

SPECIAL EDITION | IN PARTNERSHIP WITH TIKEHAU CAPITAL



2023 - 2024

TIKEHAU
CAPITAL

INVESTIR DURABLE

A MAGAZINE ON SUSTAINABLE FINANCE

UNDERSTANDING REGENERATIVE AGRICULTURE



TIKEHAU CAPITAL KEY FIGURES



▶ **> € 40 billion**

IN ASSETS UNDER
MANAGEMENT

▶ **Areas of
expertise**

- PRIVATE DEBT
- REAL ASSETS
- PRIVATE EQUITY
- CAPITAL MARKETS STRATEGIES

▶ **€ 2.4 billion**

IN ASSETS UNDER
MANAGEMENT
WITHIN OUR CLIMATE
AND BIODIVERSITY
PLATFORM



PRESENT IN

▶ **15**

COUNTRIES

Editorial

▶ This special issue is the result of a collaboration between Tikehau Capital and ID, l'Info Durable and is dedicated to a significant topic in the sustainable development of food systems and the environment: regenerative agriculture. Aimed at professionals and savvy savers alike, this issue lays the foundations of tomorrow's agriculture and the urgency of this transformation at a time when 40% of soils, responsible for meeting 95% of our food requirements, are degraded¹.

The aim of this issue is twofold. Firstly, to clarify the concept of regenerative agriculture: its fundamental principles, environmental, economic and social benefits and the issues it addresses. Secondly, to explore the requirements and challenges of scaling up regenerative agriculture through financing solutions that engage all stakeholders in the value chain. ▶

1. Source: FAO, 2021. The State of the World's Land and Water Resources for Food and Agriculture – Systems at breaking point. Synthesis report. Rome. <https://doi.org/10.4060/cb7654en>

Contents

- 6 ▶ 7 ▶ **WHAT IS REGENERATIVE AGRICULTURE?**

- 8 ▶ 10 ▶ **Marc-André Seloisse**
**“THE SOIL SITUATION WILL NOT IMPROVE
WITHOUT PUBLIC AWARENESS”**

- 10 ▶ 11 ▶ **AGRICULTURE IN FIGURES**

- 12 ▶ 13 ▶ **Laurent-David Charbit**
**“ADOPTING REGENERATIVE FARMING PRACTICES HELPS MAINTAIN
OR RESTORE LAND VALUES OVER THE LONG-TERM”**

- 14 ▶ 16 ▶ **AN INNOVATIVE PRIVATE EQUITY STRATEGY
TO ACCELERATE SCALABILITY**

- 17 ▶ **Cécile Cabanis**
**“IT’S A MISTAKE TO PIT PROFITABILITY AGAINST SUSTAINABLE
DEVELOPMENT”**

- 18 ▶ 19 ▶ **Sébastien Abis**
**“THERE IS NO CHOICE BETWEEN FOOD SECURITY
AND SAVING THE PLANET”**

- 20 ▶ 21 ▶ **REGENERATIVE AGRICULTURE:
THE AGRIFOOD INDUSTRY’S TRANSITION**

- 22 ▶ **BIBLIOGRAPHY**

FEATURED SPEAKERS AND CONTRIBUTORS



▶ **1 - CÉCILE CABANIS**
*Deputy CEO,
Tikehau Capital*

▶ **2 - LAURENT-DAVID CHARBIT**
*Co-head of Tikehau Capital's
private equity regenerative
agriculture strategy*



▶ **3 - MARC-ANDRÉ SELOSSE**
*Biologist, Professor
at the French National Museum
of Natural History*

▶ **4 - PAMELA MARRONE**
*Executive Chairman, Invasive
Species Control Corporation*



▶ **5 - HÉLÈNE HENRY-PRINCE**
*Co-head of Tikehau Capital's private
equity regenerative agriculture
strategy*

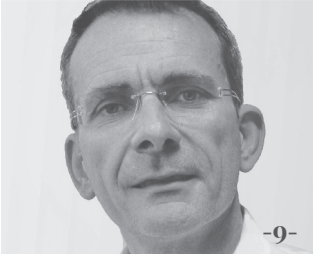
▶ **6 - ANTOINE DENOIX**
CEO, AXA Climate



▶ **7 - ETHAN SOLOVIEV**
Director of Innovation at HowGood

▶ **8 - ÉRIC SOUBEIRAN**
*Vice-President and Head of the
Climate & Nature Fund at Unilever*

▶ **9 - PIERRE LAHUTTE**
Senior Advisor at Tikehau Capital



▶ **10 - SÉBASTIEN ABIS**
*Associate Researcher
at the Institut de Relations
Internationales et Stratégiques,
Director of Club Demeter*



WHAT IS REGENERATIVE AGRICULTURE?

Sequestering carbon in soils, improving the water cycle, and preserving biodiversity. Regenerative agriculture is emerging as a promising solution to climate change. Although yet to be widespread in Europe, this approach is gaining ground in the United States and attracting agri-food giants' interest. Here's how it works.

It's an alarming fact. According to the United Nations Convention to Combat Desertification, nearly 40% of the world's soils are degraded (UNCCD¹). The development of intensive agriculture since the 1960s, with yield as its main objective, is mainly responsible for land impoverishment, water pollution, and biodiversity loss. The cause: the intensive mechanisation of agricultural work and the use of synthetic fertilizers and phytosanitary products that pollute and degrade soils essential to life on Earth. As well as regulating floods and the climate, soil is a habitat for many organisms, from earthworms to bacteria. Around 25% of the world's biodiversity lives in soil. At a time when this reservoir is under threat, new, more sustainable agricultural practices are taking shape in France and around the world. We now speak of agroecology, agroforestry, organic farming, permaculture, soil conservation agriculture... and, more recently, regenerative agriculture. A concept born in the United States by Robert Rodale, head of

the Rodale Institute and son of Jerome Irving Rodale, pioneer of the organic movement. In 1983, in an article entitled "Breaking new ground: The search for a sustainable agriculture," he evoked the idea of "regenerative organic agriculture" that would prioritise soil health and animal welfare, among other things. Over the last 10 years, the term has become popular with multinationals such as McCain, Nestlé and Danone. But what does the term mean?

