of funds available for the renovation wave** to retrofit and climate-proof public buildings and social housing, making them resource and energy efficient, healthy and compliant with principles of circular economy;
- **incentivise rigorous monitoring and evaluation of the progress made on reducing risk and adapting to global warming,** driven by consistent reporting schemes feeding into a periodic European stocktaking exercise and

providing input for the next cycle of climate risks' assessment and management.

The Mission will initiate research and innovation projects responding to the knowledge needs of citizens and civil society organisations and building capacities to take part in otherwise inaccessible policy- and decision-making processes. A series of projects will explore how to assimilate risk perceptions and behavioural aspects of human decision making in risk analysis, assessment and communication. These projects will also exploit the developments in mobile communication and social media to sensitise society to climate related risks. The Mission will foster demand- and challenge-driven innovation actions, training and capacity building, and citizen observatory campaigns. Dedicated supporting and coordination actions will develop community guidance and best practice examples for formulating climate risk and community emergency management plans, and mobilising funds to climate proof social infrastructure and services.

3.2.2 Accelerate transformation

The second objective of the Mission is to accelerate the transformation to a Europe that is climate resilient, fair and prosperous, within safe planetary boundaries. By 2030, 200 regions and communities (accelerators^x) will have articulated their visions of social change and climate-resilient pathways, tested transformative solutions, and prepared the ground for deep-rooted system innovations.

To assist the accelerators in designing transformative vision and pathways, the Mission will mobilise resources for a major research programme on social transformations for resilience and sustainability. The program will support fundamental research and foresight studies analysing ongoing societal changes and their drivers, as well as the key transformations that are needed to meet the goals of the Sustainable Development Agenda, the Paris Agreement on climate change and the Sendai Framework on Disaster Risk reduction 2015-2030. Research will address systemic macro-level social, governance and economic processes and help to scale down their implications to regional levels. In the opposite way, research will explore the systemic consequences of observed or imaginable processes at local and regional scales.

The Mission, supported by its communities of practice, will assist the partner regions and communities to formulate their individual visions and pathways by providing an overview of relevant innovations and solutions, and visualising possible futures modelling scenarios of pathways chosen. It will also assist in the formulation and agreement of the climate resilient contracts that should entail the main goals, commitments and responsibilities, as well as key performance indicators and would provide continuous support regarding the monitoring of progress made.

Based on the vision and adaptation pathways developed by partner communities and regions, the Mission will support these communities and regions to follow the chosen path to transformative change, by assisting them to:

- **co-design and test transformative solutions within and across the key community systems (section 3.1.1); and**
- **co-create favourable conditions for transformations (section 3.1.2).**

This objective is the cornerstone of the Mission. The 200 partner regions and communities will play a key role in piloting societal transformations. The regions and communities will be supported by a number of 'communities of practice' initiated by the Mission (section 2.4). The transformative solutions developed within the partner regions and communities will form a dynamic portfolio, which the Mission will use to stimulate mutual learning, partnership building and innovation.

The Mission will support the partner communities and regions to:

- **mobilise additional funds and resources to finance a portfolio of innovation actions.** Based on the agreed adaptation pathways and responding to the knowledge and innovation demand identified in the local and regional accelerators, the Mission will launch competitive calls and/or mobilise other funds for a number of innovation actions testing transformative solutions.
- **co-implement and orchestrate a portfolio of innovation actions.** The Mission will support partner regions and communities in making coherent choices about projects and problems as a system of interventions, allowing for iterative insights and feedback loops to inform dynamic management of innovation options and the portfolio as a whole, including managing exits/failures and introducing new solutions.
- **co-assess the portfolio of innovation actions.** The Mission will assist the regions and communities in making sense of the ongoing developments within the portfolio of innovation actions and in learning about obstacles and barriers to innovation, potential multipliers, more or less effective leverage points, integration effects and pathways to scaling. It will provide ample opportunities to share solutions, experiences, and knowledge with peer regions and communities and the respective communities of practice.

3.2.3 Build deep resilience

The third objective of the Mission is to provide deep demonstrations of climate resilience at large scale. Deep demonstrations are on-the-ground examples of thoroughgoing societal transformations accomplished on a larger scale, with verifiable impacts, and based upon citizen engagement. By 2030, 100 deep demonstration of climate resilience will be developed across Europe.

The Mission will:

- Create impact at scale, and scale-up innovations designed and successfully tested in pilot accelerators at regional and/or community level (objective 2), and
- Create value across borders and promote cross-border partnerships on issues where regions and communities have identified a need or benefit to address the transformation to climate resilience within a common framework.

