Annual Activity Report 2024

SISTEMA.bio®

Leadership & Governance

Global Leadership Team

Alex Eaton
CEO & Cofounder

Camilo Pagés
Director of Quality Control & Processes & Cofounder

Maxence Affre
COO

Esther Altorfer
Chief Strategy Officer

Louis Dubois
CFO

Piyush Sohani
Chief Growth Officer

Aurélie Azazga
Head of People

Xunaxi Cruz
Global Marketing & Communications Director

Regional Managing Directors

Madrin Maina
Africa Managing Director

Almendra Ortiz-Tirado Aguilar
Latin America Managing Director

Piyush Sohani
Interim India Managing Director

Board of Directors

Joyce Cacho
Independent Chairman

Thibault Couturier
Investment Manager, Rassembleurs d'Energies

Liesbet Mijlemans
Investment Officer, EDFI MC

Marcus Watson
Partner, KawiSafi Ventures

Observers

Nathalie Prado
Managing Director, EcoEnterprises Fund

Manoël Ancion
Chroma, Investment S.A.

Tope Adegun
AXA Investment Managers

Credits

Editors-in-chief & Project Coordination

Xunaxi Cruz
Leslie Domínguez

Layout and Design

Nathalia Henao
Nancy Valtierra

Writers & Editors

Xunaxi Cruz
Shreya Dixit
Leslie Domínguez
Gabriela Quijas
Maureen Njagi
Sonia Rodrigues

Annual Activity Report | 2024

SISTEMA.bio®

2024 Words

Message from the CEO

2024 has been a year of change. Around the world about half of the world's population voted driving political shifts. Inflation and economic uncertainty created economic pressures on farmers. Climate change continued to create devastation around the world, while global carbon markets had structural advances and economic setbacks. After 15 years of experience, Sistema.bio has created a resilient and diverse structure that is purpose-built for driving forward in times of uncertainty and change. We showed that resilience in 2024.

Our ambition remains clear: **to reduce 1% of global GHG emissions by 2030.** Thanks to our dedicated team and partners, we've reached a major milestone: 123,500 biodigesters installed across 35 countries. This portfolio can reduce millions of tons of carbon emissions equivalent every year. This is proof, at scale, of the impact biogas technology will have globally if we can reach the hundreds of millions of farmers that need it today. As leaders in this space, we will continue to focus on biogas growth and innovation around the world.

However, in 2024 we realized that our team, capacities and reach can create impact beyond biodigesters and create a greater impact on the farmers we serve. So, we expanded our mission to **work with farmers to improve life on Earth.** This expanded mission recognizes Sistema.bio's important role within the **regenerative agriculture movement,** doubling down on the huge impact that we know farmers can have in the world.

Regenerative agriculture is about building healthy soils, retaining water, and boosting biodiversity—enhancing productivity while reducing reliance on costly chemical inputs. To drive this, we are integrating conservation agriculture, agroforestry, and soil regeneration into our portfolio of solutions.

We also recognize that we cannot leave farmers behind in the exciting evolution of digital and technological tools that can improve data collection, communication, payment structure, and overall performance of agricultural systems. To this end we partnered with Inclusive Energy and fully acquired the company in 2024. This will allow us to build on an exciting suite of IOT tools and a robust digital platform to enhance our customer service and digital monitoring, verification and reporting in carbon markets.

Today, Sistema.bio is more than a biodigester company with an expanded platform of products, services, and financing solutions for farmers. We will continue to lead the biogas industry and sell the world's best biodigesters solutions to small and medium-scale farmers, creating value from waste. Now, we will further enhance these offerings with smart technological solutions, robust carbon financing mechanisms, high-integrity carbon credits, and new lines of organic fertilizers, and other services aligned with regenerative agriculture.

I'm excited for what's ahead. Inspired by farmers, nature, and our responsibility to future generations, we are committed to scaling impact and transforming agriculture.

"Today, Sistema.bio is more than a biodigester company with an expanded platform of products, services, and financing solutions for farmers."

—Alex Eaton
CEO & Cofounder of Sistema.bio

Alexander Eaton

CEO & Cofounder, Sistema.bio

Table of Contents

01

2024 Global Trends

2024 Global Trends

Climate Action and Carbon Market Highlights

As we approach 2030, there is an increasing urgency to fast-track efforts in favor of climate action to safeguard the well-being of our communities, the environment, and the planet. Although the goal is still far from being achieved, significant progress has been made.

In 2024, governments and organizations prioritized adaptation and resilience, with substantial investments in infrastructure to combat the growing impacts of climate change. Regions facing droughts and heatwaves focused on water management and climate-smart agriculture, advancing measures to safeguard food security and local economies.

At COP29 in Baku, global collaboration on climate action deepened, with a renewed emphasis on loss-and-damage funding and adaptation for vulnerable nations. A key milestone was the establishment of the **Article 6.4 mechanism,** a UN-supervised carbon market designed to standardize emission reduction credits and channel substantial climate finance to developing countries. To ensure environmental integrity, methodological guidelines and transparency measures were approved, preventing double-counting and verifying the additionality of carbon credits.

Corporate accountability also intensified, with stricter reporting obligations under the EU's Corporate Sustainability Reporting Directive (CSRD) and global ISSB standards. Businesses increasingly adopted science-aligned targets, boosting demand for compliance-grade carbon credits.

In carbon markets, there was a notable shift toward credits with social and environmental co-benefits. **Meanwhile, digital MRV technologies gained prominence, leveraging IoT, AI, and blockchain to enhance transparency, optimize energy systems, and monitor emissions more effectively, driving forward the digitalization of climate action.**

Article 6.4 mechanism

UN-supervised carbon market designed to standardize emission reduction credits and channel substantial climate finance to developing countries.

Regenerative Agriculture for Climate Adaptation and Decarbonization in the Food Industry

2024 showed increased levels of awareness among the general population and nations regarding sustainable food production and consumption, driving greater interest in regenerative agriculture.

Regenerative agriculture, focusing on soil health, biodiversity, and water management, became a central strategy for adapting to climate change. Practices like cover cropping, no-till farming, and agroforestry were widely adopted to enhance soil carbon sequestration, improve drought resilience, and restore degraded ecosystems.

Major agricultural regions, particularly in Africa and South Asia, prioritized regenerative practices to mitigate the impacts of heatwaves, erratic rainfall, and soil degradation, safeguarding food security and livelihoods.

