NATURETECH OBSERVATORY

How much Tech do we need to restore Nature?







ABSTRACT

TECH STARTUPS CAN'T RESTORE EUROPE ON THEIR OWN, YET THEY CAN SPEED UP THE PACE.

With COP15 and regulations such as the EU Restoration Law, the urge to restore ecosystems is even more pressing. In fact, we have only 5 years left to achieve the 30x30 target of restoring 30% of all land and all oceans on the planet. Such a colossal task implies a rapid and vigorous acceleration in both the financing and implementation of ecosystem restoration, as we need to scale up both demand and supply.

Technological solutions such as E-DNA or appropriate SaaS have emerged in the last five years, most of them claiming that their products could disrupt a market which is still heavily dependent on project-oriented stakeholders. Although such solutions can considerably speed up the process of monitoring and implementing ecosystem restoration, they can also add new costs and might not suit the specifics of ever-changing field projects.

How ecosystem can be restored to better health is, by its very nature, a heterogeneous science and practice, subject to strong local variability. To avoid technological messianism and focus efforts on useful TECH, at the service of local populations and ecosystems, we need to understand the specific features of each of these technologies and their contribution to a pressing yet sensitive challenge.

This brief explores the ever-changing thresholds that determine the usefulness of technologies in restoration projects. We considered different perspectives on whether these technologies should improve ecological quality or measure it. We also examine various financial models, including new and voluntary ones such as biodiversity credits, and attempt to identify the specific markets in which these NatureTech solutions will be implemented.

WHO WE ARE

e combine data, economic analysis and environmental expertise to explore the NatureTECH emerging ecosystem.

- Database: by using the Motherbase database, we collect and sort over 1000 start-ups developing different technologies in line with the Global Biodiversity framework of Kunming-Montreal.
- **Analysis:** thanks to the data appendix, we analyse economic trends and draft micro and macro analysis by sector and technologies.
- **Community**: because defending nature is a collective affair, we are a catalyst for businesses committed to stop and reverse the biodiversity loss.

What tech can we use to restore our ecosystems?

Restoration at the heart of ecosystem restoration

While healthy ecosystems are essential to human well-being, climate stability, and economic resilience, they are collapsing at an alarming rate. Globally, 75% of land and 66% of oceans are severely altered by human activity (IPBES, 2019). For instance, wetlands, which provide us with critical ecosystem services such as carbon capture or water filtration, are dangerously threatened. According to the Ramsar Convention, 64% of the world's wetlands have disappeared since 1900. In some regions, particularly in Asia, this figure is even higher, and in Europe, more than half of wetlands have disappeared, with 80% of the remaining areas degraded.

To reverse this trend, we need to mitigate our impacts by reducing and avoiding them at an unprecedented scale. Yet, human activities will always have some residual impacts and many ecosystems need help to return to satisfactory ecological trajectories. That is why ecosystem restoration is becoming a global priority. At COP15 (2022), countries pledged to restore 30% of degraded ecosystems by 2030. In Europe, at least 259,000 km² of protected habitats need urgent restoration, representing around half the size of terrestrial Spain (EEA, 2023). To address this, the EU adopted the Nature Restoration Law in 2024, setting binding targets to restore degraded ecosystems.

Ecosystem restoration process

According to the Society for Ecological Restoration (SER, 2024), ecosystem restoration is defined as the process of halting and reversing degradation, thereby improving ecosystem services and recovering biodiversity. SER further clarified that ecological restoration specifically refers to assisting the recovery of an ecosystem that has been damaged, degraded, or destroyed. Yet, restoration does not mean returning ecosystems to their original, historical state before degradation, but rather repairing them so they can recover and reach a good condition. These definitions acknowledge that ecosystem restoration is not a single course of action, but rather a broad continuum of practices influenced by both ecological conditions and societal choices. This restorative continuum encompasses four main categories of restorative activities:

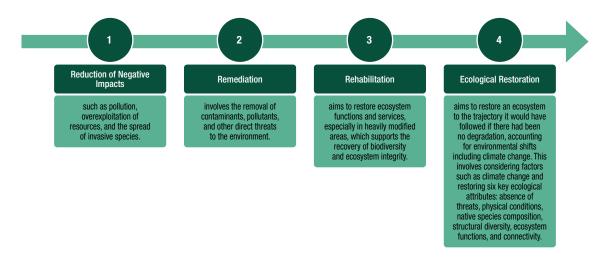


Figure 1 - The restorative continuum encompasses four main categories of restorative activities (Sources: SER, 2024)