FOCUS ON SOIL HEALTH

While no official regulatory definition exists, several players have defined the main principles. According to the commonly accepted meaning, regenerative agriculture is "a system of agricultural principles and practices that aims to rehabilitate and improve the entire farm ecosystem from the standpoint of sustainability, including improved human health and economic prosperity. It is a method of farming that places

1. Source: Global Land Outlook, 2022



great importance on soil health and improves the resources (soil, water, biodiversity...) it uses". Across the Atlantic, the holistic dimension of regenerative agriculture is emphasised. "It's a form of agriculture that promotes biodiversity by focusing on a healthy, living soil. It means creating a balanced ecosystem where nature's cycles work together holistically. The idea is to enhance the land's ability to restore itself, leaving it in a better condition for generations to come," asserts Pam Marrone, Executive Chairman of Invasive Species Control Corporation. More specifically, regenerative agriculture is inspired by soil conservation agriculture. Developed in the United States, it is based on three principles. Firstly, maintaining permanent soil cover

with plants or residues from previous crops protects the soil surface and conserves moisture – secondly, implementing crop diversification with long rotations to improve biodiversity and soil fertility. "We're not going to grow only wheat or corn in the same place. Instead, we're going to sow wheat after legumes to make the most of the nitrogen these plants make over a cycle extending over two, three, or four years," explains Paul Luu, Executive Secretary of the "4 for 1000" initiative. The final pillar of soil conservation agriculture is the reduction or even cessation of plowing, which can be detrimental to biodiversity.

TOWARDS NEW PRACTICES

While regenerative agriculture shares many points in common with soil conservation agriculture, it differs in that it replaces pesticides, insecticides, or herbicides with biocontrol solutions. Regenerative agriculture also innovates by reintegrating livestock farming, for example, to transform the biomass produced by photosynthesis into organic matter to nourish the soil. "The rumen of ruminants is a formidable bioreactor in which micro-organisms multiply, bringing life and biodiversity back to the soil through their dung," explains Pierre Lahutte, senior advisor at Tikehau Capital. He adds: "Modern agriculture has separated the animal from the field by putting it in stables. Regenerative agriculture turns its back on hyper-specialisation and promotes diversity. We recreate natural ecosystems with animals, but also hedgerows where biodiversity finds refuge, shelter, and a home to protect crops."

▶ A CLOSER LOOK AT THE "4 PER 1000" INTERNATIONAL INITIATIVE ◀

Launched by France in 2015, during COP21 which resulted in the Paris Agreement, the "4 for 1000" initiative aims to federate public and private players to promote the crucial role soils plays "in food security and climate change." Its name refers to the fact that an annual increase of 0.4% (or 4‰) in the soil's carbon content could offset the annual increase in CO₂ emissions into the atmosphere.

FIGHTING GLOBAL WARMING

Based on these key principles, regenerative agriculture offers many services. Thanks to permanent soil cover, for example, more carbon can be sequestered in the soil, helping to slow global warming. Soil conservation agriculture - on which regenerative agriculture is based - is known to capture around 20% more carbon than conventional agriculture, sequestering 126 kg of carbon per hectare per year¹. “Whereas modern agriculture works and mineralises the soil, contributing to the release of CO₂ into the atmosphere, regenerative agriculture, which is based on certain principles of soil conservation agriculture, returns organic matter to the soil, fixing the atmospheric CO₂ captured by plant photosynthesis”, explains Pierre Lahutte. This organic matter will also act as a sponge, which is helpful in combating soil erosion accentuated by intensive farming and deforestation. “A soil with 1% organic matter can retain 18 millimetres of precipitation. At 2%, the figure doubles to 36 millimetres. At 3%, the figure rises to 54 millimetres”, continues the specialist. Paul Luu agrees: “Increasing the level of organic matter in the soil improves its structure. Being more resilient, the soil will be better able to absorb and store water, better resist erosion, and provide nutrients for plants. In severe weather (storms, drought), it also helps prevent runoff.”

CHALLENGES TO MEET

Promoters of regenerative agriculture also emphasise the impact of this practice on food quality. “Intuitively, we think this type of agriculture will enable us to create products with better nutritional value. But we lack the hindsight and scientific data to demonstrate this,” qualifies Paul Luu. Studies on soil conservation agriculture do, however, provide some indicators. According to INRAE, the organic matter content of a conservation farming system is 51% higher than that of conventional farming. While this solution seems promising, several challenges remain. “Regenerative agriculture is complex to implement. In France, for example, we need

to recreate a policy that encourages mixed farming. In many regions specialising in field crops (wheat, rapeseed, corn, etc.), certain skills have been lost. As a result, there’s a shortage of skilled labor,” notes Pierre Lahutte. The limits are not only technical but also economic. The transition to regenerative agriculture can lead to a short-term drop in yields. “To see the benefits in terms of yield and return on investment, you need between three and seven years,” says Pam Marrone.

SUPERVISING INITIATIVES

For all these reasons, regenerative agriculture still needs to be improved, especially in Europe. It is worth noting that, according to Inrae (Institut national de recherche pour l’agriculture, l’alimentation et l’environnement), soil conservation agriculture was practiced by just 1.7% of French farmers in 2019. “We’re finding it difficult to work on a large scale, but we’re increasingly making progress,” notes Paul Luu. For now, the best examples of large-scale conversion are found in the United States, with structures such as Brown’s Ranch, White Oak Pastures, and Understanding Ag, which has converted 22 million hectares nationwide. While this approach is becoming increasingly popular, it still needs more definition and certification. The recent agreement reached by 170 of the world’s largest agri-food companies within the SAI Platform (Sustainable Agriculture Initiative) to align themselves with the definition of agriculture is an encouraging step that will accelerate its adoption. Today, there is only one reference label on the market. This is the ROC (Regenerative Organic Certified) label, set up in 2017 by the Regenerative Organic Alliance (ROA), a cohort of non-profit organisations and companies led by Rodale Institute, Patagonia, and Dr. Bronner’s. For its part, the “4 for 1000” initiative would like to work on a set of certification specifications for regenerative agriculture that would support farmers in this change, which has become essential in the face of global warming. According to the IPCC (Intergovernmental Panel on Climate Change), 8% of today’s agricultural land will become climatically unsuitable by 2100, up to 30% if more is needed.