Governments and international organizations introduced new incentives and subsidies for regenerative agriculture, recognizing its role in both climate adaptation and decarbonization. Financial institutions launched green financing products tailored for farmers implementing regenerative methods, ensuring access to resources and long-term viability.

Under this landscape, the world's leading food production companies and local companies accelerated regenerative agriculture programs to decarbonize their value chains. Partnerships with farmers focused on reducing greenhouse gas emissions from livestock and fertilizer use while enhancing soil carbon storage.

In summary, **2024 saw regenerative agriculture emerge as a cornerstone for climate adaptation and decarbonization in the global food industry, supported by corporate initiatives, government policies, and technological innovation.**

Regenerative agriculture, focusing on soil health, biodiversity, and water management, became a central strategy for adapting to climate change.

02

Global Milestones

Global Milestones

In 2024, Sistema.bio reached a significant milestone with the installation of 123,500 biogas units globally across 35 countries since its establishment in 2010. This progress has impacted over 740,000 farmers and their families, while contributing to the reduction of approximately 1.5 million tCO2e emissions annually.

During the year, the combined efforts of our four hubs—**Colombia, India, Kenya, and Mexico**—and a network of 20 commercial partners led to the installation of 26,500 biogas systems.

This outcome highlights the contributions of our teams across Africa, Asia and Latin America, as well as the importance of collaboration with our partners. As we continue to expand our reach, Sistema.bio remains committed to advancing sustainable energy solutions, regenerative solutions and climate actions for farmer's communities worldwide.

123,500
Biodigesters to date

35
Countries

740,000
Impacted Farmers

1.5 million
tCO2e Emissions Reduced

26,500
Biodigesters in 2024

AFRICA

Expanding Clean Energy Access Across the Continent

In 2024, Africa made significant strides in expanding access to clean energy in new countries, with **5,600 biogas systems** installed across key markets. Sistema.bio broadened its operations into West, Southern, and other African regions, marking an important milestone in the company's growth on the continent. The highest-impact countries in Africa in 2024 were Kenya, Uganda, and Malawi, contributing a total of **4,800 units,** with Kenya leading in system installations, accounting for 89%.

These achievements reflect the increasing adoption of biogas technology across Africa, including countries such as Zimbabwe, Zambia, Morocco, and Tanzania, supporting improved livelihoods for farmers on the continent and positioning it as a key player in the global climate action.

ASIA

Leaders in Installations and Revenue Generation

The Asia region, led by Sistema.bio's India office, reinforced its position as the company's top-performing market in biogas installations and revenue generation, achieving **20,928 systems sold.** This performance was fueled by key initiatives, including the launch of the **India Dairy Biogas Carbon Program 2,** which registered **10,925 biogas units,** expanding access to clean energy solutions for dairy farmers.

The successful implementation of the **Nestlé Project** further underscored the strength of strategic partnerships with leading food and beverage companies. By deploying over **3,000 domestic units** and over **200 productive use systems,** the project exemplified actionable solutions for decarbonizing value chains while reinforcing support for dairy farmers.

Momentum continued with a renewed collaboration with **Danone,** marked by a new order received in December and installations scheduled for early 2025. Additionally, strong demand from **AMUL** and **GCMMF** drove a promising pipeline of **17,100 units.**

Asia's record-breaking production of **25,810 units** and the installation of **20,800 systems** in 2024 highlight the region's operational excellence and its commitment to scaling biogas solutions for sustainable development.

LATIN AMERICA

Breaking Records in Productive Use Systems Installations and Efficiency

In 2024, Latin America set new records in productive use systems installations and operational efficiencies, further strengthening Sistema.bio's impact in the region. Across Mexico, Central America, and Colombia, the Latin America regional teams successfully installed over **530 biodigesters,** including Sistema 40 units (40 m³ capacity) and productive use systems, **equivalent to 2,172 Sistema 6 units.** These installations represent a significant milestone, **achieving 31% of Sistema.bio's global target** for serving medium-sized farms.

Colombia emerged as a standout performer, with a record **242 productive use systems** installed within three months. These systems reduced greenhouse gas emissions by **39.9 tCO2e** per year through appliance sales. So far, we have installed almost 2,000 biodigesters in the entire country, generating a significant impact on the pig sector.

The year also marked significant innovation, as Sistema.bio LATAM led the development of biogas accessories like water heaters, engines, and heating lamps, setting a benchmark for scalable renewable energy and regenerative agriculture. A standout achievement was the launch of the BioWaterTank, addressing water scarcity by providing a sustainable solution to our farmers.

Sistema.bio Impact Programs: Accelerating the Transition to a Low-carbon Farming

Sistema.bio technology supports farmers in becoming more resilient to the climate crisis and ensures they can continue to produce our food tomorrow.

The carbon credits generated through emissions reductions (ER) from farmers using Sistema.bio digesters provide crucial financing, making the technology more affordable and accessible. This scalability is crucial for achieving our ambitious goal of reducing 1% of global greenhouse gas (GHG) emissions by 2030. From 2018 to 2024, Sistema.bio has launched 9 Carbon and Impact programs, generating nearly 1 million tCO2e. One such program took place in India.

Our Ambitious Goal Reducing 1% of global greenhouse gas (GHG) emissions by 2030.

Biogas Impact Programs: A Pathway for Decarbonizing Agriculture

Watch Video

Sistema.bio in the Global Climate Conversation

June 22 to 30, 2024

London Climate Action Week

During London Climate Action Week, Sistema.bio participated in the inaugural Earthshot Prize Innovation Camp, hosted by Bloomberg Philanthropies and The Earthshot Prize. We joined 50 climate innovators from 20 countries to share and accelerate transformational environmental solutions. As part of Earthshot's network, we are proud to collaborate with leaders across diverse sectors, contributing to global efforts in climate creativity and innovation.

November 11 to 22, 2024

UN Climate Change Conference (UNFCCC COP29)

Hosted in Baku, Azerbaijan, COP29 provided an excellent platform to advance global climate collaboration. Representing Sistema.bio, Raphael Eberle, our Carbon Strategy and Program Manager, engaged in critical discussions on methane reduction, a central theme of the conference. Highlighted during the Methane and Non-CO2 Greenhouse Gases session, co-hosted by the US and China, was the importance of methane mitigation under the Global Methane Pledge, now endorsed by over 150 countries.
Sistema.bio proudly contributes by reducing methane emissions from manure management and enhancing the climate resilience of family farmers worldwide.