The 100 deep demonstrations will mostly emerge from the grassroots innovation of the 200 accelerators. Some advanced regions may be already in position to work on the deep demonstrations. Member States governments and cross-border organisations such as international river basin commissions will play a critically important role. Going beyond research and innovation, the creation of impact at scale or cross-border value hinges on governments and the EU leveraging policy

processes and funds managed at national and European level, such as the National Energy and Climate Plans, the Common Agricultural Policy and the European Agricultural Fund for Regional Development, the European Structural and Investment Fund, the European Regional Development Fund, and the Cohesion Fund.

To create the impact at scale, the Mission will:

- select the most promising accelerators, based on a thorough review of their potential impacts, diversity and complementarity, as well as their geographic distributions, and assist them in achieving and amplifying their outcomes;
- further enhance capacities and capabilities of the chosen demonstrators by innovative coaching, peer review, knowledge transfer and twinning through every step of their transformation pathways;
- assist demonstrators to implement the successful transformative solutions at large scale, to mobilise and tailor European and national funding, to respond to encountered challenges and barriers, as well as to exploit new opportunities.

To create value across borders, the Mission will:

- help identify issues that would need and/or benefit from a coordination across borders for more climate resilience, such as the cross-border management of health systems and services^{xi}, natural and cultural heritage^{xii}, river basins^{xiii}, business and value chains, or knowledge and innovation^{xiv};
- facilitate and strengthen coordination and cooperation, drawing on the support of relevant communities of practice established under the Mission, and/or other relevant platforms offering the sharing of knowledge across borders, including for example the EU macro-regional strategies;
- assist demonstrators to mobilise relevant funds and resources, in particular drawing on the European Regional Development Fund (ERDF), including the European Territorial Cooperation (or Interreg)^{xv} that supports common challenges across regions.

ⁱ EUCO 23/19. Conclusions of the European Council meeting, 17-18 October 2019, <https://www.consilium.europa.eu/media/41123/17-18-euco-final-conclusions-en.pdf>

ⁱⁱ The European Green Deal. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions [COM \(2019\) 640 final](#).

ⁱⁱⁱ Europe's moment: Repair and Prepare for the Next Generation. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions [COM \(2020\) 456 final](#).

^{iv} Adaptation to Climate Change – Blueprint for a new, more ambitious EU strategy ([link](#))

^v Manca, Benczur and Giovannini, Building a scientific narrative towards a more resilient EU society, Part 1: a conceptual framework, EUR 28548 EN, doi:10.2760/635528

^{vi} *Resilience* is the ability of a system, community or society to resist, absorb, accommodate to and recover from shocks and stresses in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. Navigating uncertainty, and with a particular attention to the most vulnerable, resilience enables social and environmental systems (from local ecosystems and communities to the world economy and Earth stability) to operate along desired and functioning pathways. Resilience is thereby a critical

component of sustainable development, integrating mitigation of avoidable risks and adaptation to unavoidable risks, providing societies with qualities needed in particular when faced with rising uncertainty and turbulence.

^{vii} Transformations entail changes of fundamental attributes of a system, including value systems; regulatory, legislative, or bureaucratic regimes; financial institutions; and technological or biological systems. IPCC: Summary for Policymakers, in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by C. B. Field, V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, and L. L. White, pp. 1–32, Cambridge University Press, Cambridge, United Kingdom, and New York, NY, USA., 2014.

^{viii} EIT Climate-KIC (2019). Work with us to achieve net zero, in time: Funding systems change is today's most important innovation. [[Link](#)]

^{ix} Fransen L, del Bufalo G and Reviglio E (2018) Boosting Investment in Social Infrastructure in Europe. Report of the High-Level Task Force on Investing in Social Infrastructure in Europe chaired by Romano Prodi and Christian Sautter. Luxembourg: Publications Office of the European Union, 2018. doi:10.2765/794497

^x Accelerators are projects intended to scaleup innovative ideas that have been previously successfully tested. European Innovation Council (EIC) and the Climate KIC have dedicated accelerators programs.

^{xi} With cross-border health care being enshrined in the European Treaty to compensate for gaps in regional healthcare provision, demonstrators could explore climate change relevant innovations in cross-border healthcare and social care, building upon responses to COVID-19 pandemic.

^{xii} To achieve a truly coherent and resilient Trans-European Nature Network the EU Biodiversity Strategy 2030 suggests investing in green and blue infrastructure and cooperation across borders among Member States to set up ecological corridors to prevent genetic isolation, allow for species migration, and maintain and enhance healthy ecosystems.

^{xiii} For example, open access cross-border water accounting system continuously measuring and monitoring the status of, and trends in, water supply and demand in specified domains across large river basin districts would be of great value for the EU Water Framework Directive. Including the projected climate change in such systems would inform difficult climate adaptation choices including review of water allocation quotas and schemes.

^{xiv} The demonstrators could explore new ways of cross-border collaborative innovation between businesses, industry, and research organisations, building on the assessment of the regional innovation scoreboard (RIS) that cross-border regional spill overs of research and innovation have positive effects up to certain distance but are overall limited.

