ARYAM
ADAPTIVE & REGENERATIVE SOLUTIONS

IMPACT REPORT
2025

Public version

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MESSAGE FROM THE PRESIDENT

The past year marked a decisive turning point in Aryam's development, confirming the relevance of our founding conviction: science and artificial intelligence are powerful levers that can be put to the service of an imperative cause, the resilience of our agricultural systems.

As a mission-driven company, our ambition is to democratize access to knowledge, decision-support tools and impact measurement for all stakeholders in the field. Far from any technological solutionism, we design useful, frugal tools that are deeply rooted in local realities.

This commitment has translated into a strengthened investment in research and development. Obtaining the Jeune Entreprise Innovante status is, in this respect, an important recognition of the work undertaken by our team. It rewards our continued efforts to forge robust methodologies, promote responsible digital technology and develop AI capable of tangibly supporting the transformation of agricultural practices.

In a context marked by the intensification of climate shocks, rising geopolitical tensions and the fragility of supply chains, this mission appears more urgent than ever. Farmers, and smallholders in particular, are on the front line in the face of these upheavals. They need reliable, contextualized and accessible tools to anticipate, decide and act.

This impact report presents the progress made during 2025.
It illustrates a demanding journey, nourished by experimentation, the strength of our partnerships and a committed approach of continuous improvement.

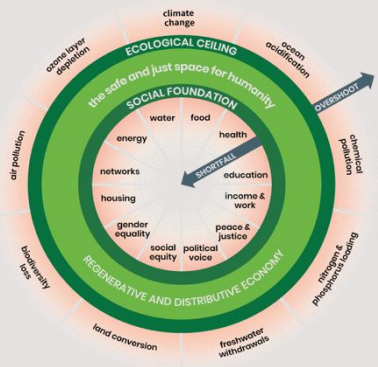
I would like to extend my warmest thanks to our partners, our supporters, our users and our teams, who make this trajectory possible. Together, we demonstrate that technology guided by a clear vision and tested against the realities of the field is a powerful accelerator of the agroecological transition.

OUR PURPOSE

Aryam has enshrined its purpose in its articles of association "to generate a positive social and environmental impact" and has adopted the legal status of a mission-driven company (société à mission) within the meaning of article 1835 of the French Code Civil, with the following objective:

> "accelerating adaptation measures in response to the impacts of climate change and biodiversity degradation and promoting a regenerative economy that respects planetary boundaries and the essential needs of its inhabitants".

This mission applies in particular to agroecology (also referred to as regenerative agriculture), namely an agriculture respectful of planetary boundaries and the essential needs of its inhabitants. It's a matter of urgency when 7 limits have already been crossed in 2025 while many people around the world are unable to meet their essential needs.



Source: Doughnut Economics

Agroecology is a climate change adaptation solution that meets the IPCC criteria and avoids maladaptation. As a nature-based solution, it does not aggravate greenhouse gas emissions and instead contributes to the preservation of biodiversity as well as social equity.

The tangible impacts described in this report directly contribute to 5 of the Sustainable Development Goals (SDGs) set out in the United Nations Agenda for Sustainable Development.

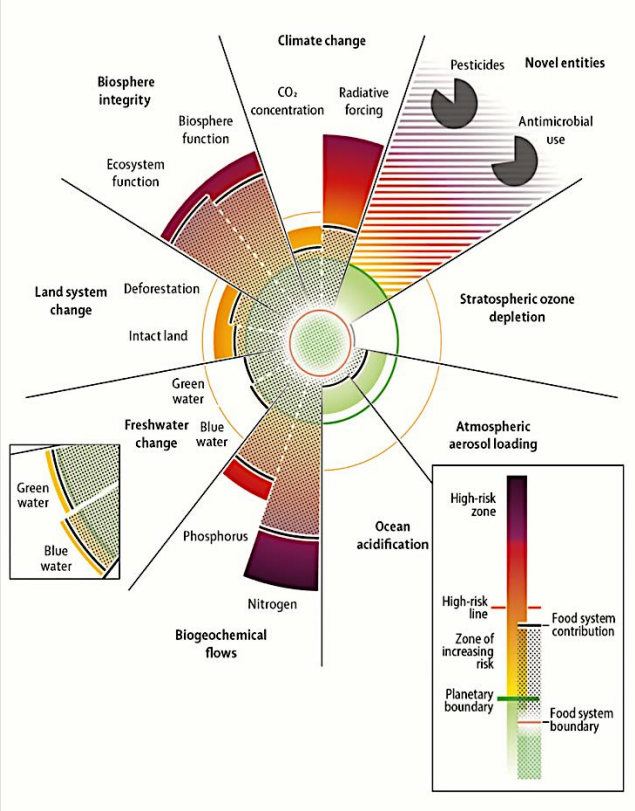
Our mission officer, Catherine Jagu, is responsible for monitoring the achievement of the objectives, conducting any necessary reviews and verifications, and preparing the annual mission report.