Strategic Investments Fuel Sistema.bio's Global Expansion

In 2024, Sistema.bio secured a remarkable $18.5 million in financing, driven by a strategic internal funding round and a significant new partnership with **Novastar Ventures.** This achievement underscores the confidence of existing and new investors in Sistema.bio's mission and positions the company for continued global expansion and innovation.

The $15 million internal financing round was led by **ElectriFI,** managed by the **EDFI Management Company,** with robust participation from long-standing investors like **Chroma Impact Investment, KawiSafi Ventures,** and **AXA IM Alts.** This funding aimed to drive the growth of partnerships, expand the range of bioenergy products, and unlock additional external capital in anticipation of a Series C round in 2025.

A standout addition to this success was the support from Novastar Ventures, marking the first investment from their Novastar Ventures Africa People and Planet Fund III (NVIII). Novastar's capital infusion is set to accelerate Sistema.bio's growth across Africa, bringing innovative energy and agricultural solutions to more farmers.

"Sistema.bio empowers farmers to transform waste into renewable energy and fertilizer, unlocking resilience and productivity while reducing greenhouse gas emissions."

—Steve Beck
Cofounder and Managing Partner of Novastar

Together, these investments highlight Sistema.bio's unwavering commitment to its mission: supporting family farmers with affordable, sustainable energy and regenerative agricultural solutions. With this financial backing, Sistema.bio is scaling its impact and strengthening its position as a leader in the global carbon markets, advancing toward its ambitious goal of achieving a 1% reduction in annual global greenhouse gas emissions by 2030.

Novastar Ventures backs the growth of Sistema.bio in Africa

Read More

Revolutionizing Farming with Technology: Sistema.bio Acquires Inclusive Energy

This year marked a pivotal moment for Sistema.bio as the company took a bold step to integrate advanced technology into its mission of transforming lives through biogas solutions. With the acquisition of Inclusive Energy (IE), Sistema.bio has strengthened its leadership in biogas and entered the realm of cutting-edge digital Monitoring, Reporting, and Verification (dMRV).

For years, Sistema.bio has been at the forefront of providing biogas technology, financing, and services to family farmers worldwide. Now, with Inclusive Energy's pioneering expertise in remote sensors and digital monitoring for biogas and solar systems, the company is positioned to serve farmers with greater precision and impact.

"This acquisition is about accelerating innovation and impact. By integrating Inclusive Energy's digital tools with our biogas technology, we're empowering farmers with better support, real-time monitoring, and robust carbon emissions tracking—bringing us closer to our goal of reducing 1% of global greenhouse gas emissions by 2030."

—Alex Eaton
CEO and Cofounder of Sistema.bio

Inclusive Energy's advanced dMRV platform, already tested on thousands of farms, enhances the integrity of carbon credit reporting and enables predictive maintenance of biogas systems. Farmers benefit from improved performance insights and seamless service, while Sistema.bio strengthens its leadership in carbon reduction projects and sustainable farming solutions.

As Sistema.bio continues to innovate, the Inclusive Energy acquisition underscores its commitment to advancing regenerative agriculture and making climate action tangible for family farmers everywhere.

Sistema.bio Acquires Inclusive Energy, Adding Digital Monitoring to its Carbon Reduction and Biogas Technology Platform for Farmers

Read More

A Global Partnership with Danone

In 2024, Sistema.bio marked a significant achievement by establishing a global partnership with Danone. This collaboration is present in the three continents where Sistema.bio operates—Africa, Asia and Latin America—and reflects a clear endorsement from Danone's global headquarters to implement emissions reduction programs in new markets. This milestone was made possible through a global effort by all Sistema.bio teams and regions.

Mexico

Building the Foundation

Working with nearly 20 medium-sized farmers in the western region of Mexico, this pilot project installed Sistemas 40 and milking machines and biogas-powered engines to generate energy. This pilot project with Danone in Mexico laid the groundwork for expanding into India and Morocco. The proven excellence of our pilot has set the stage for scaling in Mexico in 2025.

India

Pioneering Innovation

Danone's network in India comprises approximately 9,000 dairy farmers, creating a significant opportunity to impact the region's agricultural ecosystem.

Over 850 biodigesters, ranging from Sistema 6 to Sistema 40, are set to be installed in Punjab. Our India team has also introduced an ingenious biofertilizer collection and distribution system to bridge the gap between biofertilizer supply and demand. This system ensures efficient use of biofertilizer, even when cows and fields are physically distant, optimizing benefits for farmers.

Morocco

Building the Foundation

With Danone's vast network of approximately 40,000 dairy farmers in Morocco, our partnership will focus on a segment of this network. A total of 800 biodigesters will be installed across two key sectors.

Further Potential

Enhancing Climate Action for Farmers in More Regions

This multi-regional collaboration with Danone exemplifies synergy in action, leveraging smart climate biogas and biofertilizer technologies to support farmers while decarbonizing agricultural operations.

By integrating Sistema.bio's solutions with Danone's extensive farmer network, the partnership strengthens the shared commitment to climate action across multiple regions.

Customer-Centric Success: Celebrating 65% NPS

Sistema.bio has utilized the Net Promoter Score® (NPS) from 60_Decibels for over five years to assess our impact, including customer satisfaction, defined as the likelihood of users recommending our products and services to other farmers.

Additionally, Sistema.bio conducts two internal annual Customer Satisfaction Surveys (ICSS) to monitor progress across regional operations.

In 2024, Sistema.bio achieved a global NPS above 65% in our ICSS[1], aligning with the latest **60_Decibels report** conducted in September 2023. This report places Sistema.bio in the top 20% of companies in the energy sector, reflecting strong customer satisfaction across all regions.

Sistema.bio achieved a global NPS above 65% in our ICSS.

—60_Decibels Report

Notes:

[1] The ICCS and the NPS are different metrics. The ICCS shows the percentage of customers who are satisfied with our products and services. The NPS is calculated by deducting the number of dissatisfied customers to the number of satisfied customers who are open to promote our products and services.

Detailed Sistema.bio Impact Performance

Performance Relative to Benchmark indicates where Sistema.bio falls in the ranking relative to other companies in the Energy sector.

