Climate-KIC is supported by the EIT, a body of the European Union

Views from EIT Climate-KIC on the EU 2030 Climate Target Plan

This document supplements EIT Climate-KIC views communicated during the European Commission public consultation process.

June 2020

climate-kic.org

Introduction

EIT Climate-KIC welcomes the Commission's initiative on the EU 2030 emission reduction ambition as well as its proposal for a Climate Law. As the main European Union innovation agency dedicated to tackling climate change, EIT Climate-KIC supports the European Commission's commitment and efforts to achieve zero net emission by 2050, supported by ambitious mid-term targets in 2030.

The climate emergency is already here and made even more significant in light of the COVID19 crisis which has deeply impacted European economies and societies. The recent announcements from the European Commission on the EU Recovery Plan, along with national recovery packages being shaped across the EU, bring significant opportunities to drive further efforts and investments in the green transition which will support Europe's recovery based on quality and upskilled jobs and a competitive and clean economy. Therefore, we must ensure that today's political decisions are strongly aligned with the European Green Deal and consistent with the carbon neutrality target. Europe will need to learn from this crisis to help design and create a better and more resilient and greener Europe after this pandemic. That includes rethinking the way Europe provide subsidies, fiscal stimuli and social support, both to accelerate progress on the European Green Deal and to encourage new norms for social interaction and community support.

EIT Climate-KIC's key messages for the 2030 Climate Target Plan:

1) Set a 2030 EU emissions reduction target consistent with a 1.5 degree pathway

Europe has an extraordinary challenge and time is running out. The IPCC Report acknowledges we need to demonstrate increased ambition towards achieving net zero- emissions, **targeting a date much faster than 2050**, and **coherent with the aim of 1.5°C**.

Such a goal is significantly more ambitious than current agreed European targets and very far from the progress made to date. Nonetheless, EIT Climate-KIC believes that the **EU has the opportunity to show leadership at global level** by delivering on the European Green Deal, also by recognising its historical responsibility in contributing to climate change that have underpinned Europe's economy and prosperity. We believe that a net zero future is possible, and that it offers significant opportunities for the European economy, society and citizens.

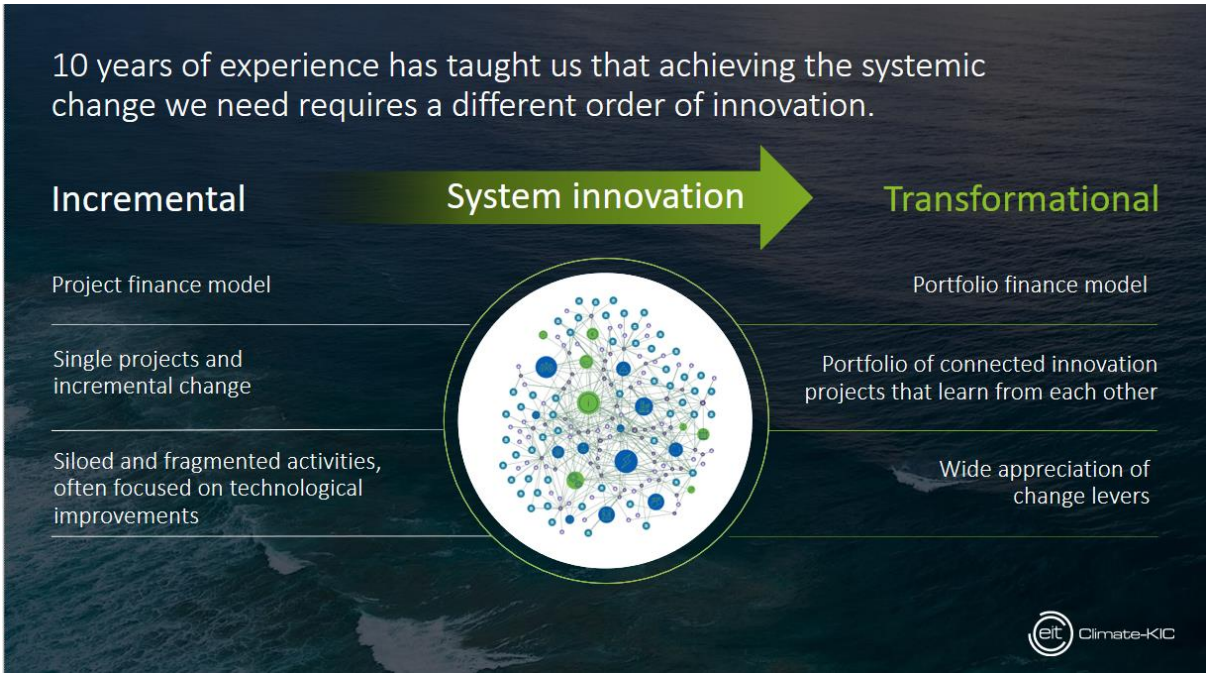
2) Promoting systems innovation to address the climate crisis