1. Source: “L’agriculture régénératrice: summum de l’agroécologie ou greenwashing?” Cahiers agricultures, Michel Duru, Jean-Pierre Sarthou, Olivier Therond, 2022.

3 questions for...

MARC-ANDRÉ SELOSSE

“The soil situation will not improve without public awareness”

Although little-known, soils perform many functions and provide numerous services to humanity. Marc-André Selosse, biologist, and professor at the Museum national d'histoire naturelle (MNHN) and author of *L'origine du monde*.



1. What role does soil play?

Soil comprises rock debris, roots, animals, fungi, and bacteria, all of which contribute to its fertility. In one hectare of Earth, for example, there are five tonnes of microbes, five tonnes of roots, and 1.5 tonnes of animals. That's between one and one-and-a-half times more than what lives on the surface. This whole ecosystem

maintains the soil. Soil also helps to regulate the climate. If left unploughed, soil can store organic matter. This storage is one way of offsetting greenhouse gas emissions. Finally, living soil rich in organic matter retains more water. As a result, rivers don't overflow when it rains. Water is temporarily retained, allowing vegetation to grow.

2. What is the state of the world's soils today?

They are mostly degraded, although this varies from region to region. Human activities are mainly responsible for this impoverishment. Certain agricultural practices are to blame. While ploughing enables weed control, it also increases soil porosity. As a result, ploughed soil breathes more, releasing CO₂. Since 1950, our agricultural soils have lost half their organic matter. Mineral fertilizers also pollute

the soil. Some end up in coastal waters, creating green and brown tides. However, there is no such thing as agriculturally dead soil. What is killing their life and functions is the rampant artificialization of land in France and around the world. Since 1970, we have artificialized 10% of our useful agricultural area, covering it with concrete or bitumen as our cities expand.

3. What can be done to protect the soil?

We need to change how we farm by no longer ploughing, permanently covering soils with vegetation, rotating crops over very long periods, and limiting pesticide use. To replace them, we can rely more on resistant varieties: for vines, such varieties reduce fungicide treatments by a factor of ten! We can also mix varieties with different resistances in cereal fields. Organic farming and soil conservation agriculture are moving in the right direction. However, the soil situation will only improve with public awareness. At a consumer level, there needs to be a genuine demand for products that respect the soil and the environment.

- 1 -

SOIL, AN INDISPENSABLE RESOURCE¹

95 %



of the world's food production comes from the soil

25 %



of the world's biodiversity is found in soils

4 %



of the world's GDP came from agriculture in 2018

11
MILLION
KM²*

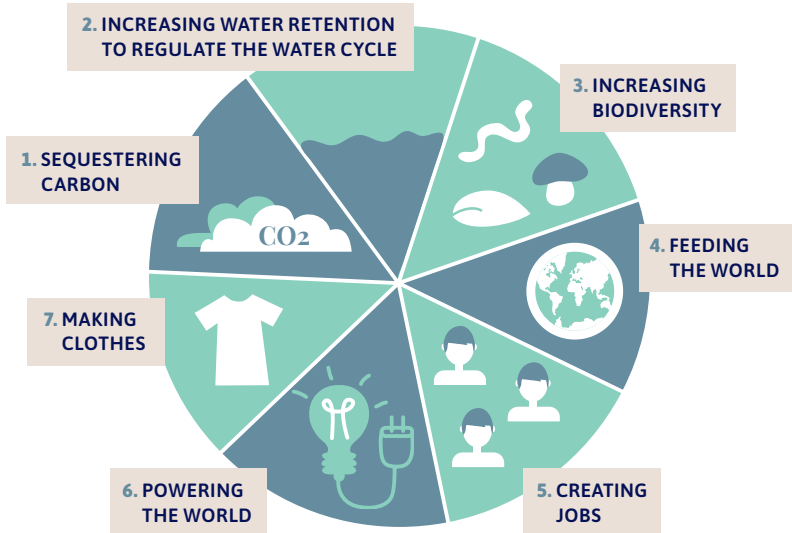


of the planet's surface is farmland

* About 20 times the surface area of France

- 2 -

WHAT ARE SOILS GOOD FOR?



1. Sources: UNCCD; FAO (2022); statistiques-developpement-durable.gouv (2022); United Nations; World Bank

AGRICULTURE AND GLOBAL WARMING²

22 %



of greenhouse gas emissions in France are linked to agriculture

25 %



of European agricultural soils have disappeared due to water erosion

40 %

of the world's soils are degraded

THE 6 KEY PRINCIPLES OF REGENERATIVE AGRICULTURE

1. Cover the ground permanently
2. Reduce synthetic inputs
3. Limit tillage

4. Diversify crop rotation
5. Integrate livestock activities
6. Consider the specific characteristics of each region

2. Sources: French Ministry of Agriculture (2022); European Environment Agency (2015); FAO



LAURENT-DAVID CHARBIT

“Adopting regenerative farming practices helps preserve or restore land values over the long-term”

“Scaling up regenerative agriculture practices requires reconciling time horizons through appropriate financing and subsidies that encourage a transition in practices and a cooperative approach by players along value chains,” stresses Laurent-David Charbit, co-head of the private equity strategy dedicated to regenerative agriculture at Tikehau Capital.

W

hy is it essential to take an interest in soil health?

We can note several significant aspects of land surface distribution. Approximately 71% of Earth’s land surface, which accounts for 30% of the total land surface, is habitable, with nearly half of it used for agriculture. 78% of this agricultural land is used for animal husbandry, including grazing land and land cultivated to produce animal feed. The remaining 22% is dedicated to growing grain for human consumption. Soil is roughly the size of the United States, and 95% of the food we eat today comes from the land. At the same time, soils play other essential roles. They filter water, promote the regeneration of biodiversity, and play a major role in the

global economy, with 40% of the working population employed in agri-food systems. In addition, soils produce the biomass needed for the energy transition and play a crucial role in carbon capture. It is the second largest carbon sink after the oceans¹.