- BOTTOM 20%
- BOTTOM 40%
- MIDDLE
- TOP 40%
- TOP 20%

Benchmark Overview	# Companies	# Respondents
60dB Energy Benchmark	96	25,300+
60dB Asia Benchmark	202	47,700+
60dB Global Benchmark	588	152,200+

Indicator	Description	Sistema.bio	60dB Energy Benchmark	60dB Top 20%	Performance Relative to Benchmark
Profile & Access					
Female Reach	% of female respondents	33	38	58	●●●○○
Impact					
Quality of Life	% 'very much improved' quality of life	58	47	72	●●●●○
Satisfaction					
Net Promoter Score	NPS, on a scale -100 to 100	86	45	71	●●●●●

NPS

India		**(74%)**
Kenya		**(55.5%)**
Uganda		**(44%)**
Mexico[2]		**(91%)**

Notes:

[2]With a low reachability rate of 44%.

Source: 2023. 60_Decibels. Sistema.bio Impact Performance Report

Key factors driving this success include

1. High product satisfaction: Over 92% of clients are satisfied with their biodigesters.
2. Strong after-sales service satisfaction: 87% of clients value training, service visits, and follow-ups.
3. Ease of use: Over 93% of clients appreciate the simplicity of learning, operating, and maintaining the technology.
4. Financial impact: Over 97% of clients have experienced cost savings or other financial benefits from their biodigesters.

This achievement was made possible by our Customer Care team's dedicated efforts and innovative strategies. Their commitment to delivering exceptional support, tailored follow-ups, and ongoing training has been instrumental in ensuring client satisfaction and fostering trust among the farmers we serve.

ISO 23590 Certification: Elevating Biogas Safety and Quality

Sistema.bio achieved ISO 23590 certification in 2024, solidifying its commitment to safe, high-quality biogas systems. This certification positions Sistema.bio as a global leader in the domestic biogas sector and reinforces its commitment to excellence, innovation, and impact.

What is ISO 23590?

ISO 23590 is an international standard that establishes comprehensive requirements for the design, installation, operation, maintenance, and safety of domestic biogas systems. By adhering to this norm, Sistema.bio ensures its systems meet the highest global standards, offering farmers and partners biogas solutions that are both safe and effective. It also provides a structured framework for validating and improving practices across the organization.

Raising the Bar

The journey toward ISO certification began in 2023 in India, where the TechOps team laid the groundwork by conducting a gap analysis and aligning processes with the standard's requirements. In 2024, this certification was successfully expanded to Mexico and Kenya, consolidating its implementation in three of Sistema.bio's key regions.

ISO 23590 certification validates Sistema.bio's commitment to quality and innovation, solidifying its leadership in the domestic biogas sector.

Key impacts of this milestone include:

1. **Enhanced trust:** Farmers and partners can now rely on internationally certified systems, ensuring safety and effectiveness.

2. **Global recognition:** The certification elevates Sistema.bio as one of the few companies worldwide to meet this rigorous standard.

3. **Improved practices:** The certification process has refined internal processes, ensuring continuous improvement across all operations.

Expanding the Reach

With this milestone, Sistema.bio is setting its sights on expanding ISO 23590 certification to additional regions in Latin America and more countries in Africa. This next step will allow the organization to broaden the impact of its biogas solutions and continue empowering communities with safe, high-quality technology.

RESEARCH AND DEVELOPMENT

Innovating to Broaden Sistema.bio's Impact for Farmers & the Environment

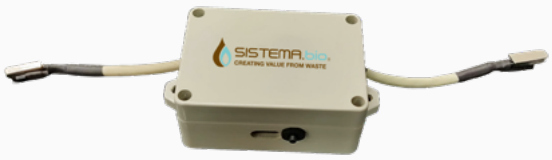
Following the DNA of Sistema.bio, our innovation hubs in India and Mexico continue to bring farmer-centric solutions for biodigesters in both domestic and productive farming contexts. Furthermore, in 2024, the R&D teams developed products and software focused on enhancing reliability in emission reduction projects, ensuring customer satisfaction, and managing bioslurry.

Automatic Flare

Added to the Sistema.bio product catalog as a venting and leakage prevention technology, the Automatic Flare was developed to ensure the destruction of excess methane, preventing venting into the atmosphere for biogas systems ranging from 40 - 200 m³. This innovative solution aligns with **Gold Standard** methodology, increasing ER generation and boosting carbon program benefits.

Thermal Sensors

This device was developed to monitor and record stove usage (biogas consumption) for better emission reduction and carbon projects monitoring. By using a temperature sensor located at each burner of Sistema.bio's cookstoves, the data is recorded in a tracking digital platform, ensuring dMRV and improving maintenance and troubleshooting services.



Flow Sensors and IoT Platform

The Smart Biogas Meter, developed by **Inclusive Energy,** and now powered by Sistema.bio, is a remote monitoring and analytics solution for biogas systems and carbon impact programs. It collects pressure, flow, and gas consumption data from biogas digesters and feeds it back to our software platform. Advanced analytics within the platform enable biogas owners and technicians to collaborate effectively, ensuring biodigesters operate at peak performance. This proactive approach maximizes the farmer's experience by enabling timely and efficient maintenance and training, all of which help to sustain optimal usage rates for Sistema.bio biodigesters over the long-term.

The precise sensing and real-time monitoring solutions make the Smart Biogas Meter a reliable and transparent dMRV tool for carbon reporting, fully aligned with high-integrity carbon program requirements.

H2S Filter 2.0

This blow-molding filter is an evolution of the previous Sistema.bio's hydrogen sulfide filters, by using a regenerated media (ferrosorp), it can last a full year and can be reused two to three times. Extending the filtration lifespan, this filter facilitates farm maintenance and use.

Instant Water Heaters

Designed for heating water at households or larger farms, this water heater has been enhanced for reliability, durability, and performance. It also introduces a new design introducing a modern aesthetic to farms.

Microaerator-1.3

Following the earlier version of the Sistema.bio microreactor, this new iteration is designed to introduce air into the biodigester to enhance biogas production. Now equipped with a timer, it activates and deactivates the air pump. It has been improved for reliability, robustness, manufacturability, and performance, managing electricity fluctuations and electromagnetic interference. It offers an improved and compact packaging, with visible indicator LED lights and reduced power consumption.

Bioslurry Management Solutions

To strengthen the bioslurry needs for farmers, the R&D team developed tools and products to increase ROI (Return on Investment) and better apply bioslurry to improve crops. These products include Bioslurry Filters, VermiCompost units, and Bioslurry Pumps. These products will be launched in 2025.

