# **ECOM Group** Sustainability Report







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# MESSAGE FROM ANDREW HALLE, CEO, ECOM

The coffee farmer in Vietnam, the cocoa farmer in Ghana and the roaster in Costa Rica all have one thing in common: the ECOM Group is revolutionizing their work through the implementation of sustainable practices and innovations. Together, we are transforming the supply chain from root to branch to address challenges like climate change, resource scarcity and farm productivity.

As a global leader in coffee, cocoa and cotton, the ECOM Group invests from commodity to customer in each of our 40 countries of origin. Our deep network of global and local expertise helps us identify and amplify cooperative benefits throughout our supply chains, allowing us to become a farmer's one-stop shop for the entire crop cycle. Farmers benefit from convenience and higher productivity, while buyers and clients receive better products and greater traceability.

Sustainability is a core value at the ECOM Group. Our Sustainable Management Services (SMS) division enables us to pinpoint and strengthen community assets and partnerships to allow for greater foresight in planning and adaptation. By mapping the masses of data points gathered by SMS staff and analyzing, including with application of artificial intelligence, then sharing this information with farmers, we can democratize access to information, while delivering the best solutions to farmers and clients alike.

At the ECOM Group, we firmly believe that diversity and inclusion are sustainable assets that can spark social and political empowerment, better economic opportunities for farmers and greater farm productivity.

My colleagues and I are fortunate to be part of a global community fighting against some of the greatest agricultural issues of our era. Together, we are devoted to shifting the paradigm of how we do business so that we can change farmers' lives and the environment for the better.

Sincerely,

Andrew Halle



ANDREW HALLE
CEO, ECOM AGROINDUSTRIAL
CORP. LIMITED

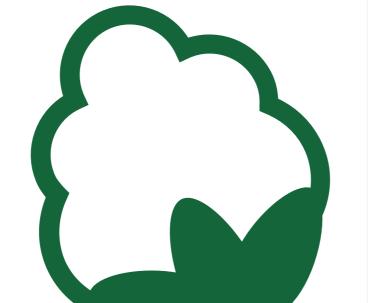
1849
founded in Barcelona, Spain, by Jose Esteve Thomas

1885 commencement of U.S. operations in New York

1930
opening in Dallas
(as a founding member of the Dallas cotton exchange)

1935 start of cotton operations in Brazil

1948 start of cotton operations in Mexico



# MESSAGE FROM TEDDY ESTEVE, PRESIDENT OF SMS

1967
establishment
of office in Switzerland

1980s expansion into coffee in Central and Latin America

1990s expansion into coffee and cocoa in Africa and East Asia

2013

purchase of commodity trading division of Armajaro Holdings

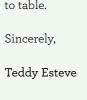
Coffee fuels the world's workforce. And cocoa, in its many derivatives, feeds and heals us. Together, they form the cornerstone of millions of livelihoods. At the ECOM Group, we first integrated sustainability into our strategy in Oaxaca, Mexico in 1997 — and what lessons have we learned! It has provided us with a compass that brings us closer to a renewable future for our supply chains.

As a family-owned company, the ECOM Group understands the value in knowing its origins. We know how far we have come since the inception of our coffee and cocoa businesses and how far we can go. Our multi-faceted experience in agriculture allows us to find common ground with coffee and cocoa farmers as we guide them toward the long-term sustainability of their livelihoods.

Our SMS staff strive to minimize the physical hardship and uncertainties farmers endure by offering a wealth of support, including access to new technologies and exceptional planting material. We enhance farmers' agronomic literacy through training in good agricultural practices and hands-on experience with demonstration plots. And with the benefit of science and smart partnerships, we are exploring ways to scale up innovations, like our climate-resilient coffee hybrid plants and forest-positive cocoa production models.

We join industry partners in their efforts to eliminate deforestation, build resilience to climate change, eradicate child labor and support our farmers in reaching a living income. We want to drive change in producing regions by working towards a more profitable supply chain for everyone involved. The more traceable the supply chain, the greater our ability to work together in addressing issues that affect us all.