^{xv} In the current programming period 2014-2020, the three strands of Interreg include: (i) cross-border cooperation (Interreg A) covering border regions from neighbouring countries; (ii) transnational cooperation (Interreg B) covering larger areas of cooperation such as the Baltic Sea, Alpine and Mediterranean regions, including some non-EU countries; and (iii) interregional cooperation (Interreg C) covering all Member States through four programmes for experience and knowledge sharing.

4 Annexes

Annex 1: Key evidence and references recommended for further reading

Key evidence and references Recommended for further reading

Feyen L., Ciscar J.C., Gosling S., Ibarreta D., Soria A. (editors) (2020). **Climate change impacts and adaptation in Europe**. JRC PESETA IV final report. [\[Link\]](#)

Abstract

The JRC PESETA IV study shows that ecosystems, people and economies in the EU will face major impacts from climate change if we do not urgently mitigate greenhouse gas emissions or adapt to climate change. The burden of climate change shows a clear north-south divide, with southern regions in Europe much more impacted, through the effects of extreme heat, water scarcity, drought, forest fires and agriculture losses. Limiting global warming to well below 2°C would considerably reduce climate change impacts in Europe. Adaptation to climate change would further minimise unavoidable impacts in a cost-effective manner, with considerable co-benefits from nature-based solutions.

European Environment Agency (2020). **Monitoring and evaluation of national adaptation policies throughout the policy cycle**. EEA Report No 06/2020. [soon to be released]

Abstract

Although the EU and all EU Member States have a dedicated climate adaptation policy, none of them can fully show whether we are becoming more resilient. This report looks at how monitoring and reporting could feed into policy evaluation and inform future policies.

Gancheva M., O'Brien S., Tugran T., Borrett C. (2020). **Adapting to climate change: Challenges and opportunities for the EU local and regional authorities**. Report by Milieu Consulting SRL commissioned by the Committee of the Regions. [\[Link\]](#)

Abstract

This report presents a review of key issues and challenges in adapting to the impacts of climate change for local and regional authorities in the EU, based on a review of literature and a survey of stakeholders within regional and municipal authorities. The key challenges identified can be categorised into the following four groups: Lack of political leadership and commitment to adaptation; Insufficient administrative capacity; Insufficient financial resources; and Knowledge gaps. The report concludes by providing a set of recommendations that can be pursued at the EU-level to overcome these challenges.

Global Commission on Adaptation (2019). **Adapt now: A global call for leadership on climate resilience**. World Resources Institute and Global Commission on Adaptation. [\[Link\]](#)

Abstract

This report focuses on making the case for climate adaptation, providing specific insights and recommendations in key sectors: food security, the natural environment, water, cities and urban areas, infrastructure, disaster risk management, and finance. It is designed to inspire action among decision-makers, including heads of state and government officials, mayors, business executives, investors, and community leaders.

EIT Climate-KIC (2019). **Work with us to achieve net zero, in time: Funding systems change is today's most important innovation.** [[Link](#)]

Abstract

EIT Climate-KIC is Europe's largest climate innovation agency focused on the rapid, broad-based systems transitions we now need to build prosperous, resilient, net-zero-carbon societies in time. EIT Climate-KIC is a delivery vehicle for systems innovation. Through framing ambition and intent, systems mapping, portfolio-building, demonstration, sense-making and orchestration, we offer systems innovation as a service. Deep demonstrations are intended as inspirational examples of what is possible at the level of whole systems when innovation is orchestrated, collaborative and mission-led.

Annex 2: Engagement with citizens and stakeholders

In developing this report scoping the Mission on Adaptation to Climate Change Including Societal Transformation, the Mission Board has engaged with citizens and a variety of stakeholders to learn from their experience and their views, throughout the year 2020. The tables below list the individual citizen and stakeholder engagement events that took place related to this Mission and any written feedback we have received from citizens or stakeholders.

In addition to the broader engagement with citizens and stakeholders, the EU Member States and Associated Countries have been regularly involved in the development of the report through the sub-group on the Mission "Adaptation to Climate Change, including Societal Transformation" of the Strategic Configuration of the Horizon Europe Shadow Programme Committee. Also, European Commission Directorate-Generals have regularly contributed to the development of the report scoping the Mission on Adaptation to Climate Change Including Societal Transformation.

Citizen engagement events

Online citizen engagement event with European Youth Forum (28 May 2020): In a three hours online session, 15 participants from the European Youth Forum engaged in a discussion with two Mission Board members, Asun Lera St. Clair and Per Espen Stokens, and European Commission representatives about the Horizon Europe Mission on Adaptation to Climate Change Including Societal Transformation.

Online citizen engagement event with citizens from Slovakia (23 July 2020): In a six hours online session, 43 citizens from Slovakia engaged in a discussion with Mission Board member Jaroslav Mysiak and other Slovak experts about the Horizon Europe Mission on Adaptation to Climate Change Including Societal Transformation.