03

Strategic Growth

Strategic Growth

Our New Mission & Values

Our Mission: Work with Farmers to Improve Life on Earth

Sistema.bio was founded in 2010 with the clear idea that in nature, there is no waste, only resources. The end of a biological cycle is the input for another that perpetuates life, with biodigesters being the clearest example of waste-to-energy and fertilizer technology. In this spirit, we have always firmly believed that smallholder farmers are the backbone of our food systems and guardians of the land. They play a crucial role in addressing the most pressing global challenges of our times—climate change, food security, and social justice.

Fourteen years later, our mission has grown. We are going beyond the biogas space for farmers and expanding into farmer-led regenerative agricultural and energy systems that provide clean energy, organic fertilizers, and restore soil health, enhancing biodiversity and building resilient food systems. By creating value from waste, we empower farmers to increase productivity while reducing greenhouse gas emissions.

We envision a world where farmers thrive while regenerating ecosystems where family farms collectively create large-scale impact, ensuring a healthier, more just, and more sustainable planet for all.

New Values to Reflect Our Vibrant Culture

As Sistema.bio continues to grow, we have updated our core values to reflect our culture and aspirations. These values guide us in our mission to empower farmers and create positive impact:

Building a Robust Foundation in Sistema.bio Corporate Structure

This year, we streamlined our organizational structure to drive efficiency and innovation, creating four core teams: Strategy, Growth, Operations, and Finance.

These teams are led by Esther Altorfer, Piyush Sohani, Maxence Affre, and Louis-Marie Dubois, respectively, with all departments and regions now reporting to these four leaders.

- The **Strategy** team encompasses the People team and oversees our three regions.
- The **Growth** team brings together the Commercial, Marketing and Communications, R&D and Manufacturing, and Product teams.
- The **Operations** team integrates Technical Operations, Customer Success, Data Infrastructure, Analytics and Environment and Safety.
- The **Finance** team includes Financial Planning & Analysis, and Investor Relations.

The Sistema.bio team is thrilled to welcome **Maxence Affre** and **Piyush Sohani** to their new roles as **Chief Operations Officer** and **Chief Growth Officer,** respectively. Their unwavering commitment, exceptional professionalism, and outstanding leadership have been instrumental in driving Sistema.bio's success and growth during their time with the organization. We are excited to embark on this new chapter together with them and look forward to the impact they will continue to make in their expanded roles.

VISION & LEADERSHIP
Alexander Eaton
Chief Executive Officer & Cofounder

STRATEGY
Esther Altorfer
Chief Strategy Offices

GROWTH
Piyush Sohani
Chief Growth Officer

OPERATIONS
Maxence Affre
Chief Operations Officer

FINANCE
Louis-Marie Dubois
Chief Financial Officer

For more information, visit our website www.sistema.bio

04

New Beginnings

New Beginnings

Driving Global Growth

2024 was a year of growth and innovation at Sistema.bio, marked by the expansion of our team with exceptional talent joining from across the globe.

Following our acquisition of Inclusive Energy, we were thrilled to welcome **Vijay Bhopal,** Inclusive Energy CEO; **Jordan Silverman,** Cofounder; and **Gareth Selby,** Cofounder, to Sistema.bio. Their expertise in digital monitoring and innovation brings fresh perspectives to our mission of transforming farming through technology and sustainability.

Photo taken during the last Global Call 2024.

Welcome to Sistema.bio!

Vijay Bhopal, Jordan Silverman, and Gareth Selby.

We are also proud to introduce key additions to our Global Team, strengthening our leadership and expertise:

Ed Agnew
Global Carbon Partnerships Director

Read More

As Global Carbon Partnerships Director, is fostering impactful collaborations in the carbon market. With extensive experience in business development, carbon finance, investor relations, corporate development, and climate initiatives, Ed is driving strategic partnerships that align with Sistema.bio's mission to scale its global impact.

Raphael Eberle
Carbon Policy & Gov. Partnerships Mgr.

Read More

Joined Sistema.bio in February 2024 as Carbon Policy and Government Partnerships Manager. In this role, he champions policy advocacy and fosters strategic partnerships to amplify our work in carbon markets and environmental impact.

Alejandro Echeverri
Global Head of Sales Operations

Read More

Our Global Head of Sales Operations, brings over a decade of experience in rural sales and a proven track record of driving high-level optimizations in commercial operations across regions.

Strengthening Our Global Voice

In 2024, Sistema.bio's Marketing and Communications Team experienced significant growth, underscoring our commitment to amplifying our impact and enhancing our global presence. This year, we welcomed several talented individuals, both at the global and regional levels.

This expansion reflects our dedication to crafting impactful messaging, engaging with diverse audiences, and empowering farmers worldwide. Together, we are building a more powerful voice for Sistema.bio.

Sistema.bio's MarComs Team experienced significant growth

05

Regional Highlights

Regional Highlights

AFRICA

Over 10,000 Blue Flames Lit in Kenya

Sistema.bio Kenya achieved a major milestone, surpassing 10,000 clients nationwide. This success reflects our impact on rural communities through clean cooking and agricultural innovation, improving the lives of families across the country.

Expansion Across Africa

East and Southern Africa:

Sistema.bio expanded into Zambia, Mozambique, and Tanzania through a partnership with **Engie Energy Access,** launching active pilot projects. The success of previous initiatives in Ethiopia, Malawi, and Zimbabwe continued, with Ethiopia's 200 pilot biogas systems showing exceptional performance.

West Africa:

Collaborations with **Farmerline** in Ghana and local partners in Nigeria, such as NSIA, SNV, VD&S, and **Engie Energy Access,** facilitated the installation of pilot biodigesters, unlocking opportunities in one of Africa's largest agricultural markets. In Morocco, a partnership with **Danone** enabled successful pilot projects to advance sustainability.

Majuu Project Partnership

Sistema.bio Kenya partnered with **Shell Foundation, Cooperative Bank**, and **Mastercard** on the Majuu project, bringing biogas and bioslurry solutions to 125 family farmers in Nyandarua County. Leveraging Mastercard's Coop SOKO platform, the project aims to enhance agricultural productivity and green energy adoption, with plans to expand nationally.

Expanding Influence in Clean Energy and Sustainable Solutions in Africa

In 2024, Sistema.bio Africa actively participated in key regional forums and summits, strengthening its role in regenerative agriculture, carbon finance, and circular economy discussions.

