

Climate & Agri-Tech

Climate Saving Innovation





Way back in 2014, the AR5 Synthesis Report was published.

This startling report clearly showed the ways in which climate change was affecting our planet. And yet, here we are in 2022, and many question why we are still having the same conversations, and making so little progress.

In 2021 tech companies were responsible for between 2% to 3% of global emissions, (according to UN statistics), and as the demand for tech grows, negative impacts are also likely to grow, so we have reached yet another critical point in the tech revolution.

So is tech a big part of the problem or could it be a part of the solution?

Technological innovation has always played a big part in shaping the agricultural industry. Everything from the humble plough to the sophisticated global positioning system (GPS), have played a part in its evolution.

The EU has already declared a climate emergency and stated that Europe must reach zero greenhouse gas emissions by 2050 - in the same year, our planet's population is expected to hit 10 billion people.

And so the critical need to feed a global population still drives the farming processes which may increase yields, **but at what cost?**

It's not all bad news!

Climate tech is making great strides. Agriculture, sustainable mobility, and heavy industries are also developing innovative solutions to achieve net-zero goals.

Ground breaking emerging climate technology innovation include exciting initiatives such as carbon capture, the circular economy, and sustainable natural resource utilisation.

Our [own collaborations with climate tech clients](#) bears this out.

At national level, in the UK we are the first major economy to make a legal commitment to achieving net zero emissions. Now, more and more influencers are sitting up and taking notice. The UNEP's (United Nations Environment Program) for example is supporting the European Green Digital Coalition in its efforts to encourage the use of data and digital tools to support production whilst reducing negative impacts. This initiative encourages governments and business leaders to embrace sustainable methods, reducing raw material consumption whilst increasing food production. The aim is to help decision makers in the tech space leverage innovation to tackle climate change, biodiversity loss and pollution on a global scale, before the situation becomes irreversible.

Interestingly, and perhaps surprisingly, as the climate emergency becomes increasingly more apparent, investors are also starting to take notice. Last year, round sizes for climate tech startups quadrupled, with more than 600 investments totalling over \$40 billion. Nearly a third of these were pre-seed and seed, with [182 deals closing in Q4 2021](#).

There can be little doubt that we have arrived at a critical point and if we are to save our planet and feed our population, it is time to change the way we prioritise capitalism over the environment.



What are tech investors saying?

Alex Bondar, of Acre Venture Partners (a leading investor in the climate tech space) was asked what his climate tech investment thesis for H1 2022, and how it has evolved since he started investing in this space, [his response](#):



"Given where we have invested recently, we definitely saw health opportunities on the agtech [agri-tech] side. One company is going after bettering soil health so that we can sequester more carbon through better ag [agri] practices. I think something similar can be done on the forestry side as well."

And the appetite shown by VC investors is growing...

Unprecedented amounts of funding are now being directed towards those tech businesses that are consciously driving change and positive impact through innovation. Governments and banks alike are starting to take action as they recognise that the failure to tackle climate change is a major factor in the rise of economic risk.

So where is the smart money going in terms of VC investment? In 2022, [the top 10 Tech trends and innovations](#) were:

- Clean Energy
- Climate Smart Agriculture
- Sustainable Mobility
- Circular Economy
- Low-Carbon Manufacturing
- Sustainable Land & Water Management
- Building Management
- Carbon Data & Analytics
- Carbon Capture, Utilisation, and Storage
- Green Construction

Many thought leaders agree that the climate tech sector has huge potential to drive change.

Those in the space say that artificial intelligence, for example, could **lead the way** in tackling climate impacts. And innovations in the food/agri space are in rapid development. Applying vertical farming techniques (where crops are grown in vertically stacked layers, instead of using a single, degraded soil surface), has enormous potential. Green technologies such as carbon capture and storage will also have a key part to play here.

Insights and data collected via satellite provides us with invaluable data on climate impacts and also tracks pollution, which can only add weight and gravitas to the conversation around environmental impact.

Digital technology has the potential to reduce the world's carbon emissions by about 17 per cent, according to a report from the International Telecommunications Union, a United Nations body.

So technology really does have a part to play!

In the last few years, hundreds of the world's largest global companies have publicly committed to achieving net zero emissions but results have been inconsistent and sporadic.

However, forward thinking climate, agri(culture) and food tech businesses are heeding the call and through technical innovation, are helping to move the needle back in the right direction.

Entrepreneurs in these sectors, driven by research data collected by scientists and environmentalists, are taking the lead through innovative and impactful solutions to the global crisis.





But there is hope!

There are many initiatives running that can really help to drive change. Oxford University Innovation and the University's Innovation & Business Partnerships team are running a challenge, for example. The Climate Tech and Sustainability Innovation Challenge calls upon researchers to submit ideas based on their findings to help meet the challenges faced by the world in this historic climate crisis, including those in agriculture & food and water management.

Whereas in the past, technology was once part of the problem, it is fast becoming a part of the solution. By designing and developing new tech innovations, to tackle very real global problems.

It is crystal clear that if we are to save our environment from destruction we need to do three things.

1. We need to maintain an eco focused approach to growth and positive social impact. We need to cement this approach using the best scientific data, measurements, and metrics to ensure the achievement of real benefits for climate, nature, and people.
2. These initiatives require finance to implement these interventions in the right way. Investments in our ecosystems can and will deliver tangible benefits beyond their monetary value.
3. We need to change to long term strategies. We need to focus on strategies that guarantee the long-term success of investments. This requires a clear vision for ensuring stable and sustained funding and local management.

The time has come.



It's time for entrepreneurial start ups and scale ups in the climate tech space to be given the support that they need to tackle the climate crisis. Here are just a few examples of the projects which are going on right now:

1. O.C.O Technology in the southwest of England turns hazardous waste into a non-hazardous resource for use in construction materials. This process is net carbon negative and production in one year is the equivalent of planting more than half-a-million trees.
2. Meanwhile Gigastack are leading a project in the Humber using renewable energy from one of Europe's largest wind farms to develop technology that produces green hydrogen.

So the climate tech sector really are leading the way, through conscious and ecologically sound decisions to protect the planet!

These businesses are trying to fill these gaps to create a cleaner future with climate-friendly technology. The more of these sector players succeed, the safer and more protected our planet will become.



To all planet focused, climate tech pioneers, we salute you!