ACCELERATING THE AGROECOLOGICAL TRANSITION

For over a century, modern agriculture has achieved a remarkable productivity miracle, but at a hidden thermodynamic cost. Today, producing a single food calorie requires nearly ten calories of fossil energy.

Overall, the current food system is the main cause of the breach of 5 of the 7 planetary boundaries that had been crossed in 2025!

As the world's population continues to grow, food demand is projected to rise by 60% by 2050. This pressure will further exacerbate soil degradation, biodiversity loss and greenhouse gas emissions, making conventional agricultural systems less viable.



Source: Stockholm Resilience Center, EAT-Lancet Commission.

The agroecological transition offers an integrated response to these challenges by drawing on sustainable practices such as agroforestry, the conservation of living soils, crop diversification and rotation. These approaches make it possible to restore ecosystems and biodiversity, sequester carbon, improve resilience to climate change and ensure food security, while valuing local knowledge and respecting the specific characteristics of each territory.

Athough agroecology is gaining momentum, its adoption is nonetheless far from being the norm. Embarking on such a transition is a complex exercise, requiring one to move beyond decades of conventional agronomic knowledge and to shift from a model based on control to one of continuous adaptation working with living systems rather than attempting to dominate them.

Aryam offers solutions that are both innovative and inclusive, designed to accelerate this transition through **3 key areas of impact**:

- Facilitate access to knowledge,
- Support stakeholders,
- Measure and steer the effectiveness of new practices to drive continuous improvement.

IMPACT

Facilitating access to knowledge

Thanks to the support of the Fondation BNP Paribas and Entrepreneurs du Monde, in 2025 we continued to enrich **upya connect,** our open-source knowledge hub, now available in 8 languages, with Portuguese, Hindi, Vietnamese and Polish added to the 4 initial languages (French, English, Spanish and Arabic).

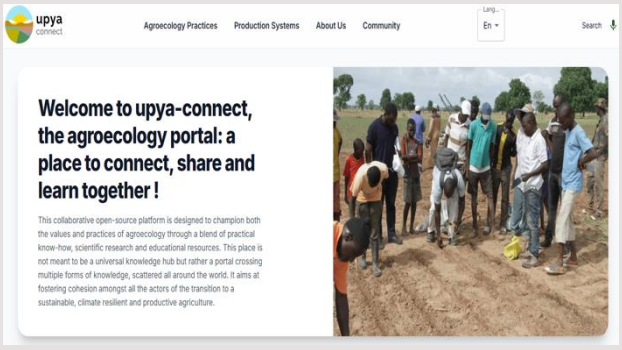
We have structured a comprehensive training programme on agroecological practices, incorporating podcasts to diversify learning formats and facilitate the uptake of knowledge, including for learners on the move. In parallel, the resource base was strengthened by the addition of new technical fact sheets and field feedback.

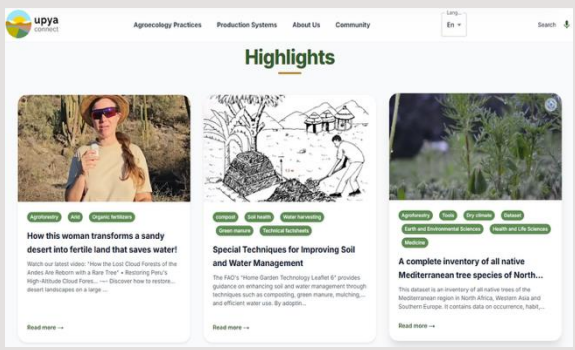
These developments make Upya Connect a more comprehensive, inclusive and operational tool to support the dissemination of agroecological practices.