At **EEP Knowledge Week,** Sistema.bio contributed to the Carbon Markets panel, highlighting the potential of biogas technology in unlocking carbon finance for small businesses. This participation reinforced the company's commitment to scaling clean energy solutions across the continent.

During the **Sankalp Africa Summit,** Sistema.bio engaged with impact investors and industry leaders on sustainable development initiatives, fostering collaboration and exploring opportunities for scaling impact.

Similarly, at the **Africa Food Systems Forum** in Kigali, the organization joined discussions on transforming food systems through innovation and inclusive investment strategies.

At the **8th AgriFin Learning Event** hosted by Mercy Corps, Sistema.bio exhibited its innovative solutions, engaging policymakers and digital ecosystem leaders in discussions on inclusive agricultural transformation. Head of Partnerships Lucy Kaburia attended as a delegate, contributing insights into the role of biogas in digital agriculture.

A major milestone was the Ethiopian team's independent participation at the **African Livestock Exhibition and Congress (ALEC) 2024.** This marked the first time Sistema.bio Ethiopia represented the company autonomously, showcasing the team's expertise and the potential for growth in Africa's largest livestock-producing nation.

ASIA

Sistema.bio's 100,000th Global Farmer: Pooja Singh, India

In April 2024, Sistema.bio achieved a remarkable milestone with its 100,000th installation globally. Pooja Singh, a farmer from Bhilwara, Rajasthan, symbolizes this achievement. By adopting the Sistema 8 biodigester, Pooja transformed her farm and household, reducing her workload and improving her family's health and well-being. Her journey represents the transformative power of clean energy solutions for rural women across Asia.

Strategic Partnership with Amul and GCMMF

Sistema.bio partnered with **Amul,** India's largest milk brand with 40% of the organized packaged milk market, uniting 3.6 million farmers across 18,700 villages. The initiative aims to install 17,000 Sistema 6 biodigesters in Gujarat's Kheda, Anand, and Mahisagar districts, supported by the **Ministry of New and Renewable Energy (MNRE)** and the Gujarat Government, promoting clean energy and strengthening family farmers, who form the backbone of its legacy.

Expansion to Nepal and Indonesia

Sistema.bio, through the Kingdom of Saudi Arabia's Forward7 Initiative, introduced modern biogas technology in Nepal and Indonesia. Both regions face challenges due to their reliance on biomass fuels, which leads to carbon emissions, health risks, and limited access to LPG. With plans to install 800 biodigesters by March 2025, the project aims for rural development, women empowerment, uplift marginalized groups, and reduce CO2 emissions.

Nestlé Partnership Success in Punjab

The partnership between **Nestlé** and Sistema.bio is transforming smallholder farming in Punjab with modern biogas technology. Since 2023, over 6,000 biodigesters have been installed, reducing emissions and cutting fuel costs. In 2024 alone, more than 3,000 new systems were deployed, with a growing shift toward larger models like the Sistema 120 and 200. This partnership is driving real impact—lower methane emissions, stronger farm economies, and a path toward Nestlé's goal of 50% GHG reduction by 2030 and net zero by 2050.

India Dairy Biogas Program: Phase Two Launch

Sistema.bio India launched the second phase of its Dairy Biogas Program, aiming to install 50,000 biodigesters across Maharashtra, Gujarat, and Rajasthan. Following the success of phase one, which saw 37,500 installations, this initiative enhances economic stability for farmers and contributes to climate action.

Partnering for Impact: Sistema.bio Meets India's Corporate Leaders

In 2024, Sistema.bio actively championed the role of biogas technology in addressing critical environmental challenges and advancing sustainability in Asia, participating in two high-profile events that underscored its commitment to impactful climate solutions.

CSR & ESG Summit | October 2024:

At the CSR & ESG Summit in New Delhi, Sistema.bio highlighted the transformative potential of modern biogas projects in empowering communities and advancing sustainable development. Key discussions emphasized the role of climate-focused CSR initiatives, the importance of public-private partnerships in scaling agricultural solutions, and the alignment of CSR efforts with global frameworks like the **SDGs.**

ESG & Sustainability Strategy India Summit 2024 | December 18-19, 2024:

At the 7th ESG & Sustainability Strategy India Summit, held in Bengaluru, Sistema.bio spotlighted the transformative potential of biogas technology in addressing some of India's most pressing environmental challenges. With 49% of rural India still dependent on polluting fuels and livestock waste contributing 14.5% to global methane emissions, biogas offers a cleaner alternative that reduces emissions, supports rural communities, and empowers women. This premier conference provided a platform to engage with industry leaders, share best practices, and explore how integrating biogas into sustainability strategies can drive meaningful environmental and social progress.

LATIN AMERICA

Colombia Achieves Record-Breaking Installation of Biodigesters for Productive Use

Sistema.bio Colombia achieved a groundbreaking milestone by implementing its first carbon credit program certified under **Gold Standard,** focusing on carbon emission mitigation and sustainable practices. Over 240 productive use systems were installed in just three months—a record for the Colombian TechOps team. These biodigester systems, primarily on **pig and cattle farms,** position Colombia as a key market for sustainability initiatives and set the stage for future program enhancements in 2025.

Colombia is committed to the **Paris Agreement,** aiming to reduce emissions. Since 2017, it has implemented a carbon tax on fossil fuel consumption, encouraging businesses, organizations and farms to invest in offset projects and sustainability initiatives.

Strengthening Institutional Partnerships

Strategic collaborations across Latin America played a key role in amplifying Sistema.bio's reach and impact in 2024:

Mexico:

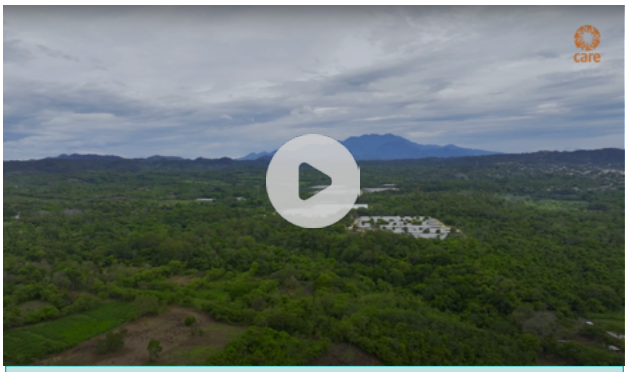
Partnerships with **Danone, Sigma Alimentos** and **Heineken Mexico** advanced biofertilizer applications and supported over 30 producers in conservation agriculture and biogas solutions. Additionally, this year marked a pivotal period for strengthening alliances with local governments in Puebla, Querétaro, Guanajuato and others. All these collaborations and the different projects provided crucial public support, facilitating the adoption of biodigesters and boosting farm productivity across diverse regions and agricultural contexts.