The European Commission's Recovery Strategy emphasises the value of research and innovation in tackling the health crisis and its key role to play in driving a sustainable and inclusive recovery. **R&I investment will be critical** to create the enabling conditions to transform our economic and

societal systems to become **more resilient and better prepared for systemic risks**. Nevertheless, a business-as-usual approach to innovation will not be enough. To unlock change at the scale and speed needed, the EU cannot rely on step-by-step incremental improvements, but rather must help trigger **systemic change** for decarbonisation.

EIT Climate-KIC believes that this approach implies that support to research and innovation in EU policy and EU programmes **should not only be limited to technological development** but should rather **engage all levers** which can help unlock deep societal transformation including policy, financing models, social behaviours, skills and capabilities, citizens engagement and business models. This is why EIT Climate-KIC has adopted a **systems innovation approach** in its *Transformation, In Time strategy* that aims to address a complex combination of interdependent risks and challenges.

This approach was supported by the **High Level Panel of the European Decarbonisation Pathways Initiative** who released its Final Report published in November 2018, specifically calling for a focus on: "*system-level innovation, promoting sector-coupling so that the individual elements of decarbonisation fit together in a coherent whole*" and recommends the **establishment of large mission-oriented programmes** of a crosscutting nature for the deployment of system-level transdisciplinary innovation.



Starting with a demand-led approach, we are working very closely with challenge-owners in our community of approximately 400 partners including cities, regional government, businesses,

universities, research institutes, NGOs, to develop large scale projects - called 'Deep Demonstrations' - based on a single portfolio of options, blending innovation, entrepreneurship and education, deliberately designed to reveal what combinations of interventions trigger zero-net emissions and climate resilience fastest. We seek to accelerate learning and share these insights with the Commission, Member States and partners to maximise climate impact on the ground and reinforce Europe's position as the leader of the global climate action movement.

[Please refer to the last section of this paper which outlines a few examples on how EIT Climate-KIC's Deep Demonstrations are contributing to the climate transition on the ground].

3) An adequate enabling framework allowing for an inclusive, just and climate resilient 2030 pathway

In a context of emergency, complexity and uncertainty, Europe needs to address the climate crisis with adequate policy frameworks capable to generating robust options for the transformation of whole systems to accelerate net zero pathways in whole places and sectors. In particular:

- **Ensure sufficient investments to deliver the European Green Deal:** the Commission's Communication on a 'Sustainable Europe Investment Plan' released in January this year outlined that **additional investments of €260 billion per year by 2030** would be needed to decarbonise our economies. Finance is a critical lever that can deeply contribute to systems change but, if not directed, is likely to result in isolated discrete incremental changes. EIT Climate-KIC participated in the Commission's technical expert group on sustainable finance (TEG) providing expertise in the design and development of the EU Taxonomy which is now acting as cornerstone of the European sustainable finance strategy. We believe that the taxonomy provides a key instrument to help direct private capital towards long-term, environmentally sustainable activities and prevent false claims on the environmental nature of an investment. The Taxonomy has a great potential to support financial system transformation by advancing transparency about the implications of some investments versus others. In that respect, EIT Climate-KIC looks forward to contributing to the Renewed Sustainable Financial Strategy which should step up efforts to remove existing structural barriers such as issues relating to data availability which remains greatest hurdle to the success of the Taxonomy in supporting achievement of its goals.
- **EU funding will be key to support the climate transition**: European funding for research and innovation to date has tended to favour incremental, single point solutions and a focus on technology, in part because it has been grounded in requirements for precise deliverables and the use of competitive calls to mitigate risk. It is becoming increasingly evident that this will not solve climate-related societal and economic challenges in time. A new approach to funding is needed, with appetite to **take risk** and to **invest in non-linear structural change**, a willingness to acknowledge and learn from failures and the mandate to make space for deliberately chosen combinations of interventions working together to

have direct and indirect effects on industrial ecosystems and on social change. **Funding should actively encourage and incentivise collaboration and experimentation across multiple interdisciplinary and organisational boundaries** to bring about transformational systems change such as the Missions in Horizon Europe.