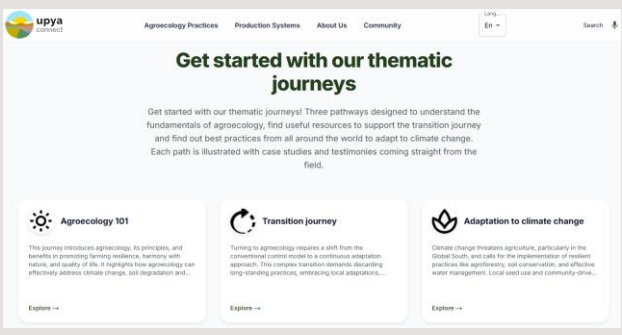
	Fiches techniques	Articles de recherche	Retours d'expériences	Pays sources	Podcasts
2024	632	134	478	76	3
2025	786	147	508	76	18

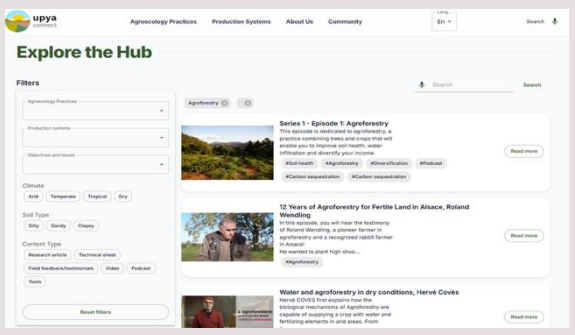
" Accelerating the agroecological transition first and foremost requires breaking down silos between forms of knowledge. By combining scientific knowledge, field feedback and local know-how, we bring out solutions that are better adapted, more resilient and genuinely appropriable by all the stakeholders of a community. The open dissemination of the Upya project through its platform shows that the cross-fertilization of this knowledge is not only a lever for innovation: it is an essential condition for initiating and anchoring systemic change ".

Bruno Leroux, Head of Environment Initiatives – Fondation BNP Paribas









IMPACT

Supporting the agroecological transition's stakeholders at every step of their journey

UpyaChat: an AI-field assistant to support agroecological practices

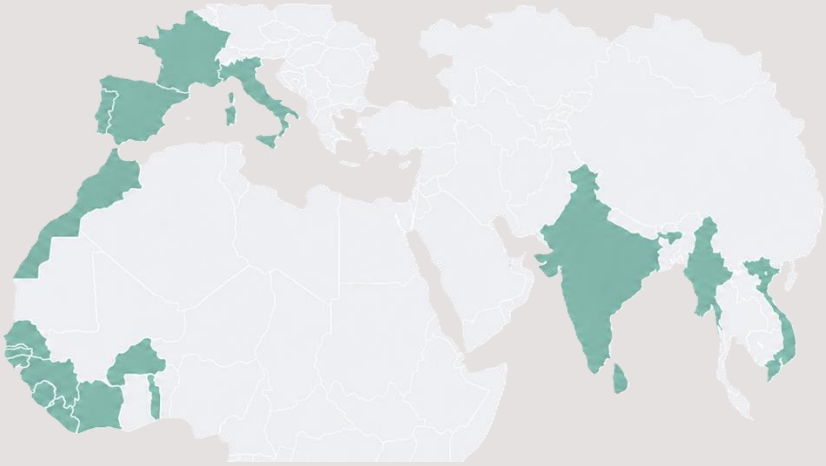
In the field of agroecology, where scientific knowledge must be articulated with local know-how and pedoclimatic contexts, AI is a support tool to facilitate access to reliable resources, guide agronomic reasoning and turn complex information into concrete, contextualized recommendations that can be directly put to use.

This is the purpose of UpyaChat, the generative AI assistant developed by Aryam. Over the year, the tool continued to mature, with enhanced capabilities in dialogue, contextualisation, and the analysis of agronomic situations

IMPACT

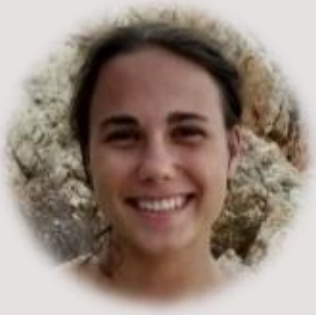
Supporting the agroecological transition's stakeholders at every step of their journey

The partnership with Entrepreneurs du Monde has marked an important step in grounding UpyaChat in the field. The tool is now used to support agricultural advisors across several countries of operation. This multi-country deployment provides an opportunity to test the relevance and effectiveness of the assistant in diverse agricultural, climatic and linguistic contexts, while strengthening advisors' capacities through responsive technical support based on qualified resources.