According to the IPCC, the “AFOLU” (Agriculture, Forestry, and Other Land Uses) sector is responsible for 22% of greenhouse gas emissions today. Could regenerative agriculture be a solution?

Regenerative agriculture is not fundamentally new. Soil erosion linked to intensive agriculture was already mentioned in the 1930s by John Steinbeck (1939) in his novel “The Grapes of Wrath,” in which he refers to the

1. Sources: UN Food and Agriculture Organization (FAO), Licensed under CC-BY by Hannah Ritchie and Max Roser, 2019

2. Source: Mutualité sociale agricole

phenomenon of “Dust Bowls”: “In the ruts made by the water, the earth crumbled into dust and flowed in little dry streams.” Franklin Roosevelt, another witness to this phenomenon, declared: “A nation that destroys its soil destroys itself.” In Europe, after the Second World War, nearly a third of the population suffered from malnutrition. In this context, the priority was to set up an intensive, industrial, agricultural system designed to resolve this situation. The negative consequences of this intensive agriculture were not considered at the time. Regenerative agriculture provides industry stakeholders with principles and solutions, most of which have already proved their worth. Deploying these practices on a large scale will both reduce emissions and enable the soil to capture carbon better than it does today. It’s a question of taking these fundamental principles and applying the latest research and technological developments.

What are the current obstacles to large-scale deployment of regenerative agriculture?

We can mention several of them. Firstly, as with any change, the transition to new practices is accompanied as much by the need for those involved to learn as to “unlearn and/or relearn” to carry out these profound transformations. Secondly, there is a need to find financial and non-financial mechanisms to reconcile time horizons, i.e., the conflict between the fact that the impact of climate disruption is felt beyond the traditional time horizon considered by companies and political leaders. In many countries, the retirement of many farmers (in France, it is estimated that 50% will retire in the next 10 years?) is a delicate time to manage. Finally, the positive impact of new practices implies risk-taking for farmers, especially those who depend on an annual harvest. If changes in practices have a negative impact on their activities, this can affect income for an entire year. During the transition phase, crop yields are generally lower. For example, the reduced use of inputs can lower land productivity over a period. The agricultural sector benefits from substantial subsidies in different countries: in 2021, the OECD estimated this amount at around \$817 billion. In Europe, the sector is also heavily subsidised. These subsidies are essential to the economic equilibrium of the players involved.

On the other hand, they are not necessarily linked to the implementation of regenerative farming practices. While we now have many years of research on the use of chemical fertilizers, pesticides, etc., research needs to be more advanced on solutions linked to regenerative agriculture. Much work remains to be done to scale up solutions and ensure that, in as many cases as possible,

yields are at least equivalent to those obtained with “conventional” practices. The solutions currently proposed need to cover a wider range of situations.

How can we remove these obstacles?

In addition to those mentioned above, several other actions can be considered. To encourage farmers to transition, a mechanism could be devised to subsidise or penalise interest rates on land acquisition financing, depending on their commitment to regenerative agriculture. Such incentives could also be applied to insurance policies, as the adoption of these practices helps to preserve or restore land values in the long term. Research is crucial in finding concrete solutions for implementing regenerative farming practices. This involves developing techniques and tools adapted to local realities and different types of harvest.

Are these principles applicable on a large scale?

The relevance and impact of these principles have already been proven. Scaling up requires finding the right tools, depending on the context in which we operate. For example, in precision agriculture, the choice of bio-fertilizers, stimulants, and their application to best consider crop needs. There are enough solutions available that can be deployed on a large scale right now without waiting for innovations that will be viable in 20 years.

Where do we stand today in terms of scaling up these practices?

Several positive signals are pointing to a growing commitment to regenerative agriculture. Many major players in the food, fashion, beauty, and other industries have made commitments to change their practices and switch to regenerative agriculture. These decisions have an impact on their entire value chains. To date, in the agri-food sector, 50 companies representing \$2.5 trillion have made commitments on this subject. This is a strong signal of large-scale transition.

**FIND THE FULL
INTERVIEW HERE ►**



AN INNOVATIVE PRIVATE EQUITY STRATEGY TO ACCELERATE SCALE-UP

Faced with the lack of investment needed to transition agricultural systems towards regenerative farming practices, private players, and investors in particular, have a crucial role to play in directing funding towards companies that are part of this approach. Earlier this year, Tikehau Capital¹, AXA and Unilever launched an impact private equity strategy dedicated to this theme.

The world's soils are in peril, warned the United Nations Convention to Combat Desertification (UNCCD) in the second edition of its "Global Land Outlook" report. According to the organisation, 20% and 40% of the planet's land is currently degraded. An additional area equivalent to South America will be at risk by 2050 if no action is taken to reverse the trend.

Soil preservation is a crucial issue for the future of our societies, as it plays a key role in regulating the climate of the water cycle and maintaining biodiversity. Global food security also depends on soil health since 95% of the food consumed today comes from the soil. Suppose current trends in land degradation continue into this century. In that case, scientists predict an increase in climate-induced disturbances, "warns the UNCCD report. This includes disruptions in food supply, forced migration, and continued loss and extinction of biodiversity".

CHANGING FARMING PRACTICES

The main factors behind this degradation are linked to human activities and agricultural systems' poor management of soil and water resources. With agriculture occupying around 40% of the world's land surface, "restoring the health and productivity of food landscapes will be essential," the authors stress. In recent decades, intensive tillage and the massive use of chemical fertilizers have primarily contributed to the impoverishment of soil health.

"Our companies must work in favour of the living world instead of limiting themselves to reducing their negative impact on it"

Faced with these challenges, the experts recommend, among other things, adopting a regenerative model: "Conserving nature is no longer enough - restoration is now an imperative because it is the abundance and complexity of healthy ecosystems that have made complex human societies possible," insists the report. To preserve a habitable planet, we need to switch to a positive logic, a regenerative state, "says Antoine Denoix, CEO of AXA Climate. This means that our companies must work in favour of living beings instead of limiting themselves to reducing their negative impact on them."