Actions under these categories of restorative actions align with the United Nations' five-step framework for ecosystem restoration (FAO, 2023), which provides practical guidance for implementing these principles on the ground. For example, the assessment phase corresponds to identifying degradation and determining what type of restorative intervention is most appropriate. Planning and design integrate ecological, social, and financial dimensions to shape context-specific strategies, while implementation translates these strategies into concrete actions aligned with the SER continuum. The ongoing management and monitoring stages enable adaptive responses over time, ensuring that restoration efforts remain effective and responsive to evolving conditions. Together, the UN and SER reflect the reality that restoration is not a linear checklist, but a dynamic and evolving process.

Tech as an enabler

New or enhanced technologies are much needed to attain 30x30 objectives of COP15. As the <u>European Commission (2022)</u> estimated that "Investment into nature restoration adds €8 to €38 in economic value for every €1 spent, thanks to the ecosystem services that support food security, ecosystem and climate resilience and mitigation, and human health". These economic benefits could be a future driver for the Tech market allowing restoration at scale that still faces huge financial and technical challenges as the years go by before 2030. Thus, NatureTech startups can help scale and enhance our current tools and fasten the overall process.

As we look at restoration processes, disruptive technologies could help at various levels. On information, for instance habitat mapping, startups using advanced Al-powered remote sensing can help identify and prioritize degraded areas needing restoration. Space Intelligence, a Edinburgh based impact assessment tools developer, can identify near real-time forest disturbance using satellite data. Later in a project life cycle, Morfo claims to plant at rates 100x faster than traditional forestry approaches thanks to their drones. The French startup uses a combination of drones and on-site analysis to both analyse the ecosystem and launch seed capsules with a mix of site-specific and native species.

Such approaches also help build more trackable restoration units. Field data collection is being eased by monitoring tools using a combination of AI and eDNA, IoT sensors or bioacoustics. By allowing a more efficient and affordable tracking, those technologies are already clearing the paths for transparency and massive private fundings. <u>Land Life</u> is operating both in Europe and the US and is a good example that combination of various technologies lead the way to global massification, as they completed 150+ projects all around the world.

The right threshold

NatureTech startups are now clearly at the forefront of the process of turning nature into a commodity. In fact, they could be seen as the ongoing symptom of nature financialization. According to Bram Büscher and Robert Fletcher (2015), it could affect the way we conceive conservation and restoration efforts. By providing data compatible with financial accounting, such as certification of biodiversity gain, new technologies may transform nature into intangibles assets. The biodiversity credits' market relies heavily on technologies such as eDNA which break down biodiversity into observable pieces, thereby risking obscuring what is not counted.

Those applications also come with a hefty price tag for local populations and people in contact with the ecosystems. For example, the agricultural transition must contend with a fragile economic sector, where farmers have limited resources. Investing in an expensive technological solution could cut farmers off either their contact with the ecosystem or their financial resources. The cost of a soil analysis to measure the ecological benefits of a farming practice could also go directly into the pocket of the farmer who implements the change in practice.

The question is, how useful are these new solutions to gain biodiversity? NatureTech startups accelerate processes that need to be scaled up, but they must also respond to real-world challenges that are at the heart of biodiversity, which is inherently very heterogeneous and local. In fact, one could argue that the NatureTech ecosystem is walking alongside the thin line that divides a blinkered technological messianism, fueled solely by financial projections that are sometimes far removed from practical reality, and put technology at the service of a genuine revolution in our relationship with nature.



KEY TRENDS TRENDS

Overall number of NatureTECH startups referenced by the NatureTECH Observatory with relationships with ecosystem restoration:

380

Over the last 5 years, 166 startups have been created, 60 since 2022.

VC AND EQUITY FUNDINGS

the overall number of deals represents \$842 million in last December 2024, for 229 deals. 34% of those deals happened in the last two years for the equivalent of 32% of the total amount invested.

CORE ECOSYSTEM

startups specialised in ecosystem restauration ranked as highly related to biodiversity raised 37% of the total amount invested (275 million \$) since 2020.

GEOGRAPHY

more than half NatureTECH startups specialised in restoration have headquarters in France and USA alone. France is the country with the greater number of new startups since 2022, yet American based startups concentrate more than half of the global fundraising.

