





COP27: INNOVATE AND IMPLEMENT

Extreme weather events of recent times serve as a stark reminder of the urgent need to mitigate climate catastrophe. Heatwaves in Europe, flooding in Pakistan and hurricanes in the US have emerged against a backdrop of unprecedented food and energy shortages, all exacerbated by Russia's war in Ukraine. The destructive effects of climate change continue to manifest on a global scale, touching every facet of human life to the exclusion of none.

By the end of the 26th United Nations Climate Change Conference (COP26) held in Glasgow in 2021, both the US and European Union had committed to reach net-zero by 2050, China by 2060 and India by 2070. With 74 countries under pledge (representing 80% of global greenhouse gas emissions), almost the whole world became locked into net-zero commitments.¹ However, the International Energy Agency's (IEA) World Energy Outlook 2022 suggests that collectively, we are still not doing enough – nor acting quickly enough to inhibit the pace of climate change. It shows that while progress has been made in the last few years, current climate commitments and investments in clean energy, as depicted in the report, are still falling short of the level needed to ensure that the average global temperature rise in 2100 is limited to 1.5°C.

We perceive that COP26 has since been defined by 'big talk' with little tangible action - making this year's COP27 theme of 'Together for Implementation' particularly timely. Loss, damages and climate-related devastation set the scene for the COP27. The event took place amid geopolitical and economic uncertainty, with concerns around energy security at the top of the agenda. The prevailing sentiment across the two weeks was exasperation due to the persisting slow pace of climate action.

¹ United Nations https://www.un.org/en/climatechange/cop26



COP27: Three key takeaways

Despite this, in what has been described by the United Nations (the "UN") as an 'important point of progress',2 we witnessed the launch of a long-awaited loss and damages fund requiring developed countries to support the most vulnerable. This outcome manifested as a response to the issue of the cost of climate damages—which appeared on the official COP agenda for the first time.

We perceive positive progress in discussions on ways to attract maximum flows of private capital into the opportunities that now exist in clean technologies, green infrastructure and other assets. According to the latest figures from the IEA, clean energy investment in 2021 totalled \$1.3 trillion, and this figure needs to triple by 2030 to be able to reach net zero emissions by 20503.

Furthermore, in what has been referred to as the 'Breakthrough Agenda'⁴, countries at COP27 representing more than 50% of global GDP have set out sector-specific priority actions to decarbonise power, transport and steel, scale up low-emission hydrogen production and accelerate the shift to sustainable agriculture by COP28. These measures are designed to cut energy costs, rapidly reduce emissions and boost food security for people worldwide.

> The cover decision highlighted that food security is a core priority, yet food systems are increasingly vulnerable

to physical climate risks.

² United Nations COP27 Reaches Breakthrough Agreement on New "Loss and Damage" Fund for Vulnerable Countries | UNFCCC

³ IEA World Energy Outlook 2022 World Energy Outlook 2022 (windows.net)

⁴ United Nations The Breakthrough Agenda: a master plan to accelerate decarbonization of five major sectors - Climate Champions (unfccc.int) Our three key takeaways from the COP27 outcomes (and non-outcomes), and their potential significance for asset owners and stakeholders are:

1. Climate policies remain inconsistent

The challenges of unprecedented energy and food security issues, exacerbated by Russia's war in Ukraine, have inevitably slowed progress and deprioritised climate policy-making in the global political agenda. As a result, the ambition of climate policies to 2030 including nationally determined contributions (NDCs) remains inconsistent across countries, apart from the common denominator that they all fall short of the ambition needed to limit global warming to 1.5°C by 2100.5

We had hoped to see a major ramp up in policy and revisiting of NDCs at this COP, in fulfilment of one of the main requests of the Glasgow Climate Pact. However, rather than a major overhaul, the COP27 cover decision - the Sharm el-Sheikh Implementation Plan – stressed that the geopolitical situation and recovery from COVID19 should not be used as a pretext for deprioritising climate action. The decision then reiterates the outcomes from the previous COP, urging countries that have not done so to update their nationally determined contributions (NDCs), and emphasising the urgent need for countries to accelerate emission reduction actions, including the transition to a clean energy mix and phasing down unabated coal power.