1. This strategy is managed by Tikehau Investment Management, Tikehau Capital's main asset management company.

SUPPORTING THE TRANSITION

In agriculture, this transition is reflected in adopting practices that promote soil restoration: for example, the reduction, or even elimination, of ploughing and agrochemicals, crop rotation, and the use of pastures. “Many traditional and modern regenerative food production practices can enable agriculture to pivot from being the main cause of degradation to being the main catalyst for land and soil restoration,” says the UNCCD report. “The sector faces major risks, mainly in terms of water resources, but it also offers a wealth of solutions regarding carbon capture, food quality, and community well-being,” says Antoine Denoix. The transition to regenerative agricultural practices, while promising, nevertheless faces several significant challenges, requiring concerted action from a wide range of players. By adopting incentives and defining appropriate strategies, public authorities are on the front line in supporting farmers in these transformations. For their part, the major players in the agri-food sector also have a decisive role in accelerating the transition at scale. Several industry giants have announced ambitious plans to integrate regenerative farming practices into their value chains in recent years. “The agricultural sector is facing a growing increase in the risks associated with climate change. At present, the responsibility for bearing them rests largely with farmers. Still, it is essential to share them more equitably with distributors, processors, producers... all along the value chain,” insists Antoine Denoix.

A DEDICATED PRIVATE EQUITY STRATEGY

“Agriculture is a sector we’re going to have to rely on if we’re to adapt successfully, but paradoxically, it’s very underfunded,” laments the CEO of AXA Climate. In response to this lack of investment, AXA, Unilever, and Tikehau Capital launched a private equity impact strategy in 2022, dedicated to investing in projects and companies “working towards the transition to regenerative agriculture.” “Specifically, it will invest in companies involved in all stages of the agricultural value chain, from ingredient production to animal feed to impact measurement,” explains H el ene Henry-Prince, co-head of the strategy.

Classified as Article 9 under the SFDR regulation and designed “to meet the UN Sustainable Development Goals, in particular, Articles 3 (good health and well-being), 13 (measures to combat climate change) and 15 (life on earth)”, the strategy aims to promote regenerative farming practices by focusing on three areas:

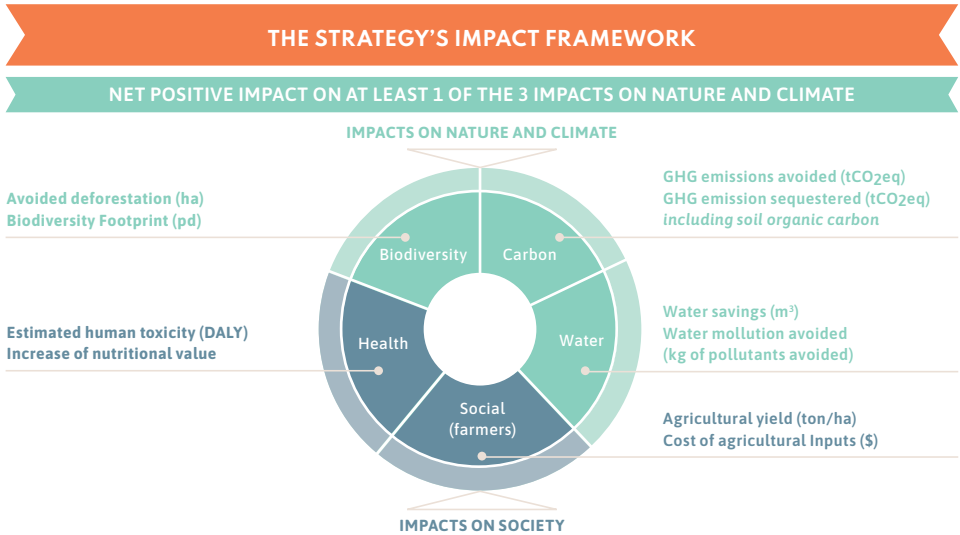
- ▶ Protect soil health to enhance biodiversity, preserve water resources, and help combat climate change.
- ▶ Contribute to the future supply of regenerative ingredients to meet both the needs of the world’s growing population and consumer demand for increasingly sustainable products.
- ▶ Contribute to advancing technological solutions to accelerate the transition to regenerative agriculture.

STRATEGY FOR REGENERATIVE AGRICULTURE - TARGETED VERTICAL SECTORS

INPUTS	FARM EQUIPMENT AND OPERATIONS	INGREDIENTS	CROSS-FUNCTIONAL CATALYSTS
<ul style="list-style-type: none"> ▶ Biocontrol ▶ Bio-stimulants (including bio-fertilizers) ▶ Pollination ▶ Animal feed ▶ Seeds ▶ Biochar 	<ul style="list-style-type: none"> ▶ Automation and robotics ▶ Methanisation and agri-voltaics ▶ Management of tillage intensity ▶ Precision farming ▶ Water management ▶ Precision breeding 	<ul style="list-style-type: none"> ▶ Food ingredients ▶ Plant- and insect-based alternatives 	<ul style="list-style-type: none"> ▶ Measuring and monitoring impact ▶ Supply chain optimisation and transparency ▶ Financing solutions ▶ Carbon value chain

To be eligible for investment, each company in the portfolio must demonstrate a net positive impact on at least one of these three dimensions: biodiversity, climate, and water. An impact committee, comprising representatives from Unilever, AXA Climate, and Tikehau Capital, will examine each investment opportunity to ensure that projects are relevant, explains the

strategy's co-head, H el ene Henry-Prince. "The impact committee can veto any opportunity it deems unsuitable for the strategy's theory of change or which does not provide sufficient evidence that it can deliver the expected impact (i.e., CO2 sequestration, water use, chemical input use, biodiversity development, etc.)."



