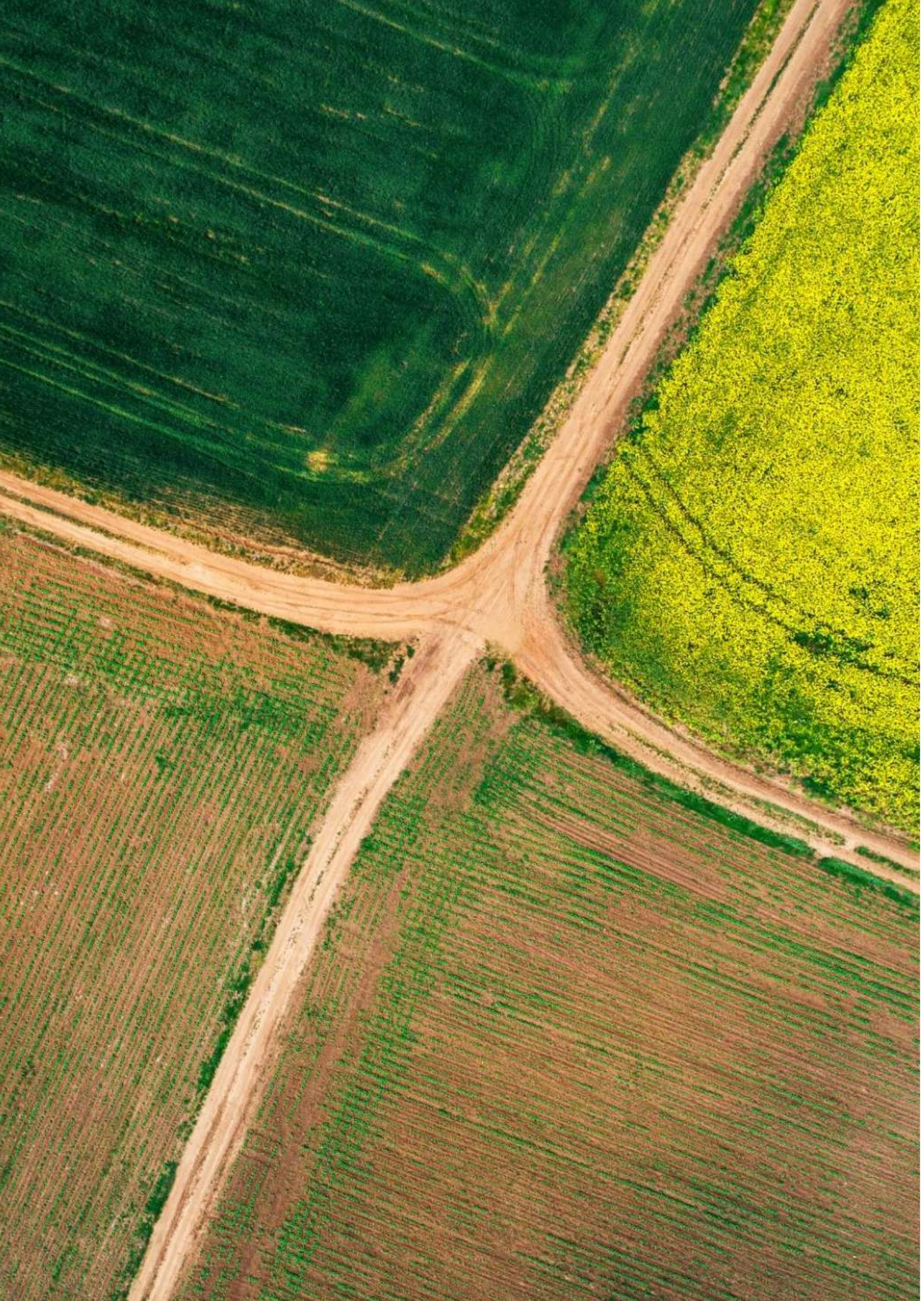
Doktar Technologies Impact Report 2025-2026