Colombia:

Collaborations with the **International Finance Corporation (IFC),** GANSO, and **Impulsa BACAO,** an agroforestry company, introduced biodigesters using cacao mucilage, enhancing soil conditions, providing specific recommendations for its improvement and benefiting cattle producers in the department of Meta with the social and economic benefits of the biodigesters.

Honduras:

In collaboration with **CARE** Honduras and Alteco, our full-service partner in Honduras, a gender-focused project successfully installed 10 biodigesters. This project impacted around 480 people of which 295 are women. Each biodigester mitigates at least 10 tons of CO_2e annually while farmers are transforming organic waste into valuable resources, reducing labor demands, and minimizing health risks while enhancing agricultural productivity.



Regenerative Biodigestion

The Growth of Productive Systems Across Latin America

In 2024, Sistema.bio LATAM established its position as a leader in sustainable technology, achieving over 530 biodigester installations. With additional organic growth in Central America and Mexico, the total impact surpassed 2,100 biodigester systems.

The year also saw significant innovation in response to the demand for accessories that cater to the increasing number of productive use systems. Sistema.bio LATAM pioneered the development of innovative biogas accessories, including water heaters, engines, and heating lamps, establishing the region as a benchmark for scalable, renewable energy, and regenerative agricultural solutions. A key product for the region was the BioWaterTank, which addresses the water crisis caused by climate change by storing water for crops, animal feeding, or as a complement to the biodigester.

Optimized Production: 35% Cost Reduction with a New Manufacturing Facility

Sistema.bio achieved a 35% cost reduction through innovations in its Mexico-based manufacturing facility. The facility, now with a capacity to produce 500 units per month, incorporates cutting-edge research and development. Notably, it has led to the creation of the new Sistema.bio BioWaterTank, designed to help address water scarcity. These advancements ensure accessible, high-quality technology for farmers, while improving operational sustainability.

More Than a Biodigester Campaign

The **More Than a Biodigester** campaign redefined Sistema.bio LATAM's narrative in 2024. Featuring over 15 impactful publications, the campaign reached 32,000 people through videos, social media, and awareness workshops. It emphasized the **multifaceted impact** of Sistema.bio, resonating with diverse stakeholders and showcasing the transformative potential of biogas technology in advancing sustainability and regenerative agriculture.

Advancing Sustainability and Biodiversity Conservation in Latin America

In 2024, Sistema.bio LATAM demonstrated its dedication to sustainable agriculture and ecosystem restoration by participating in two pivotal events that highlighted innovative solutions for a regenerative and biodiverse future.

Regenerative Agriculture and Systems Summit LATAM | June 25-26, 2024:

Almendra Ortiz-Tirado Aguilar, Latin America Managing Director,participated in the Regenerative Agriculture and Systems Summit 2024, a key event that brought together industry leaders to advance toward a more regenerative and holistic agricultural system. Attendees engaged in selected panel discussions, intimate roundtables, and startup presentations, with the opportunity to forge new partnerships and collaborations with over 150 leaders from the entire supply chain. Sistema.bio highlighted its commitment to regenerative agriculture and sustainable solutions that foster more resilient and productive farming.

UN Biodiversity Conference of the Parties (COP16) | October 21 - November 1, 2024:

At COP16, the Sistema.bio LATAM delegation: Almendra Ortiz-Tirado, Camilo Arias, and Adriana Maldonado, showcased the role of biodigesters in advancing global biodiversity conservation goals. Highlighting the benefits of biofertilizers derived from biodigesters, we underscored their ability to restore soil health, reduce dependency on harmful chemical inputs, and support ecosystem regeneration. The conference focused on implementing the Global Biodiversity Framework, with key discussions emphasizing nature-based solutions like biodigesters to promote regenerative agriculture. By fostering sustainable practices, these technologies not only boost productivity but also conserve pollinators and other critical species, advancing international efforts for ecosystem restoration and climate action.

06

Fostering Diversity and Inclusion

Fostering Diversity and Inclusion

At Sistema.bio, we are proud to have built a diverse and inclusive workforce that reflects our commitment to representing the global communities we serve.

Today, our team comprises:

Nearly 900 individuals across Africa, Asia, Europe and Latin America, representing over 17 nationalities and speaking more than 15 languages.

This rich cultural tapestry forms the foundation of our success. Our people are our greatest asset, and what sets us apart is our "Boots on the Ground" approach—embodied by our dedicated field commercial agents and technicians. Representing over 60% of our team, they build meaningful, trust-based relationships with farmers every day, driving impact where it matters most.

Gender Lens

As a recognized gender-focused company, Sistema.bio continued advancing its gender equality efforts in 2024 through the following initiatives:

Leadership's Gender Commitment and Reporting:

Since its inception, Sistema.bio has been deeply committed to fostering gender equality, empowering women economically, and creating inclusive job opportunities within the organization.

This year, the organization achieved the following key outcomes:

37%

Of women on the Board of Directors (including observers).

12 Women in leadership roles, representing more than **40%** of leaders.

29%

Of women in full-time employment (FTE).

Gender, Diversity, and Inclusion Project Funded by EcoEnterprises in Latin America:

With support from EcoEnterprises, the Latin America region successfully implemented its first Gender, Diversity, and Inclusion project in partnership with Lentes Púrpura, focusing on advancing equity and inclusivity across its operations.

Gender Approach Assessment in Kenya Funded by FMO:

This case study assesses the impact of FMO's investments on women, both as end-users (primary domain) and as leaders or employees (secondary domain). The study highlights Kenya, where FMO has concentrated its investments, and aims to provide valuable insights and opportunities to enhance future gender efforts. The study is set for release in early May 2025.

Our multicultural workforce strengthens our impact helping us develop more innovative, inclusive solutions. As we continue to grow and evolve, we are focused on organizing ourselves better to face future challenges, while ensuring that diversity and inclusion remain central to our values. Every interaction and collaboration, from leadership to field teams, reinforces our collective trust and shared vision.