Tikehau takeaway #1: We will progress despite limited policy change, but we are better together

"The private sector continues to innovate and invest in the energy transition against an inconsistent backdrop of climate policy. In our view, most of the technologies required to achieve net-zero emissions already exist, and the private sector should continue to progress regardless of the slow rate of change of policy. However, the ideal scenario would be a scaling up of NDCs, fostering greater collaboration, which would in turn, accelerate the pace of the transition."

2. Priority on food security

COP27 was notable for being the first COP that highlighted food security in the cover decision, which was particularly relevant given the hosting of the event in Africa, as well as the geopolitical context⁶. In particular, the cover decision highlighted that food security is a core priority, yet recognised the increasing vulnerability of existing food systems to physical climate risks. It also highlighted the connection between climate change and biodiversity loss and the need to tackle both in a coherent manner.

Tikehau takeaway #2: - Regenerative agriculture carries potential to address food security

"In our view, the shift to regenerative agriculture practices is aligned with the need highlighted in the COP27 decision to enhance resilience of food systems to climate change, and at the same time contributes to carbon sequestration, hence supporting the race to net-zero."

3. Private sector mobilisation in climate finance

The COP27 decision highlights that the transition to a lowcarbon economy requires at least \$4-6 trillion in annual investments. Meeting this financing goal requires a significant transformation of the financial system, and engagement from all actors including institutional investors.

Recognising the collective failure of developed countries to mobilise \$100 billion per annum by 2020 for climate action in developing countries, COP27 agreed to pursue a new collective quantified goal⁸ on climate finance, with work on this target to conclude in 2024. The decision highlights that broader stakeholder participation is important to advancing the work plan, including contributions from multilateral development banks and the private sector.

Tikehau takeaway #3: The private sector must help plug the financing gap

"COP27 emphasised the need for all financial system actors to actively engage in the transformation needed to achieve the targets of the Paris Agreement. At Tikehau Capital, we are committed to playing our part in financing businesses that are contributing to the low-carbon transition."

- ⁵ Climate Action Tracker https://climateactiontracker.org/countries/
- ⁶ Carbon Brief November 2022 COP27: Key outcomes agreed at the UN climate talks in Sharm el-Sheikh Carbon Brief
- Onited Nations CMA4_AUV_TEMPLATE (unfccc.int)
- 8 United Nations https://unfccc.int/sites/default/files/resource/cma4_auv_8e_NCQG.pdf

COP27: Innovate and Implement

Making it happen

Below, we outline Tikehau Capital's response to the climate emergency.

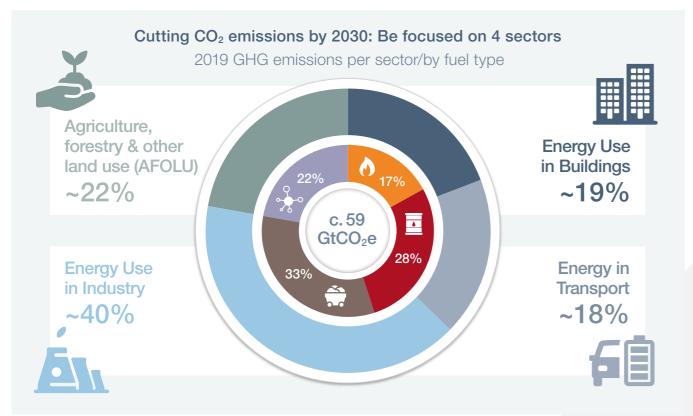
Decarbonisation: focus on the energy system

As highlighted by the COP27 decision, decarbonisation of the energy system appears essential to climate change mitigation, as about 80% of global greenhouse gas emissions originate from energy supply and its use in the buildings, transport and industry sectors⁹.