Initial user feedback helped identify concrete areas for improvement. The image recognition features proved effective for identifying weeds and pests, but were less robust in livestock-related use cases. These lessons led us to initiate further development work aimed at strengthening the reliability of visual diagnostics for livestock applications.

This feedback loop illustrates our continuous improvement approach: confronting the tools with real-world conditions, identifying their operational limitations, and refining them based on the needs and experiences expressed by agricultural advisors and farmers.



" We have rolled out UpyaChat across our network of more than 20 agricultural advisors in West Africa and Southeast Asia; this gives agricultural advisors an AI tool with reliable data that is, above all, compatible with our commitment to agroecology. Each year, the EdM network carries out more than 8,000 advisory support visits to help small farmers improve their yields or cope with the hazards of climate change. UpyaChat is used to complement our teams' knowledge, supporting them in finding solutions or refining advice. This simple solution allows our agricultural advisors to have quick support for technical questions and to fulfil their role in promoting agroecology ".

Alice Carton, Rural Development Microfinance Officer - Entrepreneurs du Monde

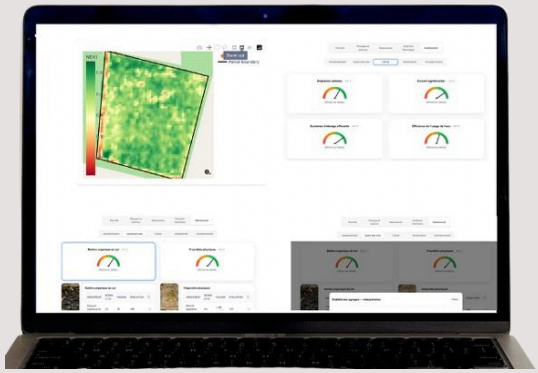
IMPACT

Measuring the effectiveness of new practices to facilitate their deployment

upya pulse: steer, measure and monitor agroecological impact

Beyond providing access to knowledge and support to advisors on the field, we continued the development of Upya Pulse, our 360° steering and impact measurement platform dedicated to manage agroecological transition programmes at scale.

The objective of Upya Pulse is to address a key challenge: making transition pathways more traceable, measurable and manageable over time.



By combining field data with geospatial data, the platform enables the structured monitoring of farms, the optimisation of implemented practices, the analysis of their progress over time, and the generation of impact indicators that can be used by support organisations, financial partners, and institutional stakeholders.

In particular, we worked on analytical frameworks designed to monitor multiple dimensions of agroecological transition, including soil health, farming practices, functional biodiversity, climate performance, water management, productivity, and the resilience of agricultural systems.

Obtaining the Jeune Entreprise Innovante status marks a significant milestone in this journey. It rewards and recognizes the research and development work undertaken around our Upya tool suite, as well as the methodological and technological effort carried out to build solutions capable of supporting, measuring and demonstrating the agroecological transition at scale.

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FINANCING A JUST AND INCLUSIVE TRANSITION

According to the UNFSS, transforming the global food system requires 300 to 400 billion dollars per year. Yet, while the populations of the least developed countries (LDCs) are the most affected by the shortcomings of current food systems, their governments face the greatest challenges in mobilizing capital. Investing in smallholder farmers is therefore critical. They manage 84% of the world's farms, produce one-third of the global food supply and yet receive less than 1% of climate finance.

To meet these needs, it is essential to increase financing, develop simplified access mechanisms and actively involve local populations in the planning and implementation of adaptation measures. Microfinance has traditionally played an important and successful role in supporting small producers. It remains a major distribution lever, provided it is channeled toward virtuous and sustainable agricultural practices.

"Access to finance is necessary, but not sufficient, for building climate resilience among smallholder farmers. By combining financial services with advisory support, insurance, and market linkages, microfinance institutions can help farmers invest in climate-smart solutions, manage risk, and build more resilient and sustainable livelihoods. At VisionFund we work with partners, such as Aryam, to combine our financial products with technical expertise to support this resilience building"

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Rory Bruce, Global Resource Development & Management Director - Vision Fund International

IMPACT

Turning agricultural loan into a lever for resilience

Building on our partnership with JuST Institute and Vision Fund International, we launched the development of UpyaChat Finance, a version of UpyaChat designed for agricultural microfinance players. The goal is to support loan officers and field advisors in analyzing the needs of smallholder farmers, assessing agricultural projects and identifying agronomic, climatic and economic risks.