Online citizen engagement event with citizens from Spain (28 July 2020): In a six hours online session, 50 citizens from Spain engaged in a discussion with Mission Board member Asun Lera St. Clair and other Spanish experts about the Horizon Europe Mission on Adaptation to Climate Change Including Societal Transformation

Online citizen engagement event with citizens from Belgium (22 August 2020): In a six hours online session, 47 citizens from Belgium engaged in a discussion with Mission Board member Jean-Pascal van Ypersele, Mission Assembly member Olivier De Schutter and other Belgian experts about the Horizon Europe Mission on Adaptation to Climate Change Including Societal Transformation.

Online citizen engagement event with citizens from Estonia (9 September 2020): In a 3 hours online session, 37 citizens from Estonia engaged in a discussion with Mission Board member Ann Runnel and other Estonian experts about the Horizon Europe Mission on Adaptation to Climate Change Including Societal Transformation.

Stakeholder engagement events

The European Union of Water Management Associations (EUWMA) in the UK (York, 5 September 2019): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

Meeting of the Committee on International Affairs Union of Water Authorities Netherlands (Amersfoort, 15 November 2019): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

Meeting of the National Water Forum Romania-Netherlands (Bucharest, 25 November 2019): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

High-level event on the Missions in Horizon Europe during UNFCCC COP25 in Spain (Madrid, 11-12 December 2019): Presentation and discussion on the Mission with Mission Board Member Asun Lera St. Clair

Meeting of the National Board Water Authorities Netherlands (Amersfoort, 13 December 2019): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

Meeting of the Presidium of the Royal Dutch Academy of Sciences (Amsterdam, 17 January 2020): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

Meeting with Denmark's strategic reference group for Horizon 2020 (31 January 2020): Presentation and discussion on the Mission with Mission Board Chair Connie Hedegaard

Horizon Europe Mission Café in Austria (Vienna, 4 February 2020): Presentation and discussion on the Mission with Mission Board Member Daniela Jacob

Event on Mission Climate adaptation and Mission Cities in Italy (Milan, 5 February 2020): Presentation and discussion on the Mission with Mission Board Member Jaroslav Mysiak

The European Union of Water Management Associations (EUWMA) in the UK (York, 5 September 2019): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

European Research Infrastructures conference in Croatia (Zagreb, 18 March 2020): Presentation and discussion on the Mission with Mission Board Member Mirela Holy

Stakeholder Event online on Missions in Horizon Europe (16 June 2020): Presentation and discussion on the Mission with Mission Board Member Helena Freitas

Meeting of the JPI Climate Transdisciplinary Advisory Board (TAB) 2018 – 2021 (16 June 2020): Presentation and discussion on the Mission with Mission Board Member Daniela Jacob

ClimatEurope Webstival (18 June 2020): Presentation and discussion on the Mission with Mission Board Member Daniela Jacob

Meeting with European Parliament's Committee on Industry, Research and Energy (ITRE) (2 July 2020): Presentation and discussion on the Mission with Mission Board Chair Connie Hedegaard

Meeting with European Regions Research and Innovation Network (ERRIN) (2 July 2020): Presentation and discussion on the Mission with Mission Board Chair Connie Hedegaard

Meeting of the Expert group on the economic and societal impact of research and innovation (ESIR) (9 July 2020): Presentation and discussion on the Mission with Philippe Tulkens

Online EU Mission Cafe in Germany (9 July 2020): Presentation and discussion on the Mission with Mission Board Member Daniela Jacob

Climate Adaptation mission webinar with National Contact Points for Climate action, Raw Materials, Environment and Resource Efficiency (NCPs CaRE – 9 July) Presentation and discussion on the Mission with Mission Board Member Mark Scicluna Bartoli and Jaroslav Mysiak

Webinar on Climate-Resilient Trade and Production, A seminar with EU member states on the European policy implications of transboundary climate risks (9 July 2020): Presentation and discussion on the Mission with Mission Board Member Jaroslav Mysiak

Climate KIC Journey Summer School (13 July 2020): Presentation and discussion on the Mission with Mission Board Member Asun Lera St. Clair

Online Stakeholder Engagement event on the Mission in the Netherlands (16 July 2020): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

Meeting of the General Board Water Authority Rijn& IJssel, the Netherlands (Zutphen, 31 August 2020): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

High-level Expert Online Workshop on Climate Adaptation Modelling (8-10 September 2020): Presentation and discussion on the Mission with Philippe Tulkens

Fresh Water Conference Middelburg, the Netherlands (11 September 2020): Presentation and discussion on the Mission with Mission Board Member Hein Pieper

