



# IN CONVERSATION WITH PIERRE ABADIE

Why agriculture is the unsung ally  
to combat climate change

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The planet must be saved. This is the loud, clear message of COP 26. Everyone is talking about the reduction of CO2 emissions in the atmosphere but what has not been widely discussed is to achieve carbon neutrality by 2050, we will also have to sequester as much CO2 as we emit into our soil.

### What does CO2 sequestration involve?

When we talk about CO2 sequestration, we obviously think of planting forests. But the soil is one of the biggest carbon sinks on the planet. It contains two to three times more carbon than the atmosphere. Each year, some of the CO2 emitted is recovered by plants through photosynthesis. When they decompose, soil organisms such as bacteria, fungi and earthworms, transform into organic matter. This is important to agriculture because it retains water, nitrogen and phosphorus, which are essential for plant growth. In other words, the agricultural ecosystem is a vital ally for the climate.

### How does our economic system support and contribute to soil pollution?

Since the 1950s, modern agriculture has made it possible to increase production in Europe. We have created fertilisers

with nitrogen, phosphorus and potassium. We developed herbicides and pesticides to eradicate insects and weeds. The industrialisation of agriculture is a shining example of human ingenuity - but at what cost?

The use of ploughing has destroyed soil vitality, rendering it infertile. We have compensated for this by increasing the use of fertilisers that pollute our water tables. We have cut down our hedges, regrouped our territory and organised large monocultures to optimise yields, making it necessary to use pesticides. With a 50% loss of living organisms since the 1980s, we have thus triggered the sixth mass extinction.

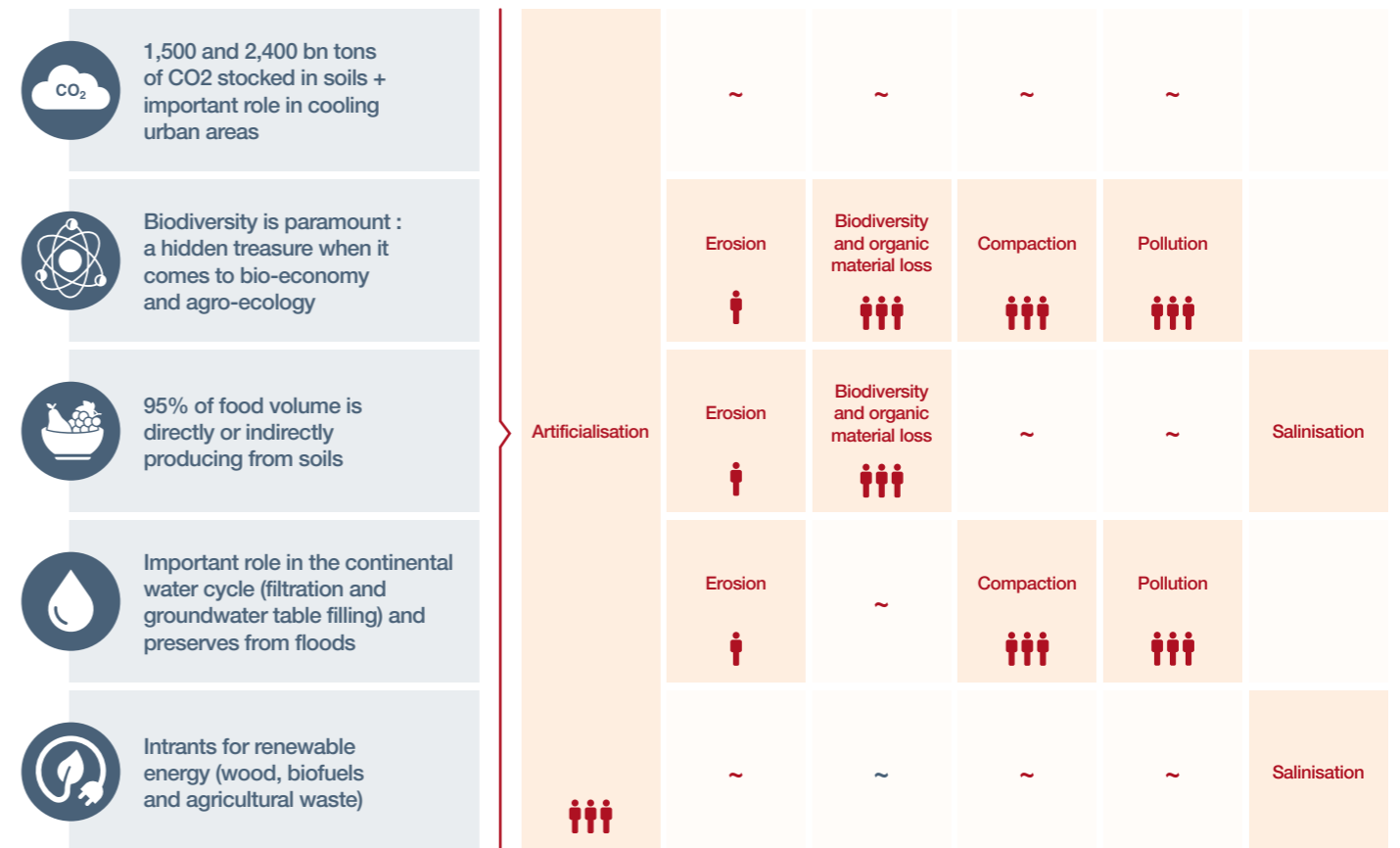
Agriculture is the second largest emitter of CO2 – the majority of which comes from the methane emitted by livestock farming, and the remainder from nitrous oxide through fertiliser use.