CAPITAL CONCENTRATION

more than half (62%) of the global fundraising gets to 10 startups, the majority of which are developing "green finance and investment" as well as "Data analysis and MRV" solutions. Those startups belong in majority to the "Rewild or restore" category.

Key trends and figures

Using our database, we analysed trends regarding three main indicators: the overall number of startups, their employment history and public information regarding their fundraising. Each indicator has been detailed in the appendix. Those trends can be directly linked to our taxonomy (see appendix).

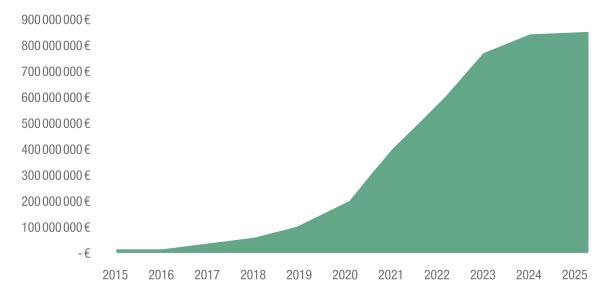


Figure 2 - NatureTech startups focused on ecosystem restoration raised 850 M \$ overall (sources: Crunchbase and NatureTech Observatory)

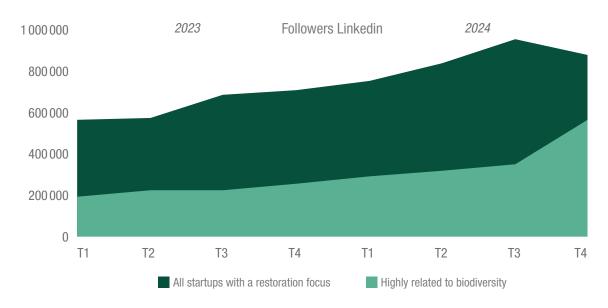


Figure 3 - The number of Linkedin followers raised significantly over the last two years (source: Linkedin and NatureTech Observatory)

3 leading countries in terms of fundraising



Figure 4 - Country Shares in Global Fundraising for Ecosystem Restoration Startups (source: NatureTECH Observatory and Crunchbase).

The United States, the United Kingdom and France stands out as the three leading countries in terms of fundraising for ecosystem-restoration-focused startups, together accounting for 75% of global funds raised in this area. This is mainly because they have often long-established regulatory frameworks, which have created mandatory markets for ecosystem restoration, boosting private investment and fostering a structured ecosystem for startups and investors.

The United States, which accounts for 31% of global funds raised, has had a structured ecological compensation market. Historically, the United States was among the first to institutionalize ecological offsetting through the creation of mitigation banks. The concept of ecological compensation seems to have first appeared in a regulatory framework in 1958 in the United States in the Fish and Wildlife Coordination Act. The Inflation Reduction Act (IRA), passed in 2022 under the Biden administration, is an investment program with a \$400 billion dedicated to climate. However, Donald Trump's inauguration in January 2025 could affect the funds raised for startups engaged in biodiversity restoration. The Trump administration withdrew from the country's climate and environmental commitments, weakened research funding, and suspended public funding related to the IRA.

The United Kingdom ranks second, attracting 27% of global funds raised, or \$252,887,630. It has established itself as a European leader in regulating the biodiversity market. The gradual implementation of Biodiversity Net Gain (BNG), enshrined in the Environment Act of 2021, is a major driver of this momentum. This BNG approach is particularly attractive to private capital because it establishes a new legal obligation: to offset biodiversity loss with a net gain of at least 10% for any new construction project, thereby creating a biodiversity credit market.

France accounts for 16% of global funds raised. The French regulatory framework is based on the "avoid, reduce, compensate" (ERC) obligation, introduced by the 1976 Nature Protection Act. This mechanism has been consolidated by the Environmental Code since 2000 and reinforced by the 2016 law on the restoration of biodiversity, nature, and landscapes. France also stands out as the second largest European country in terms of venture capital investment in Greentech, just behind the United Kingdom, according to Bpifrance in 2024. Broader initiatives at the European Union level, such as the "Green Deal" and the "Nature Restoration Law," also contribute to shaping the French restoration market and could be game-changer in terms of market acceleration.