Transformation at Scale

Doktar



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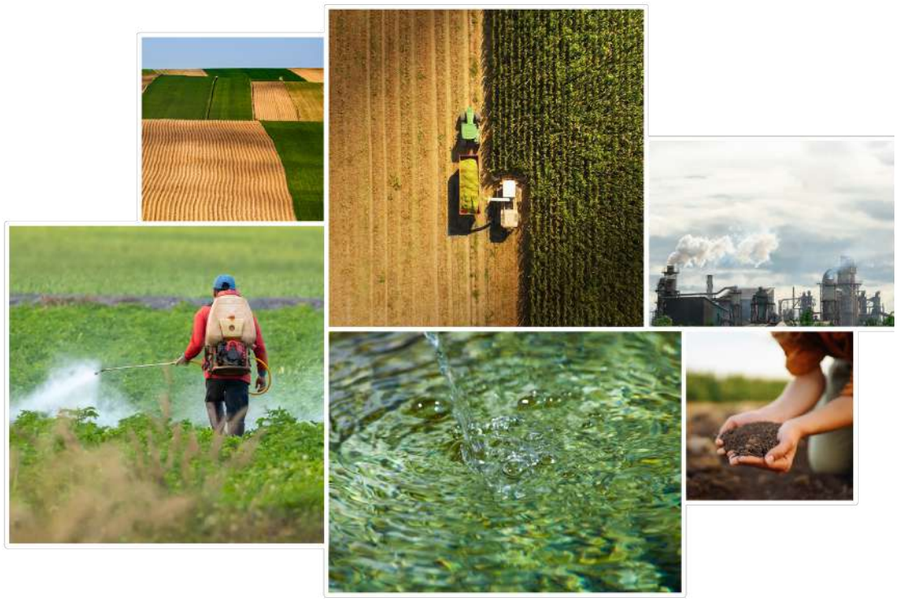


Introduction: Why This Matters

As climate pressure grows, sustainability is becoming less about ambition alone and more about execution. Companies are increasingly expected not only to set goals around water, carbon, biodiversity, and resilient sourcing, but also to show how those goals are translated into real action and measurable outcomes.

In agriculture, this matters because many of the challenges companies are trying to address take shape directly in the field. Water use, soil health, biodiversity, input efficiency, and a significant share of value chain emissions are all influenced by day-to-day production decisions. What happens at farm level therefore has a direct impact not only on environmental performance, but also on long-term business resilience.

Water stewardship has become a critical priority because water risk is inherently local. It is shaped at basin level and affects multiple users at the same time, from farmers and communities to industrial operations. In many regions, agriculture is one of the largest users of freshwater, which makes it one of the most important sectors for improving how water is monitored, managed, and used. Better irrigation decisions and stronger water management reducing pressure on shared water resources while supporting more resilient agricultural production.