## Soils Environmental Roles vs. Human Threats

Soils are a key pillar of the environment



Yet threats to soils are multiplying – and Human Activity is always involved



Source: TKO Research, October 2021

High Human impact Medium Human impact





If carbon stocks were to be increased by just 0.4% in the top 30 centimetres of the soil each year, we could compensate for all the greenhouse gas emissions produced by the planet in one year

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### What are the potential benefits if carbon stock increases?

The Common Agricultural Policy (“CAP”) has allocated 100 billion euros over the last ten years to decarbonise the sector, and we observe no significant effect - yet the potential is huge in our opinion. The international “4 by 1,000” initiative launched at COP 21, aims to show that agriculture, and in particular agricultural soils, can play a crucial role.

**For example, if carbon stocks were to be increased by just 0.4% in the top 30 centimetres of the soil each year, we could compensate for all the greenhouse gas emissions produced by the planet in one year based on INRA (Institut national de la recherche agronomique) analysis. But this approach requires a change in production methods through agroforestry (the practice of planting or leaving trees and crops on the same plot of land and crops on the same plot of land) thus protecting the quality of the soil and its yield.**

According to Ademe, the French Agency for Ecological Transition, 65 million hectares could be managed through agroforestry in Europe, representing a sequestration potential of 240 million tonnes of CO<sub>2</sub>.

### Have you invested in any companies focused on soil pollution?

#### AMARENCO

Tikehau invests in Amarenco; an independent producer of photovoltaic energy\* and leader in Agrisolar. Agrisolar (or “Agri-PV”) refers to the smart combination of agricultural infrastructure with a solar PV installation, and its potential in the EU is immense. If Agri-PV were deployed in only 1% of Europe’s arable land, its technical capacity would be over 700 GW, generating more than 25% of the EU’s current electricity consumption.

Agrisolar removes land competition between dedicated solar energy infrastructures and dedicated agricultural activities under conditions that guarantee the efficiency, sustainability, and viability of both activities, whenever the primary purpose of Agrisolar is to serve a core agricultural need. By allowing the energy transition to support the agricultural transition, the EU can make rural communities more competitive and sustainable. Solar, as the most scalable and cost-effective


clean energy technology, empowers farmers to be at the heart of the European Green Deal and the post-COVID green recovery. Agrisolar supports the transition to a sustainable food supply and ecosystem, as well as the objectives of the Common Agricultural Policy and of the Farm to Fork Strategy. As a disruptive set of technologies, we believe that innovative Agrisolar solutions can drive the modernisation of the EU’s food system and increase its resilience to climate change. Finally, thanks to its high land-use efficiency, Agrisolar seems particularly suited to boost the clean energy transition in land-scarce regions, such as EU islands.

