

World Health Day – April 7, 2022



The 2022 World Health Day campaign focuses on the interconnection between the health of our planet and the health of people, animals, and plants. This link is at the heart of EIT Climate-KIC's work.

Our portfolio of innovations includes mitigation and adaptation solutions that address raising temperatures, floods, extreme rainfall, air pollution or ecosystem degradation, all elements that are affecting human health.

Not one of the examples presented here can solve climate change and global human health on its own, as those are colossal challenges that require wholesale systemic change. But it is the combined efforts of these entrepreneurs, together with political, financial, societal will and actions, that can bring about the massive impacts needed.

A solar-power fridge that can get more people vaccinated in Kenya

The COVID-19 pandemic and associated disruptions have strained health systems in the past two years, and an estimated 23 million children under the age of one year did not receive basic vaccines in 2021. Most vaccines require a temperature-controlled supply chain but power interruption, temperature fluctuations, poor transportation and lack of cold chains lead to a lot of vaccine spoilage.

Norah Magero is the CEO of Drop Access, a women-led NGO that focuses on energy access and climate action in rural and off-grid communities through clean and climate-smart technologies. She created VacciBox, a portable solar-powered fridge designed to transport and store vaccines, blood, and other medical items. It provides a solution for hospitals with unreliable power supplies and is set to slash vaccine waste by 80 per cent.

Drop Access, who won EIT Climate-KIC's national Climate Launchpad competition, has also designed solar fridges for small-scale farmers to curb post-harvest losses. They have coupled the fridges with an online application for remote monitoring and sensing, online troubleshooting, and data collection.



An inclusive climate strategy for a healthier and more resilient community in Edinburgh

Many people in Europe live in dark, unhealthy homes in neighbourhoods with little or no community infrastructure and green spaces. In Scotland, [a quarter of the population lives in fuel poverty](#). This situation contributes to chronic crises in health and care, amplifies inequality and harms the population's wellbeing. By causing more and more episodes of extreme weather events, climate change will only worsen the health conditions of the most vulnerable people.

The city of Edinburgh and EIT Climate-KIC partner team are designing a whole block retrofitting project focused on building community resilience. The project's development model puts future residents at the heart of the development process.

Upgrading the housing stock to consider climate change impacts, people's health and wellbeing and deliver net-zero aspirations requires a multi-stakeholder approach. [Democratic Society](#), is making sure the voices of the communities are heard during the design and implementation of the projects. [Dark Matter Labs](#) is helping Edinburgh identify overlapping system risks associated with climate change and what this means for public services across Edinburgh. And [Bankers without Boundaries](#) is exploring the possibility of building heat networks.

Using the power of the sun to improve people's hygiene and health

In some of the hottest parts of the world, it can be hard to find hot water, which impacts hygiene practices. People often use charcoal to heat water, which results in household air



pollution, affecting both the health of people and the planet. Solar thermal collectors that use the sun to heat water aren't new but until now they were heavy and cumbersome. In a factory in Dundee, Scotland, Solariskit's founder Faisal Ghani developed an affordable, easy to transport, and simple to install alternative.

Their solar thermal collector is the world's first flat-packable solar thermal collector. How it works is simple. The solar coil inside the prism turns into a heat trap. At first, cold water goes through the bottom of the collector, transfers through the coil, which transfers the heat to the water, and by the time the water gets to the top and the tap, the water is hot.

Solariskit has set up a pilot project to test these kits in Rwanda and is already designing cheaper kits that use gravity to supply water so they could be used in houses that aren't connected to a water system.

[Geofootprint: A tool to encourage sustainable agriculture practices](#)

Access to safe and nutritious food is key to sustaining life and promoting good health, and the agricultural sector presents key opportunities for improving nutrition and health. But agriculture is also responsible for over 20 per cent of global greenhouse gas emissions. To reduce their footprint and meet ambitious targets like carbon neutrality, companies need to understand the impact of how their crops are grown and managed.