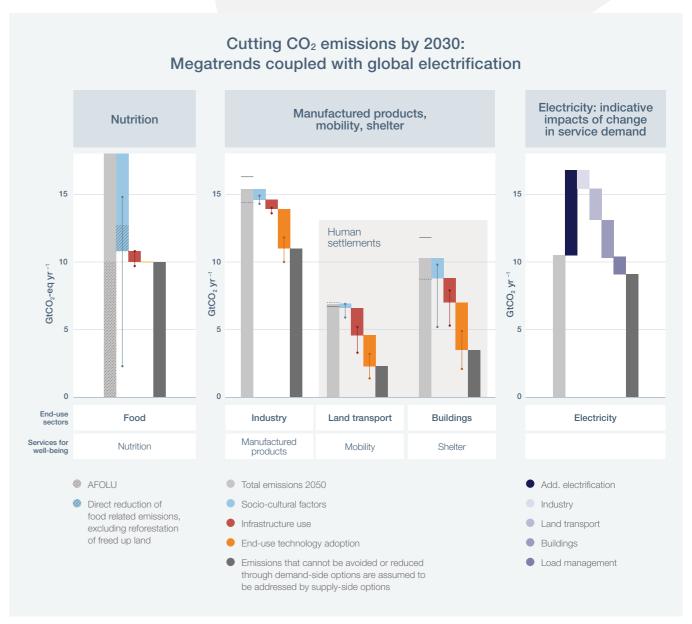
Under the IEA's latest net zero emissions (NZE) scenario, energy consumed by businesses and households will shift from oil and natural gas towards electricity, facilitated through the adoption of heat pumps and electric vehicles. The share of homes using electricity for heating rises from 20% today to 30% in 2030, with the global heat pump deployment rate increasing from 1 million per month today to 8 million per month by 2030. In addition, the NZE scenario sees 60% of all new car sales being electric by 2030. ¹⁰

We believe it is important that energy efficiency is prioritised across all sectors to reduce energy consumption, partially offset pressure in electricity demand and ultimately, reduce energy costs to businesses and consumers. Energy efficiency also mitigates energy security risks and should reduce reliance on fossil fuels. Under the IEA's net zero scenario, total final energy consumption is 10% lower in 2030 compared to the 2021 level, despite growth in GDP.¹¹

We believe renewables have an important role to play in achieving this goal. The shift to energy sources including wind and solar will be instrumental in decarbonising the power sector. According to the IEA's latest net zero scenario, annual new renewable capacity increases fourfold to 1200 GW by 2030, meaning that renewables account for more than 60% of global power production under this scenario. The IEA highlights that this expansion of renewables requires significant capital provision, with investments under this scenario increasing from the current level of \$390 billion to \$1300 billion by 2030.¹²



Source: Adapted from IPCC Working Group II Technical Summary 2022*
*emissions from electricity and heat generation have been allocated to the end use sectors.



Source: Adapted from IPCC – WG3 2022, "Climate Change 2022, Summary for Policymakers"