#### VALGO

Tikehau also invests in VALGO, a leading French specialist in the remediation and revitalisation of brownfields and industrial sites worldwide. Founded in 2004 by François Bouché, VALGO treats polluted land and groundwater and removes asbestos from buildings, rehabilitating these complex sites to repurpose them.

As a remediator of the earth, VALGO works with stakeholders to restore the value of use of polluted soils through urban development and revitalization operations. The Petroplus refinery remediation is a showcase of VALGO’s expertise, with more than 60 ha of polluted land remediated, 75k tons of metals and 400k tons of concrete recycled and used locally, and a development project allowing the creation of 10 ha of green spaces, 2,500 jobs by 2022 and a 7 MW onsite solar capacity added.

Through this investment via our energy transition fund, we are excited to support the growth of this entrepreneurial group, whose values and vision we share. VALGO will accelerate its positive ecological impact in healing the earth by limiting soil artificialisation and protecting biodiversity.



To remain focussed on our objective we must put these technologies to work in soil regeneration

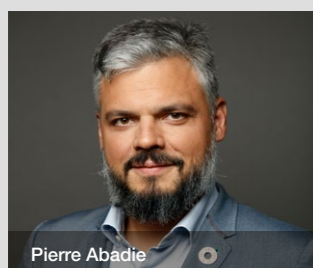
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\* Photovoltaic energy is a clean, renewable source of energy that uses solar radiation to produce electricity. It is based on the so-called photoelectric effect, by which certain materials are able to absorb photons (light particles) and release electrons, generating an electric current.

## What fundamental steps must be taken to tackle the issue at its core?

In our view, tackling this issue requires a shift in perception; producers will be forced to change the way they produce our food if we, as consumers, change our attitudes and behaviours. Yet, the crux of it is still a 'chicken and egg' situation; as consumers will only adapt their behaviour if producers change the way they operate. Ultimately, we can't achieve our goal if we operate in silos. We must unite in our efforts to regenerate the soil so that it can provide us with healthy, sustainable and traceable food. COP26 startled large corporates into making significant pledges towards carbon neutrality. The next step is for them to act upon these pledges by shifting their focus to regenerative agriculture. Collaboration between the public and private sector will be key if we want to save our earth and change the way we produce our food for good.

We believe that our portfolio at Tikehau is well placed to contribute to this objective. The companies we invest in across the breadth of the carbon neutral universe are to date, crucially, interdependent. In our role as investment partner, we foster collaboration between portfolio companies as, in our view, this is how we can create the most impact. For example, VALGO regenerates the soil so that other businesses can use the land for either regenerative agriculture, the development of energy efficient buildings or solar or wind energy production. As such, we can see how important it is to remember that we cannot fight the climate emergency alone; we are in a race against time to defeat it, and we can only achieve this if we work together for our common purpose.



### By Pierre Abadie, Group Climate Director, Tikehau Capital

Pierre is Group Climate Director at Tikehau Capital. He has over 20 years of experience in the energy sector and its transition. Pierre previously worked for 16 years at Total including in the Gas and Renewables division before launching the first Tikehau Energy Transition Fund in 2018 and subsequently the decarbonisation practice. This fund is the first fund to have raised more than €1 billion entirely dedicated to investing in SMEs that contribute to the decarbonisation of our economy.

Pierre is a board member of four energy transition companies: Greenyellow, Enso, Cool Planet Group and Amarenco. Pierre also sits on the Climate Committee of the board of BPI France and is the chair person of the Green Impact Group of France Invest Impact commission.

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