- **Ensure an inclusive, fair and just transition**: supporting carbon-intensive industry regions in their transition to carbon neutrality requires processes to enable deep societal transformations while those regions face a complex combination of interdependent risks and challenges. Therefore, **just transition planning needs to consider other initiatives and plans**, including NECPs and Smart Specialisation Strategies. Coherence is crucial not only with funding mechanisms under the Cohesion policy, energy and industry decarbonization or climate strategies, but also with initiatives in all other sectors of the local economy including health, education, agriculture, social services, art, culture, transport, housing, food, natural resources. Moreover, it is crucial for public authorities to adopt a **participatory and inclusive process** to develop pathways towards climate neutrality by involving citizens meaningfully. This requires **innovative approaches to community engagement**; tools to build collective understanding of local challenges, priorities, opportunities and risks; deep listening for local narratives, identities, values and belief systems; co-creating, with local authorities, economic actors and civil society, a vision for the transformation of the region that is embraced by citizens rather than imposed on them. This also requires building local institutions' capabilities to orchestrate such a process, from strategic planning to investment pipeline generation and implementation.
- **Meaningfully transform our business models**: the circularity gap is not yet shrinking: resource efficiency is still hugely under-exploited and our production and consumption models remain largely linear. Circular economy can be a powerful force for climate change mitigation, with high potential to cut emissions from 'hard to abate' sectors up to 56% by 2050 if we accelerate innovation and investments into clean industrial pathways (Material Economics, 2019). While Europe is rebooting its economy, supporting circular economy models will also provide great potential for jobs creation and sustainable growth for all European Member States, if well combined to the digital transformation. This must be based on enhancing synergies across policy areas with the circular economy transition, in particular by applying **product-as-service solutions** to reduce virgin material consumption and emissions from manufacturing which will be essential for a full decarbonization of industrial value chains also in a fully electrified scenario using renewable energy. For example, alignment should be seeked between the objectives set in the new Circular Economy Action Plan and the **Strategy for Sustainable and Smart mobility,** where we regret only poor efforts in current EU policy are made to increase circularity of transports and mobility. In the automotive sector for example, EU efforts should not only focus on batteries and electric vehicles but should consider the whole automotive value chain, with standards to play a big role to improve resource and energy efficiency.
- **Sustainable and decarbonised food systems**: currently accounting for up to 37% of global emissions, food systems need to be at the centre of the climate transition. If we do not

radically transform food value chains, from agricultural practices to consumption habits, Europe's obligations under the Paris Agreement and Sustainable Development Goals will not be met and natural ecosystems are at risk of collapsing. The food industry impacts the climate in multiple ways, and, therefore, **addressing parts of the food value chain will not provide a solution for the bigger problem**. To safeguard the priority of feeding the whole world and to make a **radical transformation of the global food system**, the systemic change, it will be necessary to produce more with fewer resources, waste less, change our way of thinking and consumption, incorporate sustainability principles within agri-food sector, and complement and integrate with other areas of knowledge that are very different from those previously followed in food production. Innovation can be a supporting mechanism and mobilisation tool that can contribute to climate – relevant solutions. To start with, the European production and imports of intensively farmed meat and dairy need to decline rapidly and be substituted by **plant-based diets and alternative proteins**. Farming practices and the demands of major agri-food corporations should also switch to agroecological models. This can be driven by investor and consumer pressure, along with **incentive structures**, education and policy. EIT Climate-KIC has developed an extensive and diverse network of innovation stakeholders on agriculture, landscapes and food systems across Europe and delivers collaborative programming. Our learning, systems approach and network can certainly help support the development of the European Farm-to-Fork and Biodiversity Strategies which will support the transition to more resilient food systems and soil health.

- **Education and skills to play a crucial role for Europe's climate transition:** reaching the 2030 and 2050 ambition will require new skills, different mindsets, changes to norms and ways of thinking and a fresh learning agenda to equip Europe's people to effect the transformation and realise a clean, prosperous and resilient future that supports both planetary and human health. Much of this will require a significant amount of unlearning just as much as new learning. A transition to a net-zero carbon, resilient economy implies **structural changes across sectors and occupations, with demands for new skills and a different quality of transformational leadership and agency**. This necessitates updates to curricula, new vocational training, new professional accreditation, new qualifications, rapid adaptive learning and new forms of interdisciplinary knowledge transfer and changes the mix of needs for hard and soft skills that transcend traditional sectors. This is even more needed in regions most affected by the climate transition where new, clean business models will require retraining, requalification, a high degree of versatility and adaptability, and a new approach to lifelong learning. Equally the complexity of the climate change challenge is already highlighting drastic gaps in capability as much of Europe is stuck in single sectors, siloes and linear thinking. A new breed of talent – nimble, systems thinkers and strategic entrepreneurs, with the soft skills to build followership across traditional divisions - is needed urgently.