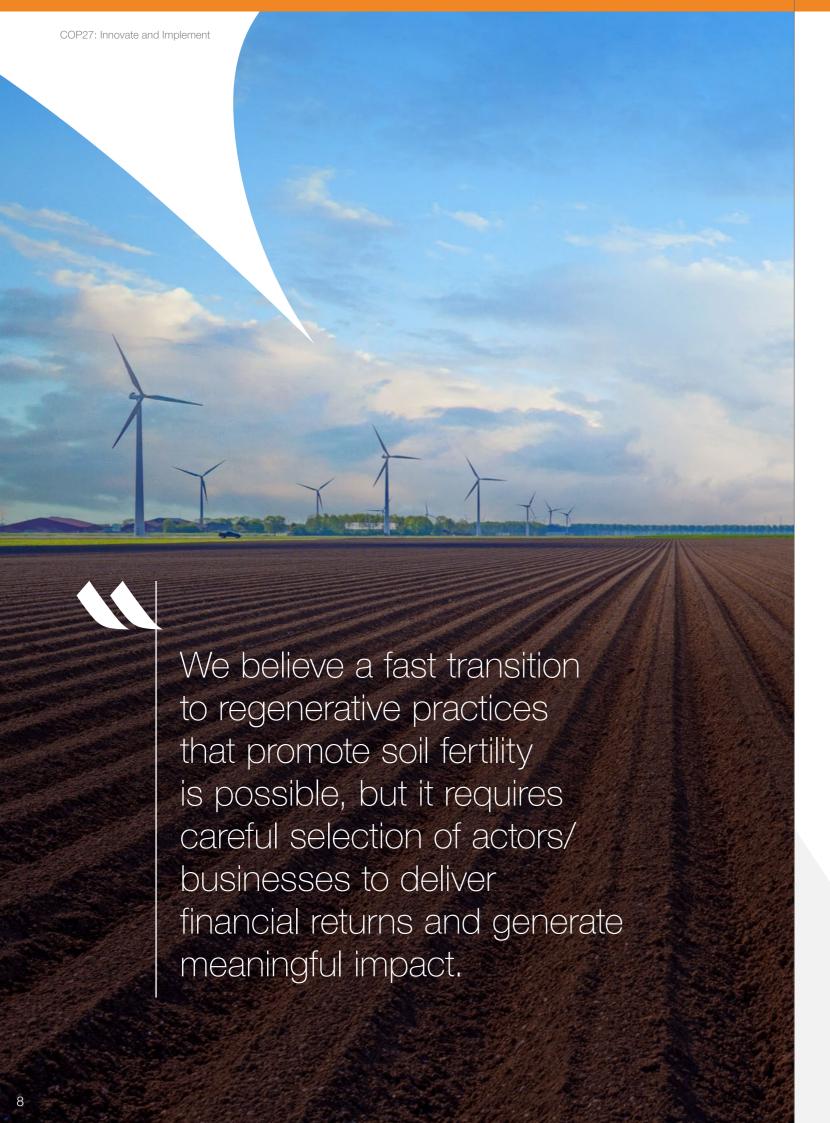
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⁹ IPCC Working Group II Technical Summary 2022

¹⁰ International Energy Agency World Energy Report 2022

¹¹ International Energy Agency World Energy Report 2022

¹² International Energy Agency World Energy Report 2022



Regenerative agriculture: achieving food security

Agriculture, land use and deforestation represent the second largest source of greenhouse gas emissions globally and it is the primary driver of biodiversity loss. Most direct agricultural emissions come from methane emitted by livestock farming and the remainder through nitrous oxide from fertiliser use, and the sector is also a key driver to greenhouse gas emissions from deforestation.¹³

While modern agriculture has made it possible to increase production across the globe to supply food for a growing worldwide population, we observe that, alongside other contributors, the intensive use of ploughing has destroyed soil vitality, rendering it infertile. According to the UN, 40% of the world's soil is now degraded¹⁴ which inhibits food production and exacerbates the loss of vital plant and animal species. This, in turn, limits the soil's ability to act as a carbon sink.

We consider that regenerative agriculture practices can reverse this and play a crucial role in addressing both climate change and environmental challenges. Healthy soils can sequester carbon, support biodiversity, preserve water, mitigate food

security risks and provide healthy food while ensuring a sustainable source of income for agricultural workers and their supply chains. The decision taken at COP27 to give a four-year mandate to advance climate action in the agricultural sector reflects growing awareness of these interconnections.

We believe a fast transition to regenerative practices that promote soil fertility is possible, but it requires careful selection of actors/businesses to deliver financial returns and generate meaningful impact.

DNA of a typical decarbonisation project

We are actively deploying capital in a wide range of projects contributing to the decarbonisation transition. For example, earlier this year we partnered with AXA and Unilever to collectively launch a new private equity impact strategy* dedicated to investing in projects and companies supporting the scaling-up of the regenerative agriculture transition through restoring soil health.

Another example is our investment in agrivoltaic** solutions within our green assets climate infrastructure strategy*:

Tikehau's green assets strategy invests in NovaFrance

As of September 2022, the Tikehau Green Assets strategy has invested in a leading developer and operator of 'agrivoltaic' solutions. Agrivoltaics solutions are key to achieving a sustainable deployment of photovoltaic*** capacity as they reconcile the agriculture sector with the renewable energy project development which usually compete for the use of land. The proprietary solution of the business partner is a shelter equipped with solar panels to be installed in the open-air yard of the poultry farms to be compliant with regulation, which requires poultry farmers to provide shelter to their poultry in open-air yards. This proprietary solution was designed with the advice of a vet and is reinforced by an agroforestry solution (planting of bushes, trees, etc) to regenerate the soil and provide natural shelters in the long-run.