In addition, candidate companies will also have to have no negative impact on two additional dimensions, namely health and the well-being of farmers. "Restoring life to the soil is the genesis and primary objective of the strategy, but we don't want this to be at the expense of people," explains H el ene Henry-Prince. "It is essential to consider a global perspective to respect the 'do not harm' principle," adds Antoine Denoix. The aim is to generate positive results for biodiversity, climate, and water without damaging other aspects, such as the well-being of local communities. In addition to the initial selection process, portfolio companies will then be monitored throughout their holding period based on an impact roadmap to help them move towards and develop their regenerative practices. "The level of achievement of the impact roadmaps, as well as other relevant key performance indicators, will be reviewed annually. The strategy will also publish an annual impact report detailing achievements and ongoing efforts," say its managers. The strategy's carried interest will also be indexed to the achievement of predefined impact

parameters, "a first," says H el ene Henry-Prince. With a target size of €1 billion – including €300 million contributed by the three founding partners – the strategy will deploy its first investments from the end of 2023. It will invest (as a majority or minority shareholder) in fast-growing companies in their market for investment tickets ranging from €15 to €150 million. "This is not a passing trend, but a deep-rooted, sustainable movement, asserts H el ene Henry-Prince. Candidate companies have been profitable for several years, supported by favorable legislative developments and significant commitments from major players, leading to an alignment of interests around this transition". In the end, the portfolio should consist of 12 to 15 holdings, each with holding periods ranging from 5 to 10 years and a lifespan of 15 years, "an appropriate timeframe for assessing the effectiveness of the solutions," explains the strategy's co-head. The strategy aims to unite various institutional players, including corporates, sovereign wealth funds, and family offices, around this necessary and potentially highly profitable transition.

3 questions for

CÉCILE CABANIS

“It’s a mistake to pit profitability against sustainable development”

“Private players have a decisive role in transitioning to more resilient models,” explains Cécile Cabanis, Deputy CEO of Tikehau Capital.



1. What role do private players play in financing the transition to regenerative agriculture?

The transition to regenerative agriculture requires the coordinated participation of the entire value chain, with private players playing an essential role. When we think of this transition, we often think of taxes and subsidies. However, the reality is different: solutions exist, commitments have been made, and financial resources are available. The key lies in finding a solution that combines all these elements and enables us to move forward in a coordinated fashion. There are two barriers to overcome

in this process: the perception that transition is a cost rather than an investment. Economic systems focus on immediate results, whereas transforming agriculture requires a long-term vision. Secondly, and this is a major change, this transition can only be achieved collectively: it must bring together savings to finance it, solutions to change farming practices, and all players in the value chain to secure outlets. And it must do so with the assurance that all interests are aligned.

2. How is the partnership between Tikehau Capital, Unilever, and AXA structured?

The strategy aims to resolve the contradictions of the current system, with a target size of €1 billion to accelerate scaling. As an industrial partner, Unilever brings its in-depth knowledge of the value chain. Thanks to its long-standing expertise in climate risk assessment, AXA will contribute to developing the framework and impact measurement. To ensure alignment of interests, the three partners, Tikehau Capital, Unilever, and AXA, have each committed €100 million.

3. As well as the desired impact, what are the financial opportunities linked to this transition?

In the past, we have been too focused on over-optimised growth centered on improving margins. For a long time, free money led to the misallocation of capital. This led to a weakened environment, growing inequalities, and poor governance in allocating capital. The focus was on achieving short-term “hits” rather than putting money to work to invest in a reasoned and patient way to create lasting value. We’ve all seen the results. Building high-performance models over

the long term means failing to achieve the best possible margin in a single year. Today, it is imperative to reinvest massively to rethink this model. Future growth may be slower, but it will be firmly sustainable and continue to exhibit dynamism around the key megatrends required for transformation: decarbonisation, agriculture, cybersecurity, and model resilience (relocalisation, digitalisation). These topics are driving growth and the model’s essential change. It’s a mistake to

pit profitability against sustainable development. Without solid performance, no investment is possible. To be sustainable, you must be profitable. Without regenerating the resources we use, the system grinds to a halt. To be profitable, you must be sustainable. Regarding agriculture and farmers, the United Nations estimates, for example, that every dollar invested in soil restoration could generate a return of between \$7 and \$30.



SÉBASTIEN ABIS

“There is no choice between food security and saving the planet”

The debate between ecological and highly productive agriculture “must be overcome,” explains Sébastien Abis, associate researcher at the Institut de Relations Internationales et Stratégiques (IRIS) and director of the Demeter Club, which brings together players in the agricultural and agri-food sector.

W

hy is agriculture a geopolitical issue?

What are the major challenges in the coming years?

Agriculture is geopolitical first and foremost because it has a significant physical footprint: it’s an activity that requires various natural resources such as light, arable land, and water. Beyond this geographical dimension, it plays a decisive role in individual social relations. As consumers, we depend on farmers for our food. It’s certainly an economic activity, but above all, a human one. Food is vital and it is agriculture that makes human existence possible. Let’s always remember that. Over time, this social dimension has taken on a political dimension. No civilisation, country, or community can be truly healthy and stable on a political and nutritional level without food security and, therefore, organised agricultural activity. The geopolitics of agriculture reminds us of these human, social, and political links, which endure over time and tend to intensify at a time when the world’s population now exceeds 8 billion.

Agriculture is undeniably linked to three crucial dimensions: food security, environmental sustainability, and the health of the planet and its inhabitants. Food security is a persistent challenge, particularly in the context of solid demographic growth that will continue until the middle of the 21st century. Ensuring adequate food security for individuals and nations remains essential to their development and stability.

Environmental sustainability is another crucial challenge for agriculture. Agricultural activities are partly responsible for CO2 emissions and must embark on decarbonisation. At the same time, the sector is directly confronted with the realities of climate change, which drives profound changes in production systems and crop cycles. Climate risks and shocks will accentuate agricultural activity’s already structurally unpredictable nature.

Farmers will, therefore, have to decarbonise their activity while adapting to the impacts of climate change. There's also a third dimension to this since agriculture can also provide solutions for the energy and climate transition: for example, by supplying renewable energy via methanisation, valorising biomass, developing agrivoltaics, or even by capturing carbon in the soil – an accounting method that now needs to be more accurately assessed. Finally, agriculture plays a fundamental role in health. Not only individual health but that of all living organisms. The “One Health” concept, which has been developing internationally over the last 20 years, is more relevant than ever. It highlights the interconnection between the health of the environment, plants, animals – and humans. It underlines the importance of protecting all living things to guarantee human health. When one system is weakened, all the others are at risk.