The sustainable agriculture tool [geoFootprint](#) combines data from satellite imagery with environmental metrics, allowing users to visualise the footprints of key commodity crops on a high-resolution interactive world map. This allows companies to simulate the environmental footprints of crops, bringing visibility to on-the-farm and upstream impacts (deforestation, fertiliser use, irrigation, land management, etc.), allowing for faster, better-informed, and more sustainable decision making. geoFootprint also enables users to assess the risks posed by changes in climate, water availability and quality, soil health, and biodiversity to secure supply chains and the future of food.

[An open-access version](#) of geoFootprint is available for non-expert audiences, students, and other stakeholders to expand public knowledge on sustainable agriculture and the crop production risks posed by climate change.

[A healthy development for the city of Krakow](#)

In Poland most energy is derived from coal, which plays an important role in heating homes but results in [high levels of air pollution](#). In Krakow, where air pollution levels are often far above World Health Organisation recommendations, EIT Climate-KIC brought together a diverse group of local stakeholders to expand the city's existing initiatives (like the Clean Air Programme), link them together and fill strategic gaps to build a portfolio of experiments.

A team of experts has collected and analysed data to identify the most effective ways to achieve environmental impact in a financially and socially sustainable way at a city-wide level. They found that the city emits an estimated 5.5 million tons of carbon dioxide each



year from transport, buildings, heating, and electricity. A portfolio of experiments was developed to scale the actions that will enable Krakow to achieve its net zero target by 2030, resulting in better air quality and improved health for the inhabitants. One of the experiments focuses on mobility and supports a city-wide shift to public transport, walking and cycling. Another goal is to increase the amount of green space in the city.

[Creating a perfect balance for nitrogen in soil](#)

Nitrogen is an essential nutrient for plants to grow and thrive. Unfortunately, nitrogen-polluted groundwater and crops have negative effects on human health and our climate. The ability to predict the optimal amount of nitrogen to add to a field or parts of a field is key to preventing leaching into the ecosystem beyond.

The objective of the [Nitrogen Sensor for Soil Sustainability](#) project is to demonstrate and implement a service for estimating and predicting nitrogen content in soil, so that the timing and amount of fertilisation can be optimised for crops – mainly focusing on cereals. This could significantly improve farm management information systems with benefits for the farmer, the environment, and people’s health at the same time.

[A clean-growth innovation roadmap for Manchester](#)

Greater Manchester wants to reach carbon neutrality by 2038. To meet the scale and pace of change required for the green transition, action is needed from all actors — from transportation engineers and electricity suppliers developing electric vehicle charging infrastructure networks, to manufacturers, builders and planners creating deep retrofit programmes at scale, to residents switching to renewable energy suppliers, to businesses procuring zero waste materials that move towards a circular economy.

In 2018, Greater Manchester Combined Authority and partners set out a five-year environment plan and local industrial strategy with a mission-oriented approach. The [Practice-based Learning in Cities for Climate Action](#) (PELICAN) project designed a clean-growth mission-oriented innovation roadmap for Greater Manchester, the first of its kind in the UK. The plan includes sectors from housing and construction to schools, local energy generation and nature preservation. In addition to supporting carbon neutrality, it also aims to help reduce fuel poverty and improve health and air quality. Over the course of 2019 and 2020, Greater Manchester has been working on this journey of implementation. In 2021, the project’s lead, the UCL Institute for Innovation and Public Purpose, has been awarded funding through the Green Recovery from COVID-19 theme to continue working with Greater Manchester as the city region is *building back better* from the pandemic.

These are only a few examples of what is in our portfolio. If you are interested in learning more about the work we have done or are doing, please contact anne-sophie.garrigou@climate-kic.org



About EIT Climate-KIC

EIT Climate-KIC is the EU's climate innovation initiative, working to accelerate the transition to a zero-carbon and resilient world by enabling systems transformation. Headquartered in Amsterdam, it operates from 13 hubs across Europe and is active in 39 countries. EIT Climate-KIC was established in 2010 and is predominately funded by the European Institute of Innovation and Technology (EIT), a body of the European Union.

As a Knowledge and Innovation Community (KIC), it brings together more than 400 partners from business, academia, the public and non-profit sectors to create networks of expertise, through which innovative products, services and systems are developed, brought to market and scaled-up for impact.