Written contributions received from stakeholders

A position paper of the Aerosol, Clouds and Trace Gases Research Infrastructure (ACTRIS) project (Horizon 2020) on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the Analytical Research Infrastructures in Europe (ARIE), a joint effort of LEAPS, LENS, DREAM, LaserLab-Europe, INSPIRE, EMFL and RADIATE to tackle the five Horizon Europe Missions

A position paper of the ATTRACT Project (Horizon 2020) on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the Aurora Universities Network on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the Climate KIC on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the European Cooperation in Science and Technology (COST) Project (Horizon 2020) on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the European Boating Industry (EBI) on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the European Regions Research and Innovation Network (ERRIN) on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the German Government resorts participating in inter-ministerial working group on adaptation to Climate Change on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the Helmholtz Association of German Research Centres, Germany, on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the international symposium 'Cultural heritage in crisis: Challenges in times of climate change and digitalization', held 28-29 November 2019 in Villa Vigoni, Como and drafted by Prof Cristina Sabbioni, Italian National Research Council

A position paper of the METROFOOD-PP Consortium (H2020) on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the Red Cross Red Crescent on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the Thünen Institute (TI) and the Julius-Kühn Institute (JKI), Germany, on the Mission on Adaptation to Climate Change, including Societal Transformation

A position paper of the JPI Climate Transdisciplinary Advisory Board (TAB) 2018 – 2021 on the Mission on Adaptation to Climate Change, including Societal Transformation

Comments from Gerhard Zickenheiner, Member of the German Bundestag, on the Mission on Adaptation to Climate Change, including Societal Transformation

Comments from the Umwelt Forschungszentrum (UFZ) Helmholtz Center on the interim scoping report

PLACARD manifesto: Adapting to extremes: Key insights for bridging climate change adaptation and disaster risk reduction in the European Green Deal.
<https://www.placard-network.eu/wp-content/PDFs/PLACARD-manifesto-May2020.pdf>

Report of a stakeholder event on the Mission on Adaptation to Climate Change, including Societal Transformation held in Portugal, 16 June 2020

Results of a Delphi Survey provided by Foresight on Demand conducted in July/August 2020 for the Mission Board on Adaptation to Climate Change, including Societal Transformation

Summary notes of Stakeholder Engagement event Mission Adaptation to Climate Change, including Societal Transformation, 16 July 2020, The Netherlands

Summary notes of Online Focus Group Citizen Engagement for Climate Change Adaption, organised by the Netherlands Enterprise Agency (RVO) and Rijkswaterstaat, 25 July 2020, The Netherlands

Annex 3: Relevant initiatives of the European Green Deal (EGD)

The below table provides elements and examples of most relevant initiatives of the European Green Deal that the Mission would address and/or draw on. It is not a comprehensive list of policy initiatives linked to the Mission.

EGD Initiatives	Commitments addressed and Funds leveraged by the Mission
Increasing the EU's climate ambition for 2030 and 2050	
European Climate Law, EU strategy on adaptation to climate change	<ul style="list-style-type: none"> - Contributing to the implementation of Article 4 of the European Law under which <ul style="list-style-type: none"> o relevant Union institutions and the Member States shall ensure continuous progress in enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in accordance with Article 7 of the Paris Agreement; o Member States shall develop and implement adaptation strategies and plans that include comprehensive risk management frameworks, based on robust climate and vulnerability baselines and progress assessments. - Supporting the EU strategy on adaptation to climate change in helping all levels of governance and stakeholders to <ul style="list-style-type: none"> o improve knowledge of climate impacts (e.g. through increased awareness, education, and better access to knowledge and fit-for-purpose data on individual and collective climate risks); o reinforce planning and climate risk management (e.g. through risk assessments and management, and helping to close the climate protection gap via risk-transfer mechanisms); o accelerate action with a focus on solutions (in addition to understanding), on deploying innovation (in addition to research), on implementation (in addition to planning), and on prevention (in addition to ex-post). - Supporting the EU strategy on adaptation to climate change with <ul style="list-style-type: none"> o more and better data and statistics that are timely, accurate, disaggregated, people-centred, accessible and user-friendly also for audiences with limited technical capacities; o deeper knowledge and faster deployment of solutions e.g. by developing better economic models for the impacts of climate change, addressing knowledge gaps

	<p>and providing customised tools and products that help decision makers to take informed decisions;</p> <ul style="list-style-type: none"> ○ closing the climate protection gap, e.g. helping to further the market penetration of natural disaster insurance and to unleash the full potential of insurance pricing for risk-awareness prevention and mitigation and for long-term resilience in investment and business decisions; ○ preventing damage to infrastructure and beyond, e.g. by climate proofing infrastructure to enhance the resilience to climate change impacts and reducing greenhouse gas emissions, or the employment of green and blue infrastructure; ○ adapting forests and other ecosystems for an adapting society, e.g. by promoting nature-based solutions to adaptation and restoring ecosystems to become more resilient.
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Mobilising industry for a clean and circular economy