These issues of food security, sustainability, and health call for greater cooperation between public and private players to reduce risks and identify solutions. The geopolitical downside is that in recent years, we have yet to see the emergence of a virtuous dynamic to strengthen international cooperation. Instead, we've seen a tendency to go alone, which could be better. We often speak of individualisation in society. This is also true on the international stage: States defend their own interests first and foremost; there's no such thing as friendship.

Is there a contradiction between the quest for safety and sustainability? How can this equation be resolved?

Is there a contradiction, or will there be a necessary combination? There could be a fundamental contradiction if we carry on as before. Tomorrow's agriculture will have to maintain food security. On the other hand, we need to make a significant environmental rearmament. In other words, agriculture must remain strong in volume and productivity while becoming highly environmentally efficient.

In this context, regenerative agriculture is an interesting approach, as it does not propose productive degrowth. On the contrary, it aims to maintain food security while working to restore the planet. We must repair systems weakened by decades of practices during which sustainability was not a priority. Over the past 30 years, this issue has become central in Europe and is becoming a global concern. Regenerative agriculture bridges the

gap between food security, environmental sustainability, and human health. It is important not to confuse a reduction in carbon emissions, which is imperative, with a decrease in social, economic, or security costs. Agriculture must generate income for producers and regions while committing to reducing carbon emissions. This challenge may appear daunting, but it represents one of the most important projects of this century and that demands a collective approach.

Can the transition to a more virtuous form of agriculture be made on a large scale without compromising food security?

Faced with these challenges, it's important to adopt a global perspective because achieving highly successful environmental initiatives in certain regions demands more. In contrast, others continue to adopt less sustainable practices. Isolated action by Europe, for example, will not solve global problems. The question is how to maximise and amplify this virtuous approach.

The debate about ecological versus highly productive agriculture must move on. This opposition to models is entirely behind us. Firstly, because there is no universal model. Agriculture is different in Europe than in Asia, and everyone will have to invent a model that performs well in terms of safety and sustainability. Secondly, these debates have yet to lead to any concrete action. There is no choice between food security and saving the planet. It's a question of combining the two: producing while preserving the Earth. We need to rehabilitate the agricultural world from this perspective and support farmers as entrepreneurs, who are the driving force behind change.

Everyone must be on a common trajectory in a borderless, highly interdependent world, even if approaches, timetables, means, or determinations may differ. Today, in geopolitical terms, the main obstacle lies in the sometimes-radical divergence of intentions and missions between the various players.

**FIND THE FULL
INTERVIEW HERE ►**



REGENERATIVE AGRICULTURE: THE AGRIFOOD INDUSTRY'S TRANSITION

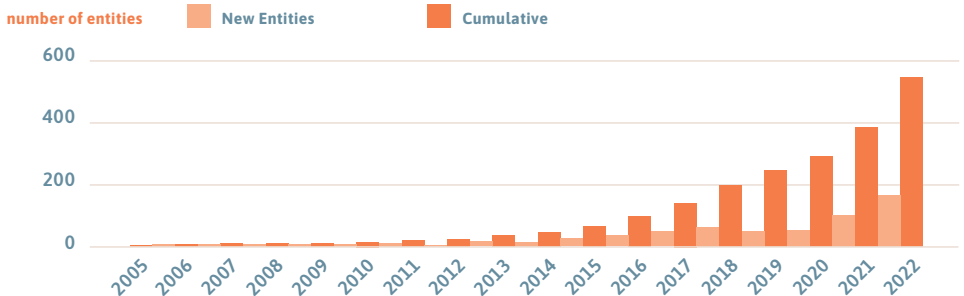
Driven by the need to secure their supply chains in the face of the challenges posed by global warming and soil degradation, agri-food giants have recently stepped up their commitments to regenerative agriculture.

The food industry has invested significantly in regenerative agriculture. In recent years, major players such as Nestlé, PepsiCola, and McCain Foods have committed to transforming their supply chains. In France, Danone has also taken a stand, announcing that by 2025, all its ingredients produced in the country will be derived from this practice. This movement is not limited to the food industry. Luxury goods, fashion, and textile giants – all sectors heavily dependent on soil-derived raw materials – have already unveiled significant plans to convert farmland to regenerative agriculture by 2030. “The movement is growing fast, and it’s on an exponential curve,” enthuses Ethan Soloviev, a farmer in New York State and Director of Innovation at HowGood, an American company specializing in food sustainability assessment. According to HowGood’s early 2023 market report, the number of companies adopting regenerative farming practices has risen from 239 in 2019 to 549 in 2022, a growth rate of 130%. Above all, the cumulative sales of companies

using “regenerative agriculture” in their communications represented \$50 billion in 2019. Three years later, it stood at over \$1,000 billion, according to HowGood data – a sign of the progressive involvement of big names in the industry. “We thought there might be a slowdown because of COVID, but that hasn’t been the case, points out Ethan Soloviev. There has been massive adoption at all levels of the value system. Many players are involved, from farmers to large agribusinesses, NGOs, ingredient suppliers, certification service providers, platforms, and investors”.

“If there is no fertile soil, there is no efficient agriculture”

NUMBER AND CUMULATIVE TOTAL OF ENTITIES USING “REGENERATIVE AGRICULTURE” BY YEAR¹



1. Source: Regenerative Industry Landscape, HowGood, 2023

SUPPLY CHAIN RESILIENCE

For the agri-food sector, the transition to regenerative agriculture makes sense for several reasons. Against a backdrop of global warming and depleted soil health, it is first and foremost a way of securing supply chains and thus preserving business models and food security, confides Éric Soubeiran, VP of Climate & Nature Fund at Unilever, which is committed to protecting and restoring over 1.5 million hectares of land and forests by 2030: “The first reason is resilience. Today, we can see that more and more agricultural ingredients are being impacted by climate change. We are reaching a point where it is essential to change our model to protect these soils, which are the assets on which all agricultural productivity is based. If there is no fertile soil, there is no efficient agriculture”.

2022, for example, saw a mustard shortage in France, mainly due to drought in Canada, the world's second-largest mustard seed producer. In Spain, the drought's severe impact on tomato production is exemplified by Eric Soubeiran. “In this context, we have observed that production has been relatively protected in the regenerative agriculture programmes we have set up. For example, tomatoes produced in Spain with one of our suppliers who has adopted regenerative practices were much more resilient last year than the market.”