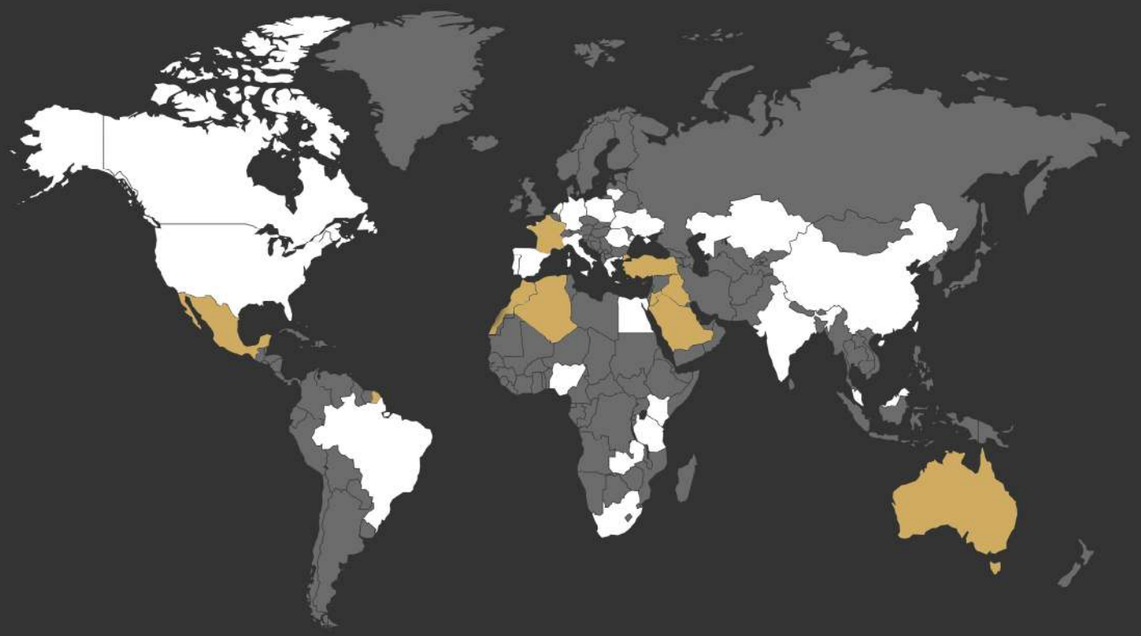
Who is Doktar?

Doktar is a technology company that transforms field data into measurable sustainability outcomes and farm-level efficiency. Since 2017, we have built end-to-end digital agriculture solutions combining field technologies, agronomic expertise, and actionable insights powered by data and AI.

Doktar delivers sustainability programs that enable corporates to achieve targets across carbon, water, soil, biodiversity, and climate resilience, while improving efficiency and execution in the field. Our solutions deliver measurable impact, backed by audit-ready measurement and reporting across the agricultural value chain.

Doktar has a presence in more than 30 countries, supports over 250,000 hectares of regenerative farmland, and works with eight of the world's ten largest food and beverage companies. The company is also building a growing presence in the technology sector, where its sustainability and water stewardship capabilities are increasingly relevant.

OUR PRESENCE



SELECTED CUSTOMERS PORTFOLIO

Cargill · Coca-Cola · CCI · Coca-Cola Europacific Partners · Nestlé · pladis · Unilever · DANONE · pepsico · FERRERO · Microsoft · Givaudan · BAYER · DIAGEO · edgeconnex · BASF We create chemistry · CORTEVA agriscience · syngenta

TEAM

A team of 110 multidisciplinary professionals, each bringing unique expertise to drive our innovations:

- Mathematical Agronomy
- Full-Stack Electronics
- Geospatial Data Experts
- Software Developers
- Data Scientists and ML Engineers
- Social Sciences
- Sustainability Experts
- Farmer Engagement Specialists

OFFICES

- Wageningen University Campus, NL
- Istanbul Technical University, TR
- Ege University, Izmir, TR

PRODUCTION FACILITY

- Istanbul, TR

Our Approach

At Doktar, we leverage advanced technology and AI to transform the agricultural value chain. Since 2017, we've been at the forefront of providing comprehensive end-to-end digitalization solutions. Our holistic approach addresses operational inefficiencies intensified by climate change, ensuring sustainable impact reporting and fostering resilience throughout the agricultural ecosystem.

Technology

Deploy Doktar and partner technologies to instrument the field and capture standardized data at scale.

Digital Twins

Turn that data into a living digital twin for each field, accurate and continuously updated.

Informed Decisions

Convert insights into actions by optimizing what to do, where, and when, improving results and reducing waste.

Sustainability & Efficiency

Deliver audit-ready impact on water, carbon, and biodiversity while improving field efficiency.