Green Finance and investment & ecosystem restoration

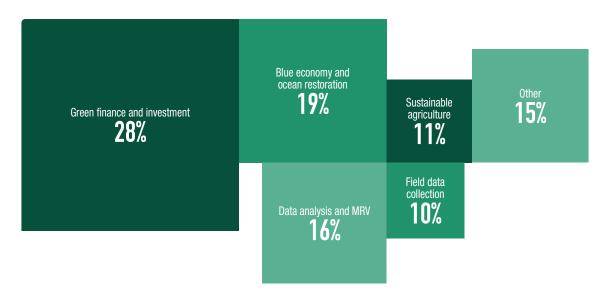


Figure 5 - Specific technologies for all startups with a link to ecosystem restoration (source: NatureTECH Observatory and Crunchbase).

Startups working on ecosystem restoration stand out for their strong presence in technologies related to green finance and investment. While this sector accounts for only 11% of NatureTECH startup technologies in general, it rises to 28% for those focused on ecosystem restoration. Next come "Data analysis and MRV" solutions (16%) and "sustainable agriculture" (11%). This shows a strong focus on financial tools and strategies designed to support biodiversity conservation, such as carbon and biodiversity credits, CSR data and reporting, green banking, crowdfunding for sustainable projects, green bonds, or blended finance. This trend is likely driven by the growing connection between ecosystem restoration and the expanding markets for biodiversity and carbon credits. The voluntary carbon market reached the equivalent of 353 Mt-eqCO2 of credits issued in 2022 for approximately \$1.9 billion in trading (Forest Trends, 2023). Green finance is also seen as an accelerator for achieving target 19 of the Global Biodiversity Framework (adopted at COP15), which seeks to increase the level of financial resources by 2030 by mobilising at least \$200 billion per year. It explicitly mentions credits as a potential solution for financing and achieving the objective.

Another possible explanation is that start-ups whose business model is linked to finance and green investment are operating in increasingly structured markets with solvent customers — namely, financial institutions — and are therefore able to raise funds more easily. In fact, 39%,,, of the total funding received by ecosystem restoration startups goes to this category. For example, Mast Reforestation, a US-based reforestation startup, has raised \$83.3 million by offering services like seedling production, project management, and carbon removal credits. Similarly, OnlyOne for Business, a French green financial platform that refuses to finance harmful sectors, has raised \$36.7 million.

If we focus only on startups most highly linked to biodiversity, the picture shifts slightly. Green finance and investment remain the leading specific vertical, yet with a less significant share (22% vs 29%), followed by Data analysis and MRV (19%), and Blue economy and ocean restoration (19%).

These shifts suggest that startups with a strong biodiversity focus tend to rely more on scientific and tech-driven approaches, particularly for measuring environmental impact and restoring marine ecosystems, yet still maintaining a strong connection to green finance. Some strong examples in this group include Pachama, a start-up that uses satellite data and AI to enable companies to invest in nature. The US start-up, which has already raised nearly \$80 million, provides ongoing information on how forests are sequestering carbon, protecting wildlife and benefiting local communities, enabling companies to find viable projects while tracking their impact over time, as well as helping land stewards earn income through tools to develop carbon projects and raise funds. Lastly, the blue economy and ocean restoration remains a significant field, both among general ecosystem startups (19%) and those highly linked to biodiversity (19%). Examples include Dendra, a UK-based startup using AI and drones for large-scale ecosystem restoration, and ARC Marine, which develops artificial reefs to restore marine habitats.

Startups collecting field data account for 11% of startups, whether they are strongly connected to ecosystem restoration or not. This steady proportion highlights how crucial information is in the field of ecosystem restoration. Low-tech sensors are frequently combined with AI to enhance data collection, which is essential in driving progress in domains such as agriculture. A good example is AgriSound, founded in 2020, which supports farmers and landowners in monitoring pollinator activity through remote sensing technologies. The company specializes in using affordable environmental and acoustic sensors to track pollinator dynamics, turning complex agricultural data into practical decision-support systems with AI.

In Brief: There is as strong focus on financial tools which include instruments like carbon and biodiversity credits, green banking, green bonds, and blended finance, driven by the expanding markets for these credits. Green finance is considered crucial for achieving Target 19 of the Global Biodiversity Framework, with biodiversity credits explicitly mentioned as a financing solution.

Even when focusing on startups most highly linked to biodiversity, green finance remains the leading sector. Those financial approach tend to integrate more scientific and tech-driven approaches, particularly for measuring environmental impact and restoring marine ecosystems, while still maintaining a strong connection to green finance. Field data collection consistently plays a vital role, underscoring the importance of information in ecosystem restoration projects.