In contexts where microfinance institutions play a key role in providing access to finance, UpyaChat Finance aims to enhance the quality of advisory support by integrating a deeper understanding of agricultural realities and context, including seasonality, farming practices, climate vulnerabilities, investment needs, and transition pathways. The solution helps improve assessment and qualification of financing applications and guides farmers towards decisions that strengthen their long-term resilience.

Through this approach, our ambition is to contribute to a more context-aware, preventive, and impact-oriented model of agricultural microfinance, with a central objective: transforming every agricultural loan into an instrument of resilience among smallholder farmers.

RESPONSIBLE AI AND DIGITAL TECHNOLOGY

Designing useful, accessible and user-friendly tools

For us, responsible digital technology is not limited to the technical performance of tools. It involves designing solutions that are truly accessible, adapted to field realities and capable of strengthening the autonomy of farmers and those who support them. This approach requires confronting our tools with real-life practices, listening to user feedback and adapting digital experience to the practical constraints faced by the audience they are intended to serve.

Our pilot conducted in India proved to be a key learning opportunity. User feedback underscored the need to minimise access barriers to UpyaChat, particularly for individuals with limited familiarity with conventional registration processes or restricted access to email services.

These insights prompted a comprehensive redesign of the onboarding experience, including the launch of a WhatsApp-based version and phone number login. The objective is simple: to meet users where they already are digitally, rather than expecting them to adapt to new tools and behaviours.

"Building inclusive AI starts with listening. This pilot allowed us to learn from the diversity of farmers, landscapes, and agricultural knowledge systems so that UpyaChat can better serve those who need it most".

Divyavaahini Thyagarajan,
AI engineer - Aryam

RESPONSIBLE AI AND DIGITAL TECHNOLOGY

Designing useful, accessible and user-friendly tools

In parallel, we structured an R&D project with the MOISA laboratory (Institut Agro Montpellier) to better understand the drivers of AI adoption among farmers. The project draws on approaches from the social sciences and humanities, focusing on collaborative expertise, co-construction, and the explainability of algorithmic recommendations. The ambition is to move beyond a purely top-down model of technology transfer and to develop solutions that are designed with users, grounded in local knowledge and practices, and closely aligned with the needs of field practitioners.

These two initiatives are rooted in the same conviction: digital tools only create meaningful impact when they are understood, trusted, and effectively used. By working simultaneously on ease of access, alignment with existing user practices, and confidence in the recommendations produced, we embed the development of our solutions within a responsible digital innovation approach, supporting an agroecological transition that can be genuinely adopted and embraced by field-level stakeholders.

In parallel, we have also undertaken specific work on the frugality of our AI solutions. Our team designed an action plan aiming to progressively apply the principles of AFNOR's “Frugal AI” specification. This work focuses on optimizing resource use, limiting unnecessary processing, selecting architectures that are aligned with actual user needs and assessing the usefulness of features against their technical and environmental cost.

OUTLOOK

Accelerating the transition in a world of systemic shocks

The past year confirmed a conviction at the heart of our project: the agroecological transition is no longer merely an environmental option; it is the key to resilience for agricultural and food systems.

The announced return of El Niño is a reminder of the growing vulnerability of agricultural systems in the face of climate disruption: drought episodes, extreme rainfall, heat stress, disruption of cropping cycles and increased pressure on water resources. At the same time, geopolitical tensions, notably around Iran and the strategic routes for energy and inputs, underline the fragility of an agricultural model still heavily dependent on synthetic fertilizers, fossil fuels and globalized supply chains.

These shocks do not occur in isolation. They reinforce one another and weigh first on the most vulnerable producers, in particular smallholder farmers, who often have limited financial capacity to absorb rising costs, climate hazards or supply chain interruptions.

Faced with this reality, we remain committed to a clear ambition : harnessing data, artificial intelligence, and digital technologies to support an agroecological transition that is practical, measurable, and accessible to field-level players. Over the coming year, we intend to pursue a development strategy anchored in three priorities: consolidating our solutions, strengthening their deployment in the field and structuring larger-scale partnerships. Following a significant R&D phase, experimentation and continuous improvement, the challenge now is to accelerate the adoption of the Upya tool suite by agri-food players and the organizations that support and advise farmers: including agricultural actors, microfinance institutions, NGOs, public sector and transition programmes. A constant commitment of our trajectory will be: developing solutions that are useful, measurable and accessible, and capable of delivering tangible impact on agricultural practices, producers' resilience, and the transformation of food systems.