The MRV of Sustainability Programs

Doktar's MRV tool enables sustainability programs to be managed dynamically from field implementation to impact reporting. Designed to be scalable across geographies, crop types, and program models, it allows users to track scope completion, monitor ongoing activities, and follow results across water, soil, biodiversity, carbon, and farmer livelihoods in one place.

The system consolidates data collected through digital agronomy, on-site agronomic activities, farmer engagement, field visits, devices, and other field-level records. By structuring all implementation data within a single platform, it creates a highly traceable system where progress can be monitored continuously and outcomes can be linked directly to what is happening on the ground.

Beyond activity tracking, the tool also supports impact calculation through algorithms and program-specific methodologies, helping turn farm-level data into measurable, reportable, and independently verifiable results. This makes the platform not only an MRV system, but also a practical management tool for running sustainability programs at scale.

2025 & 2026 by the Numbers

We have completed 27 projects to date. A total of 250,000 hectares have been successfully onboarded, with environmental KPIs set to be finalized following the next harvest season. Here are some insights and estimations:

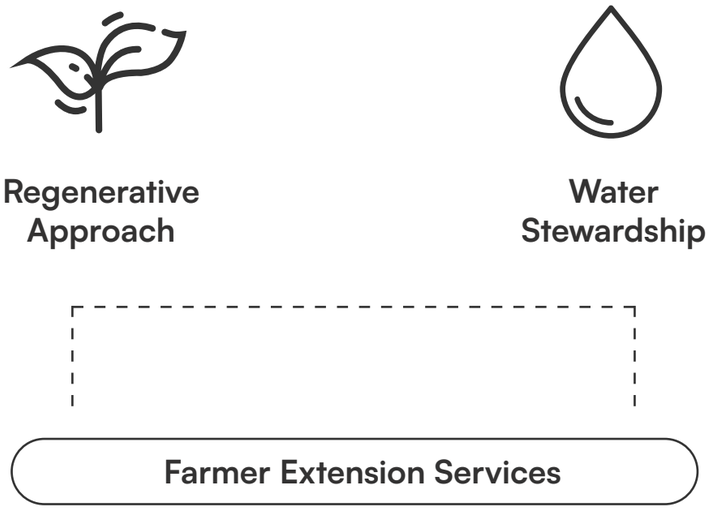
AREA	Climate & sustainability activities implemented across **250,000 hectares.**
WATER	A total amount of **11.640 million liters** replenished.
BIODIVERSITY	Integrated pest management enabled up to **19% reduction** in pesticide use.
SOIL	**Up to 31%** increase in farmer N-use efficiency established through 4R nutrient management.
CARBON REDUCTION	**A total of 274,968 MT CO_2e** reduced in carbon emissions.
CARBON REMOVAL	**29,785 MT CO_2e** of carbon sequestered in total.
LIVELIHOOD	**Up to 24%** overall increase in farmer profitability, driven by yield improvements and cost-reducing practices.

Climate and Sustainability Impact Approach

Doktar applies a phased regenerative agriculture approach that provides a practical, scalable, and measurable transition across crop types and geographies.

Starting with input optimisation and progressing toward advanced regenerative land management, Doktar's sustainability programs address five key regenerative impact areas: Water, soil, biodiversity, carbon, and farmer livelihood, through a range of targeted interventions. These interventions can be implemented individually or in combination, depending on the specific requirements and objectives of each program. For example, within a water stewardship program, irrigation efficiency measures can be integrated with cover cropping practices to maximize impact.

Doktar delivers these activities through its "RegenAg" framework, which is composed of 3 main pillars:



1. Regenerative Approach

By combining field-level data, continuous monitoring, and tailored transition roadmaps, Doktar enables companies to transform agricultural supply chains in a structured and scalable way, helping strengthen sourcing resilience, support farmers, and maintain long-term productivity under growing climate pressure. This approach is also relevant beyond agricultural sourcing. For companies without direct agricultural supply chains, regenerative agriculture programs can provide a credible pathway to support carbon removal and broader carbon neutrality goals through measurable interventions across agricultural landscapes.