Biodiversity credits versus Carbon credits

While carbon credits are used to offset greenhouse gas emissions, biodiversity credits are emerging as a tool to finance conservation and ecosystem restoration. Defined by the Global Environment Facility and IIED (2023) as standardized units that support biodiversity and local communities, these credits are meant to quantify positive ecological impact. Unlike carbon credits, which target a reduction in CO2 emissions, the gain from a carbon credit is more difficult to calculate. How do you calculate this gain? Should you look at key but uncertain and costly metrics? Should you focus on practices, but it can be difficult to verify all practices?

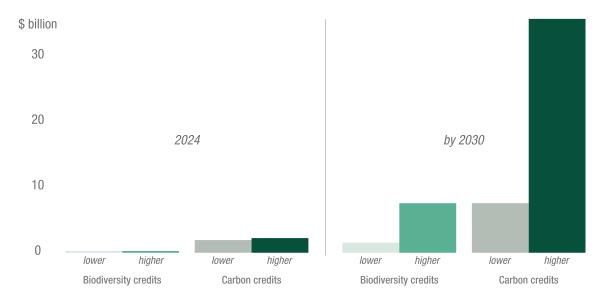


Figure 6 - Carbon & Biodiversity credits estimation in dollar.

OPIS Biodiversity Market Report (1), World Economic Forum(2),
Global Market Insight(3), MSCI Carbon Markets(4)

The United Nations Global Biodiversity Framework (GFB) calls on its 196 signatories to mobilise at least \$200 billion a year by 2030, by encouraging mechanisms such as biodiversity credits. The IPBES estimates that between 722 and 967 billion dollars a year are needed to sustainably manage biodiversity and maintain the integrity of ecosystems.

According to the <u>World Economic Forum</u>, the voluntary biodiversity credit market was valued at \$8 million in December 2023. However, a 2024 report by <u>Pollination</u> suggests it could be much lower, ranging from \$325,000 to \$1.87 million. Our analysis of the <u>OPIS Biodiversity Market Report</u> (based on (only) public data from the latest OPIS newsletter) estimates that around \$2.5 million in biodiversity credits have been sold so far. Regardless of the source, these figures highlight a significant gap in funding for global biodiversity efforts.

Startups focusing on both biodiversity & carbon credits raised \$89 million in 2023

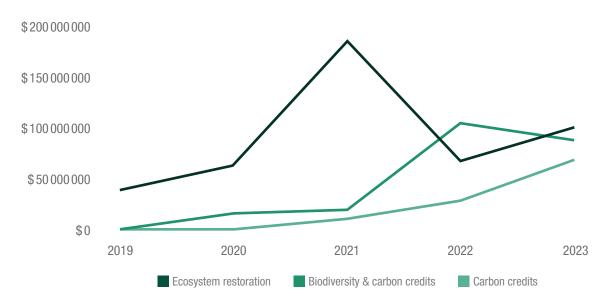


Figure 7 - Fundings of NatureTECH startups, focus on biodiversity et carbon credits. Sources: NatureTECH observatory

To fill this gap, significant investment is needed, particularly in NatureTech start-ups, which offer technological solutions for monitoring, verifying and scaling biodiversity projects. Among the NatureTech startups working on biodiversity credits, the most common specific technologies are green finance and investment (65.3%), followed by data analysis & MRV and sustainable agriculture, both at 16.3%. Startups that combine both biodiversity and carbon credits tend to attract more funding (ca. \$230 million since 2017), whereas it is more challenging to estimate funding for startups focused solely on biodiversity credits.

In Brief: Discussions around a new generation of biodiversity credits have been ongoing since 2022. Yet, despite growing political momentum, the biodiversity credit market remains very niche – a niche that is mainly being occupied by NatureTech startups. Among them, the most common specific technologies are green finance and investment, followed by data analysis & MRV and sustainable agriculture. Startups that combine both biodiversity and carbon credit tend to attract more funding. In fact, it's a growing trend for startups already strongly embedded in the carbon market to investigate this new opportunity.

Technology vs project?

To evaluate the success of restoration efforts, a range of monitoring technologies is available. In our work, we have chosen to focus on a selection of technologies (see appendix), based on both their recurrence among startups with activities linked to ecosystem restoration and the amounts of funding they attract.