For the stakeholders involved, the transition to regenerative agriculture is also part of a profound shift in consumer expectations regarding the impact of the products they consume, both on society and the environment and their health. For example, according to the latest Greenflex-Ademe barometer published in June 2023, 81% of French people say they ask questions about the impact of pesticides on the environment, soil quality, water, and biodiversity. 78% say they are “mobilised in favour of responsible consumption.” At the same time, 84% are concerned about the impact of water and soil pollution on human health.

Faced with these new societal expectations, adopting practices that promote soil restoration and reduced pesticide use makes sense, especially as the promise of regenerative agriculture also relates to the nutritional quality of the ingredients that come from it, reminds Eric

Soubeiran: “We can see that there is a nutritional density that can be higher, even if we still need to reach a scientific consensus on the subject. We're interested in investing in this direction because a richer soil contains more nutrients, which will be found in the ingredient”.

“On the consumer side, the concept of regeneration is intuitively well understood, adds Ethan Soloviev. That's why it's being adopted so quickly. Nobody wants to reduce their impact by using a plastic water bottle that contains 20% American plastic. People want to add value. Not only do they want to do less harm, but also to do some good. Regenerative agriculture is about adding value, regenerating soils, communities, biodiversity, ecosystems, and nutrition – that's what appeals immediately.”

To date, the commitments made by consumer-packaged goods companies (food and beverage, cosmetics, fashion...) cover around 20 million acres of land, according to HowGood. This is only a small fraction compared to the 12 billion acres currently occupied for agricultural production. “However, the growing international focus on agriculture as a nature-based solution to global climate change, coupled with many companies setting Science-Based Targets to reduce carbon emissions by 2030, will drive increased demand for regenerative agricultural practices,” the company predicts.

At the same time, the market faces several structural challenges over the next few years, including greater transparency and education for consumers and the identification and standardisation of metrics to measure the impact of the practices deployed. According to a survey carried out in 2022 by the International Food Information Council (IFIC), only 19% of respondents said they had heard of regenerative agriculture.

Bibliography

DOCUMENTARIES



- 1 ▶ **KISS THE GROUND**, documentaire de Joshua Tickell et Rebecca Harrell Tickel (États-Unis, 2020, 1 h 24 min), disponible sur Netflix
- 2 ▶ **ROOTS, ÉPISODE 2** « De la Terre mère au sol vivant », documentaire de Anaïs van Ditzhuyzen (Allemagne, 2022, 33 min), disponible sur arte.tv.

PODCASTS



- 1 ▶ **CHALEUR HUMAINE**, « Comment changer le monde agricole », podcast produit par *Le Monde* (France, 2023, 55 min).
- 2 ▶ **L'ESPRIT PUBLIC**, « L'agriculture face au changement climatique », émission diffusée sur France Culture (France, 2023, 58 min).
- 3 ▶ **L'EFFET PANDA**, « L'agriculture régénératrice », podcast produit par WWF France (France, 2021, 12 min).

BOOKS

- 1 ▶ **L'ORIGINE DU MONDE**, Marc-André Sélosse (2021, éditions Actes Sud)
- 2 ▶ **LES AGRICULTEURS ONT LA TERRE ENTRE LEURS MAINS**, Paul Luu (2023, éditions La Butineuse)
- 3 ▶ **KISS THE GROUND: How the Food You Eat Can Reverse Climate Change, Heal Your Body & Ultimately Save Our World**, Josh Tickell (2017, Atria/Enliven Books)
- 4 ▶ **REGENERATION: Ending the Climate Crisis in One Generation**, Paul Hawken (2021, Penguin Books)
- 5 ▶ **THE POWER OF REGENERATIVE AGRICULTURE: TRANSFORMING AGRICULTURE FOR ENVIRONMENTAL, ECONOMIC AND SOCIAL SUSTAINABILITY**, Michael Barton (2022, éditions Book Bound Studios).
- 6 ▶ **DIRT TO SOIL: ONE FAMILY'S JOURNEY INTO REGENERATIVE AGRICULTURE**, Gabe Brown (2018, Chelsea Green Publishing)

SCIENTIFIC PUBLICATIONS



- 1 ▶ **MEETING GLOBAL CHALLENGES WITH REGENERATIVE AGRICULTURE PRODUCING FOOD AND ENERGY**, *Nat Sustain* 5, 384-388 (2022), Schulte, L.A., Dale, B.E., Bozzetto, S. et al.
- 2 ▶ **ACS ET POTENTIELS DE STOCKAGE DE CARBONE**, APAD, décembre 2020.
- 3 ▶ « L'AGRICULTURE RÉGÉNÉRATRICE: SUMMUM DE L'AGROÉCOLOGIE OU GREENWASHING? » **CAHIERS AGRICULTURES**, Michel Duru, Jean-Pierre Sarthou, Olivier Therond, 2022.



Special issue magazine co-published by ID (linfo durable.fr) and Tikehau Capital.

The ID medium is published by VALDAMIS, a SAS with a capital of €123,000, registered with the Paris Trade and Companies Registry under the unique SIRET identification number (84302348200014), whose head office and premises are at 241, boulevard Pereire, 75017 Paris.

PUBLICATION: NOVEMBER 2023

LAYOUT AND ILLUSTRATIONS

Sophie Chaussade

ROUTING AND DISTRIBUTION

Sud Routage
110 route de Rouquirol
30900 Nîmes

PRINTING

Atelier phare
7 Rue Charlot
75003 Paris

This document has been translated into English from its original version in French.



In recent decades, the extensive use of intensive tillage and use of chemical fertilizers by industrial agricultural production systems have gradually led to widespread erosion of soil health. This impoverishment is now threatening the land's ability to provide essential ecosystem services such as carbon storage, biodiversity preservation, and global food security.

Against this backdrop, many experts are now advocating a shift to an agricultural model aimed at soil regeneration based on principles such as reduced tillage, crop diversification, and reduced pesticide use. While this solution seems promising, scaling it up requires the commitment of all stakeholders in the agricultural value chain.