4) **Design and implement adaptation strategies that strengthen Europe's resilience to the effects of climate change and other correlated shocks**

Adaptation measures have a strong role to play in EU's emission reduction efforts and must go hand in hand with climate mitigation policies. EIT Climate-KIC looks forward to contributing to the New EU Strategy on Adaptation to Climate Change to be presented by the Commission in 2021.

Whilst there has been noticeable progress and inspiring examples of adaptation in Europe, the pressure to make rapid and visible progress has often led to a focus on stand-alone, easy-to-measure projects and tackling issues through either direct and existing policy levers, or sector-by-sector mainstreaming. Climate change adaptation should, on the contrary, be treated as a **complex systems challenge** addressing multiple issues at the same time to effectively tackle the scale and complexity of the climate crisis. This requires **development and scaling of innovative approaches on the ground** as well as **unprecedented funding and investment structures** that enable to turn problems and ideas into practical actionable solutions.

Through working with multiple and diverse stakeholders, EIT Climate-KIC is orchestrating a portfolio of connected innovations in **climate risk information, resilience and adaptation** to address levers of change simultaneously, experimenting with different ways to nudge critical systems toward resilience. To date, this included helping to create and shape: (i) open data platforms and standard-setting, (ii) inclusion of climate risk in financial ratings in credit and bonds, (iii) landscape-level climate risk studies and tailored information service design for public and private infrastructure (iv) training and financial incentives for de-risking assets and emerging markets (v) public and business understanding of risk through simple schemes and installations, (vi) data and risk literacy approaches (e.g. training academies for civil protection, meteorological offices), (vii) pro-resilience regulatory and policy recommendations.

EIT Climate-KIC contribution to a global impact in this space includes:

- **Create Green Resilient Cities**: **Harness the force of nature in infrastructure design to build liveable, climate-resilient cities.** We are experimenting in Scandinavian countries an address-based risk labelling scheme with municipalities for stress testing and to help individuals understand their risk with the aim to replicate this model at global scale.
- **Reform Food Systems**: **Transform climate-damaging food value chains and enhance the climate resilience of food supply**. Crop insurance solutions are important tools to increase resilience to climate change and altered weather perils especially in least developed and developing countries. Widespread implementation of this tool would be very beneficial to farmers as a means to escape the poverty trap if climate-attributable yield losses are assessed adequately.
- **Democratise Climate Risk Information**: **Enhance access to risk information through capacity building, major expansion of the climate services market and in turn, creation of financial tools.** Understanding climate impacts and the associated risk is critical in dealing

with extreme events and disasters, however it has often been limited by a lack of transparency and data availability. EIT Climate-KIC has supported the development of the Oasis Hub, a suite of tools and services that aggregate extreme weather and environmental risk data made open and transparent to everyone. It has significantly contributed to increasing the availability of information on catastrophes and climate change risks, with more than 1000 free and commercial datasets and over 400 models have been made available through the marketplace.

Examples on how EIT Climate-KIC can help accelerate Europe's decarbonisation through climate innovation

In January 2019, EIT Climate-KIC launched eight 'Deep Demonstrations', designed to show that fast and large-scale change in Europe is both possible and desirable to achieve the urgent decarbonisation and resilience challenge it faces. 'Deep Demonstrations' are the large-scale projects through which we offer systems innovation as a service to Europe's most ambitious 'challenge owners' – i.e. local authorities, government ministries, industry leaders and funders who have the means and mandate to tackle Europe's biggest climate change challenges.

We launched a series of Deep Demonstrations in order to act as:

- a test bed environment for tackling climate change through systems innovation to build a net-zero-emissions economy
- sources of innovation and learning that can accelerate change and provide policy inputs.

The Deep Demonstrations are closely aligned with the ambitions of the European Green Deal. They are at different stages of development but include the following areas:

- Deep Demonstration of Circular, Regenerative Economies
- Deep Demonstration of Climate-friendly Food Systems and Diets
- Deep Demonstration of Healthy, Clean Cities
- Deep Demonstration of Just Transformations
- Deep Demonstration of Landscapes as Carbon Sinks
- Deep Demonstration of Long-termism
- Deep Demonstration of Resilient Regions
- Deep Demonstration of Resilient, Net-Zero-Emissions Maritime Hubs

Some detail on both the Healthy, Clean Cities Deep Demonstration and the Circular, Regenerative Economies Deep Demonstrations are available below. The examples demonstrate how EIT Climate-KIC has been actively engaged in unlocking rapid decarbonisation and resilience and our ability to help accelerate mobilisation of recovery on the ground and job creation.