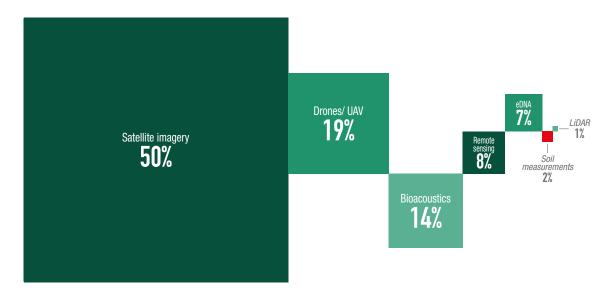


Figure 8 - Breakdown of startups by type of technologies used and amount raised (source: NatureTECH Observatory and Motherbase).

Among the most prominent tools is satellite imagery, used by 25% of the startups we analyzed. This technology provides large-scale, high-resolution data for tracking land cover, vegetation health and ecological changes over time. Valued for its scalability and capacity to offer consistent and comprehensive insights, 45% of the total funding raised by startups in our dataset went to companies using satellite imagery, confirming its central role in monitoring and planning restoration activities. Remote sensing is another widely used method, accounting for 20% of the startups and 10% of the total funds raised. It encompasses various techniques, including drones and LiDAR, which provide detailed information about vegetation, land use, and environmental stress without direct contact with the ecosystem. Drones and UAVs, used by 15% of the startups, are especially useful for accessing hard-to-reach areas and gathering high-precision data. They also rank second in terms of funding, attracting 17% of the total raised capital.

Although less common in our sample, technologies like environmental DNA (eDNA) and bioacoustics are gaining attention for their innovative and non-invasive approaches. Together, they represent only 12% of the startups, but their potential for biodiversity monitoring is significant. eDNA enables species detection through traces of genetic material in the environment, supporting biodiversity inventories and environmental compliance. Bioacoustics, on the other hand, helps assess the health of ecosystems through the analysis of sound. Startups using bioacoustics attracted 12% of the total funding, highlighting growing investor interest. Other technologies such as radar, camera traps, GIS systems, soil measurement tools, and LiDAR also contribute to a comprehensive monitoring

framework. Each plays a distinct role, from mapping terrain and species distribution to measuring soil health and habitat conditions. It is important to note that many startups do not rely on a single tool but instead combine several types of technologies: 38% of the startups use more than one tool, often in a complementary manner.

Moreover, 31% of the startups integrate artificial Intelligence (AI) at the core of their activities. For instance, AI can enhance eDNA technologies by detecting patterns in biodiversity data and scalling insights across vast landscapes (Naturemetrics). It can also analyze drone imagery to identify the most suitable reforestation sites and guide targeted aerial seeding (Morfo). AI algorithms can also when appiel to bioaccoustic recordings distinguish ecologically relevant sounds from the background sound of the ocean, making it possible to monitor species activity, detect stress factors like noise pollution, and assess the overall health of coral reefs at scale (Reef Pulse). While AI offers promising tools for environmental monitoring and mitigation, its deployment is not without significant ecological concerns. The CESE emphasizes the need for a balanced approach: leveraging AI's capabilities for environmental benefit while implementing measures to mitigate its ecological impact.

Data recording and processing technologies clearly meet investors' need for trust and integrity in the projects they finance. However, it is essential to distinguish between high-tech tools that may be costly or complex to deploy and more accessible technologies. For ecosystem restoration to succeed on a large scale, tools must be not only effective but also easy to distribute and implement across diverse regions and stakeholders. Highly advances technology might offer impressive capabilities in theory, but in practice, simpler, low-tech solution can often deliver more significant impact on the ground. For instance, a farmer transitioning to organic farming will typically face a temporary drop in yields before they recover (Institut de la finance durable, 2025). Combined with annual certification costs and already tight financial margins, this makes it extremely difficult to invest in expensive digital monitoring tools. Technologies must face the reality of restoration projects. Their true value lies not only in innovation, but in their capacity to be deployed effectively, affordably, and on a large scale on the field.

In Brief: It's not surprising that VC investors mainly fund tools like satellite imagery, drones, and remote sensing as they are widely valued for their precision and scalability. Emerging methods such as eDNA and bioacoustics also show strong potential for biodiversity monitoring. Moreover, the value of these technologies lies not only in their sophistication, but also in their accessibility, ease of distribution, and ability to be deployed effectively, at scale, and affordably in the field, as simpler solutions can often have a more significant impact given the financial realities of stakeholders.

As in many business fields, AI plays a growing role as data management and analysis are at the core of those new products – Google itself launched <u>AI for Nature</u>, a grant program to help equip nonprofits with this new technologies.