EU industrial strategy	<ul style="list-style-type: none"> - Contributing to the achievement of the goals of the industrial strategy under which Europe's industry is to become greener, more circular and more digital while remaining competitive on the global stage, including by <ul style="list-style-type: none"> ○ Encouraging place-based industrial innovation and experimentation allowing regions to develop and test new solutions with SMEs and consumers, drawing on their local characteristics, strengths and specialisms; ○ Building a more circular economy by e.g. encouraging circular approaches to water reuse in agriculture with the new Water Reuse Regulation, facilitating water reuse and efficiency, or the sustainable and circular bio-based sector through the implementation of the Bioeconomy Action Plan; ○ Underpinning the Circular Economy Action Plan by improving measurement, modelling and policy tools to capture synergies between the circular economy and climate change mitigation and adaptation at EU and national level; ○ Creating a deeper and more digital single market contributing to the establishment of relevant data spaces and the building of critical digital infrastructure, encouraging an SME to SME approach to knowledge sharing and collaboration, and developing new types of business models. - Leveraging funds from the Single Market Programme, the Digital Europe Programme, the Innovation Fund, InvestEU, European Structural and Investment funds etc.
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Building and renovating in an energy and resource efficient way

Renovation Wave

- Engaging in a 'renovation wave' of public and private buildings to address the twin challenge of energy efficiency and affordability, at least doubling the annual renovation rate, including by
 - o Ensuring that the design of new and renovated buildings at all stages is in line with the needs of the circular economy, and lead to increased digitalisation and climate-proofing of the building stock
 - o Creating jobs in construction, renovation and other labour-intensive industries and providing opportunities to support SMEs and local jobs
- Supporting and leveraging the initiative on renovation bringing together the buildings and construction sector, architects and engineers and local authorities to address the barriers to renovation, paying particular attention to the renovation of social housing, schools and hospitals
- Leveraging innovative financing schemes under InvestEU, including a doubled in size sustainable infrastructure window, as well as from the Recovery and Resilience Facility that Member States will be able to use, in line with identified priorities under the European Semester or the NECPs

Designing a fair, healthy and environmentally friendly food system

Farm to Fork Strategy

- Supporting the goals of the Farm to Fork Strategy to reduce the environmental and climate footprint of the EU food system and strengthen its resilience, and to ensure food security in the face of climate change and biodiversity loss, including
 - o ensuring that the food chain, covering food production, transport, distribution, marketing and consumption, has a neutral or positive environmental impact, preserving and restoring the land, freshwater and sea-based resources on which the food system depends; helping to mitigate climate change and adapting to its impacts;
 - o ensuring food security, nutrition and public health – making sure that everyone has access to sufficient, nutritious, sustainable food that upholds high standards of safety and quality, plant health, and animal health and welfare, while meeting dietary needs and food preferences; and
 - o preserving the affordability of food, while generating fairer economic returns in the supply chain, so that ultimately the most sustainable food also becomes the most affordable, fostering the competitiveness of the EU supply sector, promoting fair trade, creating new

	<p>business opportunities, while ensuring integrity of the single market and occupational health and safety.</p> <ul style="list-style-type: none"> - Leveraging funds from the European Regional Development Fund investing, through smart specialisation, in innovation and collaboration along the food value chain, through InvestEU fund, fostering investments in the agro-food sector by de-risking investments by European corporations and facilitating access to finance for SMEs, and facilitating investment support through the CAP to improve the resilience and accelerate the green and digital transformation of farms.
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Preserving and restoring ecosystems and biodiversity

<p>Biodiversity Strategy for 2030, Forest Strategy</p>	<ul style="list-style-type: none"> - Supporting the implementation of the EU Nature Restoration Plan by 2030, including <ul style="list-style-type: none"> o Legally binding EU nature restoration targets to restore significant areas of degraded ecosystems, in particular those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters; o Bringing nature back to agricultural land by ensuring that at least 10% of agricultural area is under high-diversity landscape features to enhance carbon sequestration, prevent soil erosion and depletion, filter air and water, and support climate adaptation; o Managing at least 25% of agricultural land under organic farming practices, significantly increasing agro-ecological practices, reducing the risk and use of chemical pesticides by 50%, and the losses of nutrients from fertilisers by 50%, resulting in the reduction of the use of fertilisers by at least 20%; o Increasing the quantity, quality and resilience of European forests, notably against fires, droughts, pests, diseases and other threats likely to increase with climate change, by planting at least 3 billion additional trees in the EU by 2030, in full respect of ecological principles; o Stepping up the implementation of the Water Framework Directive and Floods Directive, greater efforts are needed to restore freshwater ecosystems and the natural functions of rivers, including the restoration of at least 25,000 km of free-flowing rivers; o Greening urban and peri-urban areas, systematically integrating healthy ecosystems, green infrastructure and nature-based solutions into urban planning, calling on cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.
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	<ul style="list-style-type: none"> - Supporting the establishment of a truly coherent and resilient Trans-European Nature Network by 2030, including <ul style="list-style-type: none"> o Legally protecting a minimum of 30% of the EU's land area and 30% of the EU's sea area and integrating ecological corridors and effectively managing all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately. - Leveraging funds from the new Common Agricultural Policy (CAP), including by promoting eco-schemes and result-based payment schemes, the Cohesion Policy funds, the LIFE programme, and funds related to European Territorial Cooperation.
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Pursuing green finance and investment and ensuring a just transition