To make this transition credible and traceable, Doktar supports implementation with continuous field-level monitoring, real-time data tracking, and SOC-focused assessment, enabling regenerative agriculture programs to be managed and reported transparently, with data-backed and verifiable outcomes.

1.1. Precision Ag-Tech Integration

The first stage of Doktar's "RegenAg" approach focuses on **data-driven optimisation of existing farming practices,** including nutrient management, irrigation efficiency, and integrated pest management. These aim to create immediate improvements in input efficiency, resource use, and productivity.

1.2. SOM Improvement Roadmap

The second stage focuses on advanced regenerative activities designed to strengthen long-term soil and ecosystem function, including cover cropping, conservation tillage, crop rotation, intercropping, hedgerow establishment, biological inputs, and other land management practices that support soil organic carbon (SOC), biodiversity, and water retention.

1.3. Measurement and Verification

Progress is continuously monitored through Doktar's digital solutions, ensuring that regenerative outcomes are both scalable and verifiable. Impact is assessed through globally recognized tools, including the Cool Farm Platform, which measures carbon emission reductions and captures the effect of interventions across fertiliser use, energy consumption, irrigation efficiency, and more.

Regenerative agriculture can only create value at scale if outcomes are measured in a consistent, credible, and transparent way. At Doktar, measurement and verification are embedded into program design from the start, allowing regenerative interventions to be monitored continuously and assessed against clear baselines.

Our approach combines real-time field data, digital activity tracking, soil organic carbon (SOC) measurement, and remote sensing-based monitoring to evaluate the effect of interventions across different crop types and production systems. This enables progress to be followed not only at field level, but also across larger supply chain programs in a scalable and comparable way.

To strengthen credibility, Doktar's digital MRV infrastructure is designed to support alignment with internationally recognized frameworks and verification approaches, including the Cool Farm Platform and methodologies compatible with leading carbon and environmental market standards such as Verra. This helps ensure that program outcomes are not only measurable, but also suitable for transparent reporting and future verification needs.

To improve accuracy, impact is assessed against multi-year baselines, minimizing seasonal variability and allowing comparisons with conventional practices where relevant. By combining field implementation with robust digital monitoring, Doktar enables more reliable claims on environmental and social outcomes, while helping partners track progress in a practical, data-backed, and verifiable way.

Client Impact Spotlight

Launched in 2019, the 1000 Farmers Endless Prosperity Program was established to support a more resilient, productive, and sustainable agricultural model. What began as a broad farmer engagement and advisory initiative gradually evolved into a large-scale impact platform that combines field implementation, digital monitoring, and structured impact reporting.

A major milestone in this journey came in 2022, when a dedicated regenerative agriculture component was formally defined in alignment with PepsiCo's pep+ ambitions. This marked a strategic shift in the program's design, moving from a broader sustainability framework toward a more structured regenerative agriculture model with clearer intervention pathways and stronger outcome orientation. Through this evolution, the program began to generate value not only through farmer engagement, but also through measurable performance across productivity, resource efficiency, and environmental impact.

Since its inception, the program has scaled significantly, reaching 27 provinces, nearly 8,000 farmers, more than 11,500 farms, and 132,200 hectares. Its regenerative agriculture approach has been implemented through a combination of targeted interventions, including 4R nutrient management, irrigation efficiency, integrated pest management, cover cropping, reduced tillage, hedgerows, and biofertiliser use. Together, these practices have strengthened the program's ability to support field-level resilience while delivering broader sustainability outcomes.

Key impacts to date include:

- → More than 20% yield increase
- → 225 million litres of water saved
- → 261k MT of CO_2 emissions balanced
- → 3.72 SROI, independently calculated by Ernst & Young (EY)
- → Recognition at the 2024 Edison Awards
- → A broader track record of 50 global awards

Together, these results demonstrate how the program has evolved from a farmer support initiative into a scalable regenerative agriculture platform with measurable environmental, social, and economic value. By linking corporate sustainability ambition with field-level implementation, the **1000 Farmers Endless Prosperity Program** stands as a strong example of how long-term agricultural engagement can translate into credible and award-winning impact.