5 start-ups accelerating a project of ecosystem restoration

We deliberately did not assess the transformative potential and scientific existing (or not existing) consensus about any of the developed solutions.

Ecosystem restoration is a complex and non-linear journey, as emphasized by the United Nations Decade on Ecosystem Restoration (2021–2030). While the UN outlines a sequence of key steps (assessment, planning, implementation, management, and monitoring) these stages often overlap and interact in practice. Data collection and analysis, for example, are not limited to a single phase but support the entire process from start to finish. The start-ups we explore each contribute to this broader effort, addressing different moments of the restoration cycle: identifying ecosystems to restore, gathering environmental data, engaging stakeholders, measuring biodiversity gains, or creating new financing tools.

5 STEPS



NATURETECH STARTUPS



VERSANT

Versant identifies land parcels with high potential for ecological restoration in France by aggregating and processing ecological and remote sensing data. Their deeptech solution leverages aerial imagery and in situ field data to provide detailed diagnostics and candidate parcel lists based on impact site information.

FOUNDED IN 2023

FRANCE

RAISED €500K IN APRIL 2025

5 EMPLOYEES



GENESIS

Genesis is a provider of real proof of environmental impact linked to land use via a SaaS information platform. Through a five-year subscription, the company conducts regular soil sampling and analysis, delivering detailed impact reporting. This allows companies to monitor the sustainability of their supply chains and share comprehensive dashboards with farmers at no additional cost.

FOUNDED IN 2019

FRANCE

5 EMPLOYEES





THE LANDBANKING GROUP

The Landbanking Group has created Landler, a platform for Nature Equity management, turning measurable improvements in soil, carbon, water, and biodiversity into tradable financial assets. Using AI, it enables affordable tracking of nature health globally. This allows companies to profitably invest in nature, while land stewards are rewarded for regenerative practices, without having to sell their land.

FOUNDED IN 2022

GERMANY

RAISED \$11M IN OCTOBER 2023

62 EMPLOYEES



DENDRA

Dendra delivers high-resolution mapping and Al-driven insights through a platform built for the full ecosystem restoration lifecycle. It enables targeted, data-informed actions while supporting operational efficiency, decarbonization, and compliance with license to operate requirements. The platform serves asset owners, operators, and engineers across Mining, Oil & Gas, and Infrastructure sectors.

FOUNDED IN 2014

UNITED-KINGDOM

RAISED \$15M IN 2024

87 EMPLOYEES



REMOVALL

Removall designs and operates certified, high-impact carbon offset projects to support the Net Zero goal. It helps organizations invest in high-quality carbon solutions, focusing on natural carbon sinks, GHG reduction, and carbon removal in emerging markets. Removall also develops innovative environmental assets like plastic credits and biodiversity certificates.

FOUNDED IN 2021

FRANCE

33 EMPLOYEES

STEPS	FOUNDED DATE	COUNTRY	LATEST FOUNDING ROUND	EMPLOYEES	TAGS	
Finding an ecosystem to restore: <u>Versant</u>	2023	France	€500K in april 2025	5	2.1. Field data collection; 2.8. Ecosystem resto- ration; 3.4. Rewild or restore; 4.3. High	Versant identifies land parcels with high potential for ecological restoration in France by aggregating and processing ecological and remote sensing data. Their deeptech solution leverages aerial imagery and in situ field data to provide detailed diagnostics and candidate parcel lists based on impact site information.
Gathering data on the nearby environment: Genesis	2019	France	N/A	46	2.1. Field data collection; 2.2. Data analysis and MRV; 3.1. Inform; 4.3. High	Genesis is a provider of real proof of environmental impact linked to land use via a SaaS information platform. Through a five-year subscription, the company conducts regular soil sampling and analysis, delivering detailed impact reporting. This allows companies to monitor the sustainability of their supply chains and share comprehensive dashboards with farmers at no additional cost.
Assess the biodiversity gain: The Landbanking Group	2022	Germany	\$11M in October 2023	62	1.1. Land use change2.7. Green finance and investment2.8. Ecosystem restoration3.4. Rewild or restore4.3. High	The Landbanking Group has created Landler, a platform for Nature Equity management, turning measurable improvements in soil, carbon, water, and biodiversity into tradable financial assets. Using Al, it enables affordable tracking of nature health globally. This allows companies to profitably invest in nature, while land stewards are rewarded for regenerative practices, without having to sell their land.
Follow the process and manage stakeholders: Dendra	2014	UK	\$15.0M in May 2024	87	2.1. Field data collection; 2.2. Data analysis and MRV; 2.8. Ecosystem restoration; 2.9. Blue economy and ocean restoration; 3.4. Rewild or restore; 4.3. High	Dendra delivers high-resolution mapping and Al-driven insights through a platform built for the full ecosystem restoration lifecycle. It enables targeted, data-informed actions while supporting operational efficiency, decarbonization, and compliance with license to operate requirements. The platform serves asset owners, operators, and engineers engineers across Mining, Oil & Gas, and Infrastructure sectors.
Selling certificates/ credits: Removall	2021	France		33	1.3. Climate change2.7. Green finance and investment3.4. Rewild or re- store4.2. Medium	Removall designs and operates certified, high-impact carbon off-set projects to support the Net Zero goal. It helps organizations invest in high-quality carbon solutions, focusing on natural carbon sinks, GHG reduction, and carbon removal in emerging markets. Removall also develops innovative environmental assets like plastic credits and biodiversity certificates.