<p>Sustainable Europe Investment Plan, Just Transition Mechanism, Renewed Sustainable Finance Strategy, initiatives on green budgeting practices of Member States and of the EU</p>	<ul style="list-style-type: none"> - Leveraging the Sustainable Europe Investment Plan to help meet the funding needs by <ul style="list-style-type: none"> o increasing funding for the transition, and mobilise at least €1 trillion to support sustainable investments over the next decade through the EU budget and associated instruments, in particular InvestEU; o creating an enabling framework for private investors and the public sector to facilitate sustainable investments, including the EU taxonomy as part of the renewed Sustainable Finance Strategy; o providing support to public administrations and project promoters in identifying, structuring and executing sustainable projects; o supporting those regions and sectors that are most affected by the transition through a Just Transition Mechanism that is to promote a transition towards low-carbon and climate-resilient activities; - Leveraging national budgets <ul style="list-style-type: none"> o tapping into national green budgeting tools to help redirect public investment, consumption and taxation to green priorities and away from harmful subsidies.
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Mobilising research and fostering innovation

<p>Horizon Europe - the next research and innovation framework programme, European Strategy for Data</p>	<ul style="list-style-type: none"> - Mobilising instruments available under the Horizon Europe programme including <ul style="list-style-type: none"> o the knowledge and innovation communities run by the European Institute of Innovation and Technology (Pillar 3) to promote collaboration among higher education institutions, research organisations and companies on climate change, sustainable energy, food for the
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	<p>future, and smart, environmentally-friendly and integrated urban transport;</p> <ul style="list-style-type: none"> ○ the European Innovation Council (Pillar 3) and its dedicated funding, equity investment and business acceleration services to high potential start-ups and SMEs for them to achieve breakthrough Green Deal innovation that can be scaled up rapidly; ○ the partnerships with industry and Member States (Pillar 2) that will support research and innovation on areas such as climate, energy, mobility, food, bioeconomy, natural resources, agriculture and environment; ○ the research on societal challenges (Pillar 2) such as climate change, biodiversity, digital, health, culture, creativity and inclusive society; ○ research infrastructures (Pillar 1) that provide resources and services for research communities to conduct research and foster innovation. <p>- Mobilising efforts in the context of the European Strategy for Data including</p> <ul style="list-style-type: none"> ○ the establishment of EU-wide common, interoperable data spaces in strategic sectors, aiming to overcome legal and technical barriers to data sharing across organisations, including by (i) the development of data-sharing tools and platforms, (ii) the creation of data governance frameworks, and (iii) improving the availability, quality and interoperability of data; ○ the launch of the 'Destination Earth' initiative developing a very high precision digital model of the Earth to offer a digital modelling platform to visualise, monitor and forecast natural and human activity.
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Activating education and training

European skills agenda for sustainable competitiveness, social fairness and resilience	<p>- Mobilising the European skills agenda to</p> <ul style="list-style-type: none"> ○ Improve skills intelligence to ensure up-to-date information on skills needs, e.g. developing a skills forecasting system; ○ Foster National skills strategies aligning efforts across employment, education, research, industry and regional development policies; ○ Making vocational education and training future-proof, ensuring that organisations providing education and training deliver relevant skills along the entire lifelong learning continuum; ○ Investing in skills to increase the number of professionals who build and master green technologies, develop green products, services and business models,
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	<p>create innovative nature-based solutions and help minimising the environmental footprint of activities;</p> <ul style="list-style-type: none"> - Contributing to meeting the objectives of the European skills agenda, including having, by 2025, <ul style="list-style-type: none"> o 120 million adults in the EU participating in learning every year; 14 million adults with low qualifications in the EU participate in learning every year; and 230 million adults should have at least basic digital skills. - Leveraging funds to support and unlock investment in human capital from <ul style="list-style-type: none"> o REACT-EU (financed by Next Generation EU), allowing the European Social Fund to direct additional funding towards skilling opportunities linked to the green and digital transitions; o The Recovery and Resilience Facility, providing Member States with ample opportunities to fund up- and reskilling actions; o The European Social Fund Plus, Erasmus+, Just Transition Fund.
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Time to act - together: A European Climate Pact