Area (ha) *Field Presence*	Nationwide Reach *Number of Cities*
132,200	27

Livelihood *Yield Increase*	Recognition *Global Awards*
20%	50

2. Water Stewardship Framework

Water is one of the most critical resources under climate stress, and agriculture is both a driver of its overuse and a sector highly vulnerable to scarcity. At Doktar, we address this challenge through a dedicated Water Stewardship Framework that combines precision ag-tech adoption, regenerative practices, and rainwater harvesting. Together, these approaches reduce consumption, minimize loss, and enhance replenishment, creating measurable value for ecosystems and farming communities.

2.1. Water Consumption Reduction via Informed Irrigation:

Traditional irrigation practices often lead to significant inefficiencies, with farmers applying more water than crops require or soils can absorb. Even under “efficient” systems, over-irrigation remains common.

Through soil sensors, flowmeters, and satellite monitoring, Doktar enables farmers to shift from habit-based watering to **data-informed irrigation decisions**. This not only reduces water withdrawals but also lowers energy use and input costs, while safeguarding yields.

2.2. Water Loss Reduction via Regenerative Agriculture:

Beyond optimizing irrigation practices, soils must be able to retain and utilize water effectively. Doktar strengthens this capacity by integrating regenerative agriculture practices that build **soil organic matter (SOM).** Cover cropping, conservation tillage, and residue management all enhance infiltration and storage, reducing runoff and evaporation.

While SOM improvements typically require three or more years for significant results, this component complements irrigation efficiency measures and delivers lasting resilience for both farms and ecosystems.

2.3. Water Capture via Rainwater Harvest:

In regions where rainfall is significant but underutilized, Doktar supports the design and implementation of rainwater harvesting systems.

By analysing rainfall patterns, soil properties, and farm topography, we identify optimal locations for reservoirs and distribution systems. Captured rainwater is then integrated into irrigation practices, reducing reliance on groundwater withdrawals and providing a renewable water source for long-term sustainability.

2.4. Measurement and Verification:

All three approaches are guided by the Volumetric Water Benefit Accounting (VWBA) methodology proposed by the World Resources Institute. Using Doktar's digital monitoring tools, we establish clear baselines, track interventions, and quantify water benefits at field level. Results are independently verifiable, ensuring transparency and credibility in sustainability reporting.

Summary

Reducing water consumption through informed irrigation, using soil sensors, flowmeters, and satellite monitoring to replace habit-based practices with data-driven decisions, ensuring savings without yield loss.

Minimizing water loss through regenerative practices, building soil organic matter with cover cropping, conservation tillage, and residue management to increase water-holding capacity and reduce runoff.

Capturing rainfall through rainwater harvesting systems, designing site-specific reservoirs and distribution networks to create renewable water sources and reduce reliance on groundwater.

Measuring and verifying impact with VWBA methodology, establishing baselines, tracking interventions with Doktar's digital tools, and enabling transparent, third-party-verifiable results.

Client Impact Spotlight

Since 2022, we have been running a long-term partnership designed to deliver measurable water replenishment benefits across several projects. These projects are situated in basins where our partner's operations are located, and are classified as high priority through comprehensive water vulnerability assessments.

In Turkey, the initiatives began in Bursa and Çorlu and quickly scaled up to more ambitious targets and new locations such as Isparta, covering diverse cropping systems including orchards, sugar beet, and rose plantations. Building on their success in Turkey, the projects have also expanded to other critical basins in Jordan, Iraq, Saudi Arabia, Morocco, and France, strengthening regional water resilience across new locations.