APPENDIX

Using Motherbase, we collected startups based on AI algorithms & RPA before handpicking them one by one, carefully selecting them through a process with several levels of review. For example, start-ups that have not been active on the networks for some time or whose website is no longer updated have been withdrawn.

Categories

See the details of our categories here.

To evaluate the success of restoration efforts, a range of monitoring technologies is available. In our work, we have chosen to focus on a selection of technologies. Most definitions derive from the work of the Nature Tech Collective.

DEFINITIONS				
Environmental DNA, also known as eDNA, is a non-invasive method to exctract DNA from the environment and is used to carry out biodiversity inventories, to discover and identify rare and threatened species in a variety of ecosystems.				
Radar systems use microwave signals to detect and map surface features through cloud cover and vegetation. In biodiversity monitoring, radar enables the continuous tracking of land use changes, forest structure, biomass density, and habitat degradation, even under low-visibility conditions. Its ability to provide consistent, time-series data makes it valuable for assessing ecosystem dynamics and early signs of biodiversity loss.				
Drones or UAVs (Unmanned Aerial Vehicles) are remote-controlled flying devices fitted with specialized cameras and sensors (thermal, multispectral, LiDAR, GPS). They are used to monitor extensive or difficult-to-access territories, delivering precise data on biodiversity, vegetation cover, and environmental changes. These tools play a key role in tracking deforestation, habitat loss, and ecosystem health.				
Satellite imagery provides high-resolution visual and spectral data captured from space, enabling large-scale monitoring of land cover, vegetation health, and ecological change. In biodiversity studies, it supports habitat mapping, species distribution modeling, and temporal analysis of deforestation, land degradation, and fragmentation.				
Camera traps are motion-activated devices that capture images or videos of wildlife in their natural habitats. They enable non-invasive monitoring of species presence, behavior, and population dynamics, particularly for elusive or nocturnal animals.				
A geographic information system or GIS is an information system designed to collect, store, process, analyze, manage, and present all types of spatial and geographic data.				
LiDAR, an acronym for "Light Detection and Ranging," is a remote sensing measurement technique based on the analysis of the properties of an artificially generated light beam that is reflected by the target back to its emitter. Data from liDAR, help to produce 3D numeric models representative of both the soil and the elements on the soil surface				
Soil measurment provides data on the health and composition of the land by assessing paremeters such as moisture, temperature, nutrient content, pH, and microbial activity. It helps understand how ecosystems function and how human activities like farming or reforestation affect biodiversity, especially in the soil.				
Bioacoustics combines biology and acoustics by recording, storing and studying the production, reception and interpretation of sound by biological organisms, particularly animals, including humans, aquatic and terrestrial plants and bacterial colonies.				
Remote sensing refers to the acquisition of information about the Earth's surface without direct contact, typically via satellites or dronest. It enables the analysis of vegetation indices, land cover dynamics, and environmental stressors.				



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Analysis: thanks to the data appendix, we analyse economic trends and draft micro and macro analysis by sector and technologies.

Community: because defending nature is a collective affair, we are a catalyst for businesses committed to stop and reverse the biodiversity loss.



Motherbase is an Al-powered SaaS solution for identifying, evaluating, and qualifying ecosystems and innovation entities. As of April 2025, Motherbase tracks and updates 190,000 innovation entities worldwide on a monthly basis.