Healthy, Clean cities

EIT Climate-KIC is working with a cohort of 15 diverse cities across north, south and east Europe with the ambition to have zero-net emissions as fast as possible and many by 2030. The fifteen mayors, municipalities and city communities in Europe have committed to co-design portfolios of strategic experiments and innovations capable of transforming key city systems, with the aim of accelerating their path to carbon neutrality, while bringing multiple co-benefits for local people.

We plan to move to the stage of our systems innovation process where we identify a portfolio of experiments during the second half of 2020. We have developed an aggressive stimulus approach that encompasses **community-scale retrofits of buildings and infrastructure, increases in renewable energy deployment, green infrastructure and reforestation efforts**, and further **shifts toward clean mobility.** This could deliver **more than €1bn of economic activity** and **more than 6,000 direct jobs in the first year, growing to an annual amount of nearly €2B and 11,000 jobs in the third year**. First year impacts in select cities are expected as follows:

- In Milan (Italy), a significant increase in retrofit activity combined with renewable energy deployment would create 470 direct jobs.
- In Madrid (Spain), about 250 jobs from a similar increase in retrofit and renewable energy.
- In Vienna (Austria), a similar effort targeted to the City's social housing would create 550 jobs.
- In Kraków (Poland), more than 200 jobs.
- In Orléans (France), more than 550 jobs.
- Amsterdam (Netherlands) could mobilize more than 1,000 jobs based on scaling of projects already in development.

However, to accomplish this work, we would need not only the economic stimulus, but **enabling and directing policies to help local elected leaders take actions of this scope and scale**. For example, mandating performance of buildings via community-scale retrofit activities or shifts toward clean energy or mobility. In addition, resources would be needed to effectively engage citizens and build the support needed for this level of intervention, creating additional jobs.

[Note these numbers do not necessarily account for all added potential scope in a COVID renewal situation as we are just starting learn about new and added measures that would need action, such as reconfiguring markets and retail/commercial zones for public health, redesigning public spaces for ease of movement and reduced car use, and re-purposing real estate in response to shifting work/commuting patterns.]

Circular, Regenerative Economies

EIT Climate-KIC has developed a joint programme with the Government of Slovenia for a whole economy transition to circularity. With 9 ministries involved, we are co-designing a programme for national circular economy transition that will result in **200 local communities** engaged, **11 cities** involved, **800 students & school staff** trained, **1500 companies, including SMEs and start-ups,** receiving tailored advisory services and **12 Circular Economy regional action plans** developed. This will ultimately **transform entire value chains in 5 key sectors**: forestry, built environment, food, mobility and manufacturing.

The EIT Climate-KIC "Deep Demonstration of a Circular, Regenerative and Low-Carbon Economy" is a showcase example of **how circular economy transition can create benefits for job creation, growth and business resilience at the value chain level**. The total value of this initiative is **70 million euros over 3 years** and the jobs and skills needed to execute the portfolio of innovation designed into the 3 years of implementation duration has an estimated worth of 30 million euros.

We also have demand from other Member States and regions for our Deep Demonstration on circular, regenerative economies, including the governments of **Bulgaria, Ireland, Italy and Cantabria (Spain)** to replicate and adapt this model to their specific challenges.

About EIT Climate-KIC:

EIT Climate-KIC is the European Union's primary innovation agency dedicated to tackling climate change.
EIT Climate-KIC's strategy is to create *Transformation, in Time* to meet Europe's obligations under the Paris Climate Change Agreement. We believe our work can help accelerate mobilisation of sustainable recovery and resilience on the ground, in line with the European Green Deal. EIT Climate-KIC has developed a new approach to innovation that brings people together to design and commit to a green, new world by transforming their homes, habits, communities, countries, regions, governments and businesses.

EIT Climate-KIC Headlines

- Is active in **all Member States**, combining innovation, education and entrepreneurship for radical climate action.
- Has **400 innovation partners** from research, business and public bodies; offering an enormous capability for achieving the European Green Deal.
- Has a **10-year track-record** of developing, connecting and testing new ideas in policy, finance, technology, business models and citizen engagement to produce benefits for climate and society.

More information is available on our website: https://www.climate-kic.org/

Contact:

Helen Spence-Jackson, Head of EU Affairs (helen.spence-jackson@climate-kic.org)

Elléa Lhermite, EU Affairs Project Officer (ellea.lhermite@climate-kic.org)