European Climate Pact	<ul style="list-style-type: none"> - Contributing to the implementation of the European Climate Pact and its goal to engage with the public on climate action, including by <ul style="list-style-type: none"> o Encouraging information sharing, inspiration, and foster public understanding of the threat and the challenge of climate change and environmental degradation and on how to counter it. o Creating both real and virtual spaces for people to express their ideas and creativity and work together on ambitious action, both at individual and collective level. o Building capacity to facilitate grassroots initiatives on climate change and environmental protection
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Annex 4: Sustainable Development Goals (SDGs) and their targets addressed by the Mission

SDGs	SGD targets addressed by the Mission
Goal 1: End poverty in all its forms everywhere	Target 1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
Goal 3: Ensure healthy lives and promote well-being for all at all ages	Target 3.D Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Target 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles [...]
Goal 5: Achieve gender equality and empower all women and girls	Target 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
Goal 6: Ensure availability and sustainable management of water and sanitation for all	<p>Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity</p> <p>Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate</p>

	<p>Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes</p> <p>Target 6.b: Support and strengthen the participation of local communities in improving water and sanitation management</p>
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy	Target 7.3 By 2030, double the global rate of improvement in energy efficiency
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<p>Target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors</p> <p>Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services</p> <p>Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation [...]</p>
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	<p>Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all</p> <p>Target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes [...]</p> <p>Target 9.5: Enhance scientific research, upgrade the technological capabilities of industrial sectors [...], encouraging innovation [...]</p>
Goal 10: Reduce inequality within and among countries	Target 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
Goal 11: Make cities and human settlements inclusive, safe,	<p>Target 11.1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums</p> <p>Target 11.3: By 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and</p>

<p>resilient and sustainable</p>	<p>sustainable human settlement planning and management in all countries</p> <p>Target 11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations</p> <p>Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities</p> <p>Target 11.a: Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning</p> <p>Target 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels</p>
<p>Goal 12: Ensure sustainable consumption and production patterns</p>	<p>Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources</p> <p>Target 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses</p> <p>Target 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities</p> <p>Target 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</p>
<p>Goal 13: Take urgent action to combat climate change and its impacts</p>	<p>Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</p> <p>Target 13.2: Integrate climate change measures into national policies, strategies and planning</p> <p>Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</p>

<p>Goal 14: Conserve and sustainably use the oceans, seas and marine resources</p>	<p>Target 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution</p> <p>Target 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans</p> <p>Target 14.3 Minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels</p> <p>Target 14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information</p>
<p>Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>	<p>Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements</p> <p>Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p> <p>Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world</p> <p>Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species</p> <p>Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts</p>
<p>Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	<p>Target 16.7: Ensure responsive, inclusive, participatory and representative decision-making at all levels</p>

Annex 5: Timeline of the Mission

ACTIVITIES	21	22	23	24	25	26	27	28	29	30
CO-DESIGN & PREPARATORY PHASE										
Picking our partners for the Mission:										
• Finding 200 partner regions and communities										
• Engaging communities of practice										
• Setting up an implementation platform										
Establishing Mission governance and support structures:										
• Local level governance structures										
• Horizontal governance structures										
• Multi-level governance structures										
Co-designing Mission:										
• Co-creating vision and transformative pathways										
• Agreeing on Climate Resilience Pact										
CO-IMPLEMENTATION PHASE										
Prepare Europe to deal with climate disruptions:										
• A better understanding of climate risk exposure										
• Adoption of climate risk management plans										
Accelerate the transition to a climate resilient future:										
• Co-design and test solutions for transformations										
• Co-creation of favourable conditions										
Build deep resilience:										
• Creating impact at scale										
• Creating cross-border value										
CO-EVALUATION PHASE										
Monitoring and reporting:										
• Monitoring										
• Reporting										
Evaluating and adjusting the Mission:										
• Project level										
• Mission level										
Evaluating and learning from Mission:										
• Studying large scale transformations & transitions										
• Lessons for EU Climate Adaptation Strategy										

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Vision and objectives of the proposed Mission

In a world of increasing and mutually reinforcing climate disruptions and socio-economic and environmental challenges, the vision of this Mission is to **turn the urgent challenge of adapting to climate change into an opportunity to make Europe resilient, climate-prepared and fair.**

By 2030, the Mission will:

1. **Prepare Europe to deal with climate disruptions,** and assist all citizens, communities and regions in better understanding, preparing for and managing climate risks;
2. **Accelerate the transformation to a climate-resilient future,** supporting 200 European communities and regions in co-creating a vision, innovation pathways, and developing solutions for transformative adaptation within safe planetary boundaries;
3. **Build deep resilience by scaling up actionable solutions triggering societal transformations** through 100 deep demonstrations of resilience across a number of European communities and regions, with emphasis on cross-border cooperation and cohesion.

Studies and reports



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