2.545 billion litres of water replenished annually across a total of 2,400 hectares through a mix of water management practices. Initially launched in one basin, Bursa, and **later scaled to three Turkish and four international basins**, reflecting its replicability and scalability.

Implemented three complementary approaches: Water consumption reduction, water loss reduction, and rainwater harvesting.

- → Water consumption reduction emerged as the most impactful approach due to its strong return on investment.
- → Supported farmers with digital soil analyses and tailor-made fertilisation plans, enhancing soil health through 4R nutrient management principles, as evidenced by improvements in nutrient use efficiency (NUE).
- → Realised **up to 32% carbon emission reductions per farm;** achieved through input optimisation including fertiliser use, energy efficiency, and precision agriculture practices.
- → Delivered **an average 23% increase in farmer profitability** compared with conventional practices, based on year-over-year calculations and benchmarking.

This demonstrates how a data-driven, multi-stakeholder water replenishment strategy can create tangible environmental impact and economic value, while ensuring scalability across regions facing acute water stress.

3. Farmer Extension Services

Technology and data are powerful enablers of agricultural transformation, but they are rarely sufficient on their own. For farmers to adopt and sustain new practices, they need not only tools, but also the knowledge, trust, and confidence to act on them. That is why Doktar complements both its regenerative agriculture and water stewardship projects with a robust Farmer Extension Services model, designed to bridge the gap between digital recommendations and long-term behavioral adoption.

Doktar's extension services combine field-level engagement with digital support under a unified framework, helping ensure consistency across projects and geographies. This model is built not only to support implementation, but also to continuously strengthen adoption through engagement tracking, capacity-building, and timely agronomic guidance. In this way, transformation is supported as an ongoing process rather than a one-time intervention.

Core extension activities include:

- → **On-site visits** by agronomists and field experts to provide tailored, field-specific guidance
- → **Training meetings** to improve farmers' technical literacy and practical understanding of recommended interventions
- → **Continuous engagement** to monitor participation, identify adoption barriers, and support mitigation actions where needed
- → **Remote support channels** that allow farmers to receive timely updates and ask agronomic questions whenever needed
- → **Community-building mechanisms** that make peer-to-peer learning easier and strengthen farmer-to-farmer exchange

This approach creates a stronger support environment for adoption. Farmers are able to learn not only from agronomists, but also from one another through a more connected and accessible community structure. At the same time, direct access to agronomists ensures that operational or agronomic questions can be addressed quickly, helping reduce uncertainty during periods of change.

Since its foundation, Doktar's extension services have supported thousands of farmers across diverse geographies, contributing to:

- → Improved **soil and water management**, reducing resource stress while safeguarding yields
- → Higher adoption of regenerative practices such as **crop rotation, nutrient management, and integrated pest management**
- → Stronger farmer resilience through **ongoing training, trusted support, and continuous access to knowledge-sharing networks**

Summary

Farmer Extension Services ensure that regenerative agriculture and water stewardship programs are supported not only by technology and interventions, but also by the continuous engagement, training, and agronomic support required for lasting adoption.

Conclusion: Looking Ahead

As sustainability expectations continue to grow, the need for practical, measurable, and scalable implementation becomes even more critical. What companies increasingly need is not only a strategy, but the ability to turn that strategy into action on the ground across water, soil, biodiversity, carbon, and farmer livelihoods.

This is where Doktar will continue to focus. By combining field implementation, farmer engagement, digital monitoring, and robust MRV, we enable sustainability priorities to be translated into programs that can be managed dynamically, tracked transparently, and scaled across geographies and crop types.

Looking ahead, we believe the future of sustainability in agriculture will be shaped by stronger traceability, better data, and more credible impact. Doktar will continue to build this future by enabling partners to implement water stewardship and regenerative agriculture programs that are not only ambitious in intent, but verifiable in outcome.

www.doktar.com

"Together, we can transform today's challenges into tomorrow's resilience."

Partner with us to create real impact, turn sustainability goals into lasting change, and grow with data.

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