The projects produce renewable energy during at least 30 years. The energy generated is sold in the grid, transforming a usual cost for the poultry farmers into a source of revenue through solar energy generation – thanks to the solar panels situated on the shelters' roof.

Other notable valuation creation aspects of the investment include:

- 1. Improvement of animal welfare
- 2. Complementary revenues for farmers through energy sold to the grid
- 3. Regeneration of the soil

Source: Tikehau Investment Management, Tikehau Green Assets, July 2022

- * These strategies are reserved for professional investors and are managed by Tikehau Investment Management, a management company authorised by the Autorité des Marchés Financiers under number GP-0700006. Past performance does not predict future returns and there is no guarantee that investment objectives will be achieved. Investing in private strategies involves risks factors including, but not limited to: potential total capital loss, liquidity constraints and lack of transparency.
- ** agrivoltaic is the simultaneous use of areas of land for both solar photovoltaic power generation and agriculture.
- ***photovoltaic is the conversion of light into electricity using semiconducting materials that exhibit the 'photovoltaic' effect.
- 13 United Nations Global Land Outlook 2022 Global Land Outlook | UNCCD
- 14 United Nations Global Land Outlook 2022 Global Land Outlook | UNCCD

COP27: Innovate and Implement



A final word

Our world is changing at an unprecedented rate. We perceive that climate change has gathered pace alongside the global food and energy crisis exacerbated by the war in Ukraine. At this year's COP, countries agreed to launch a loss and damage fund, and the summit was also united on the need to accelerate policy shifts to create the right enabling environment for increasing climate finance.

The need for a faster shift to renewables was highlighted in the COP27 decision and articulated by independent voices from across the private sector. The pace of this transformation will be determined, in our view, by the main contributors to climate finance, given that, according to the latest UN figures, there is an estimated gap of several trillions of dollars.

As an impact-led, global investment manager we are committed to contributing to this financing need. For us, this means a continuation and reinforcement of our existing climate and biodiversity strategies within our impact investment platform. As part of this, we made a public commitment last year to reach €5 billion of assets under management (AuM) in climate and impact-focussed strategies by 2025.

As with the example of our regenerative agriculture strategy, we hope to collaborate further with our peers in the investment community to play our part in allocating capital to the transition to a low-carbon economy. Evidence tells us that the solutions are within reach and the necessary technology already exists. But we believe that the considerable financing gap places the onus on the international investment community to act urgently – before it is too late.





Lindee Wong, Director of Climate and Biodiversity

Lindee Wong joined Tikehau Capital in 2022 as a Director of Climate & Biodiversity support the implementation of the Group's climate and biodiversity strategy across the Group's business lines. Prior to joining Tikehau Capital, Lindee worked at Allianz Trade in Paris as an Environmental Business Manager. Before that, she worked as a Principal Consultant Climate Change at ERM, Paris.

Lindee holds a Master of Science in Environmental Technology from Imperial College London and a Bachelor of Science from the University of Sydney.



Pierre Abadie, Group Climate Director

Pierre Abadie is Group Climate Director and Co-head of Tikehau Capital's private equity energy transition and decarbonisation practice. He co-manages Tikehau Capital's Energy Transition Private Equity Fund, which was launched in 2018. This fund, which raised more than €1 billion, is the first fund singularly committed to investing in European SMEs that contribute to the decarbonisation of our economy. Pierre has over 20 years' experience in the energy and energy transition sectors. He previously worked at TotalEnergies for 16 years in the Gas and Renewables division.

Pierre represents Tikehau Capital in the Net Zero Asset Managers Initiative which brings together an international group of 291 asset managers with \$66 trillion in assets under management.

He trained as an engineer at the Ecole Centrale and holds a degree in physics (Sorbonne University).

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