07

Sistema.bio in the Spotlight

Sistema.bio in the Spotlight

In the Media

In 2024, Sistema.bio made headlines worldwide with groundbreaking announcements, including a major investment milestone and the acquisition of Inclusive Energy, Internal Financing Rounds closure.

These press releases were strategically shared with international and national media outlets specializing in business, sustainability, environmental issues, and investment.

Our Global Marketing and Communications team collaborated closely with regional teams in Kenya, India, and Latin America to drive extensive engagement across digital and print media platforms. This included publishing thought leadership articles by our CEO, Managing Directors and subject matter experts, such as Atul Mittal, Sistema.bio's Growth Director for South Asia.

These efforts have delivered outstanding results this year, garnering over **749 positive media mentions** and achieving a global reach of **650 million people.**

GLOBAL

Sistema.bio Acquires Inclusive Energy to Add Precision to Farmer Driven Carbon Market

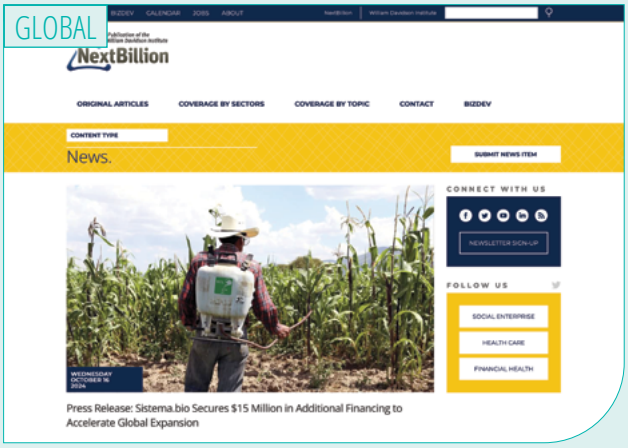
Published 12:01 PM GMT+1, October 28, 2024

With this acquisition, Sistema.bio combines its position as the largest full-service biogas company with the first biogas-specific platform for dMRV.

NAIROBI, KENYA, October 28, 2024 / EINPresswire.com / -- Sistema.bio, a global leader in the delivery of biogas technology, financing, and services for family farmers worldwide, announces the acquisition of Inclusive Energy (IE). As a pioneer in remote sensors for biogas and solar energy systems, IE is at the forefront of digital Monitoring, Reporting and Verification (dMRV). This strategic acquisition will significantly enhance Sistema.bio's capacity to deliver high-impact biogas solutions with improved digital MRV capabilities, benefiting farmers worldwide with better service and long-term support.

Read More

GLOBAL



Press Release: Sistema.bio Secures $15 Million in Additional Financing to Accelerate Global Expansion

Read More

GLOBAL

Read More

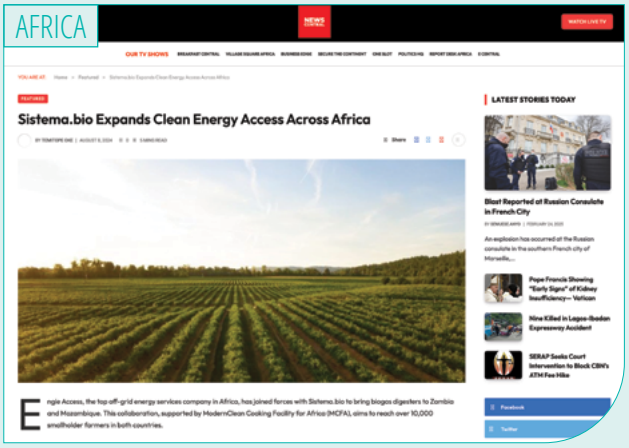
AFRICA

Read More

ASIA

Read More

AFRICA

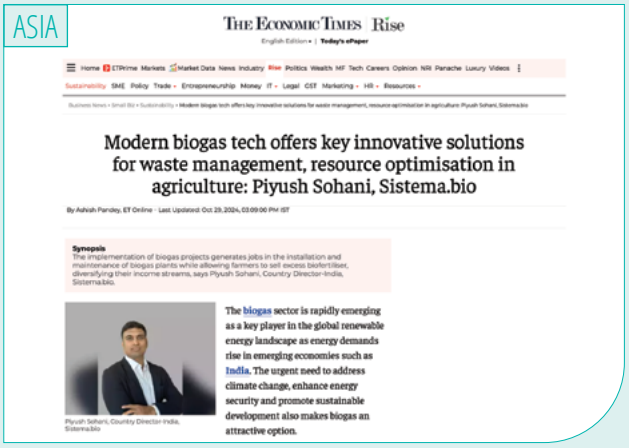


Read More

LATIN AMERICA

Read More

ASIA



Read More

LATIN AMERICA

Read More

Awards & Recognitions

2024 Biogas Valorization Award & Runner-Up for Clean Cooking Solutions Award

At the 20th **Energy Management Awards** hosted by the **Kenya Association of Manufacturers,** Sistema.bio Africa received the prestigious Biogas Valorization Award and was named Runner-Up for the Clean Cooking Solutions Award.

BW Disrupt Social Impact Leader Award

Piyush Sohani, Country Director (India), received the BW Disrupt Social Impact Leader Award from Business World, recognizing Sistema.bio's impact on over 5.5 million people across India. The award highlights Sistema.bio's role in mitigating 610,000 tons of CO2e, fertilizing 900,000 hectares of land, and empowering rural communities with clean energy solutions.

The 140 Impactful Companies in Mexico

Sistema.bio LATAM was recognized as one of the **140 Impactful Companies in Mexico** by **Impact Hub Mexico** and **Fomento Social Citibanamex** under the Social and Environmental Impact category. This award celebrates the company's continuous growth, transformative impact on agriculture, and high-quality data monitoring practices. It also aims to inspire new entrepreneurship, promote conscious consumption, and generate knowledge on best practices for creating social and environmental impact across Mexico.

Climate Positive 2024

Sistema.bio LATAM received the **Climate Positive 2024** award from **Green Cross UK** in the Circular Economy category. This prestigious recognition honors the company's innovative technology, impactful contributions to a climate-positive future, and alignment with the Sustainable Development Goals (SDGs). It also highlights Sistema.bio's exceptional communication and awareness initiatives, showcasing its leadership in advancing sustainable and circular economy solutions.

SISTEMA.bio®

Annual Activity Report 2024

Sistema.bio