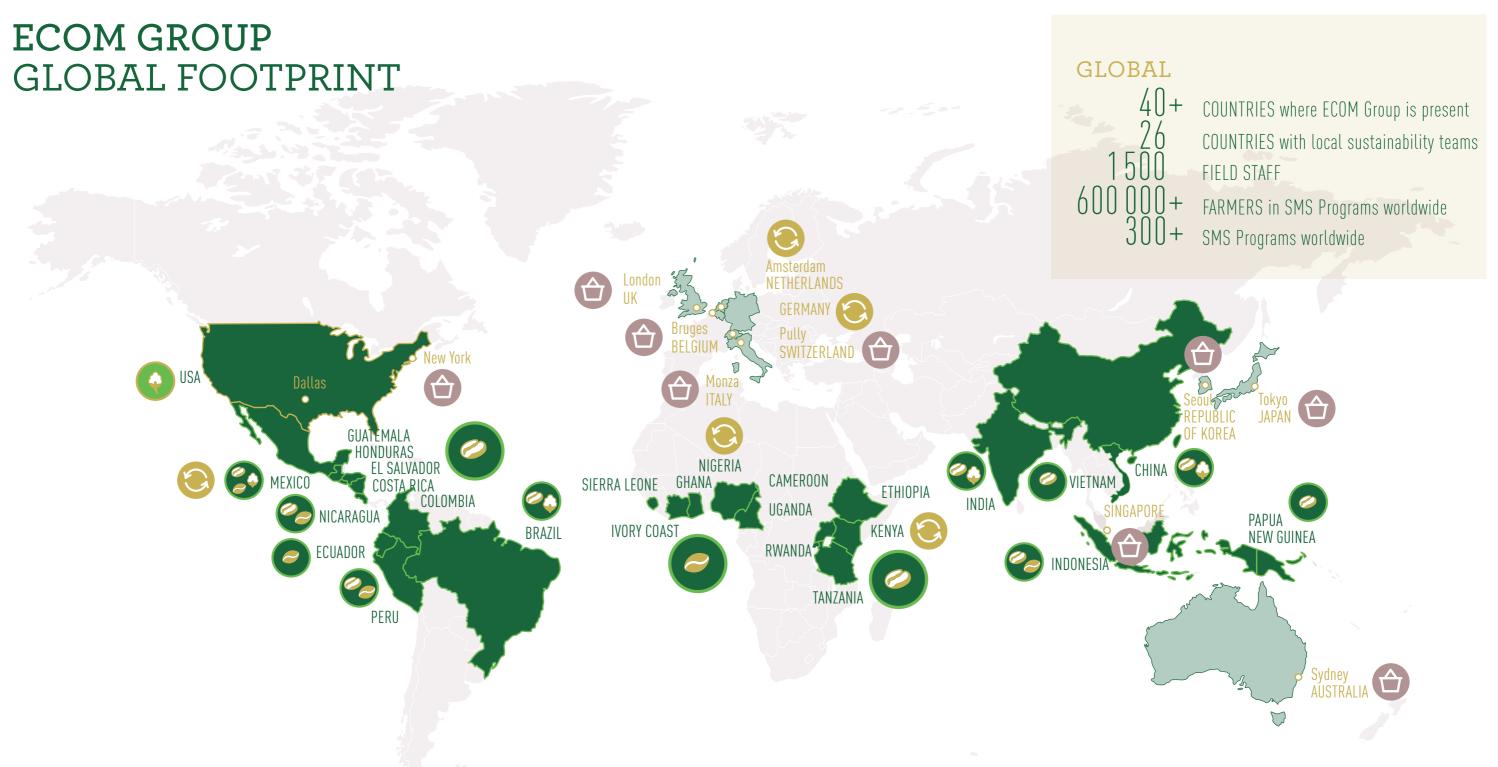
I believe the coming year will be a turning point for the ECOM Group business as we expand and support more local, regional and global initiatives that will help sustainable coffee and cocoa become the standard, rather than the exception. This report highlights some of our efforts, but is by no means an exhaustive study of everything we are able to accomplish with our partners' support. My colleagues and I deeply appreciate this opportunity to work with farmers, roasters and chocolate makers, who share our vision for a more honest and productive journey from farm to table.





PRESIDENT OF SMS







Main offices / Processing / Trading



Coffee



Cotton



Cocoa

FARMERS in SMS Program in SMS Programs FIELD STAFF YEARS PRESENCE in sustainability

180000+ FARMERS in SMS Programs 820 FIELD STAFF

YEARS PRESENCE in sustainability

Y 300000+ FARMERS in SMS Programs 330 FIELD STAFF YEARS PRESENCE in sustainability

30000+ FARMERS 140 FIELD STAFF ASI

in SMS Programs YEARS PRESENCE in sustainability

Sustainable Sourcing



Sourcing



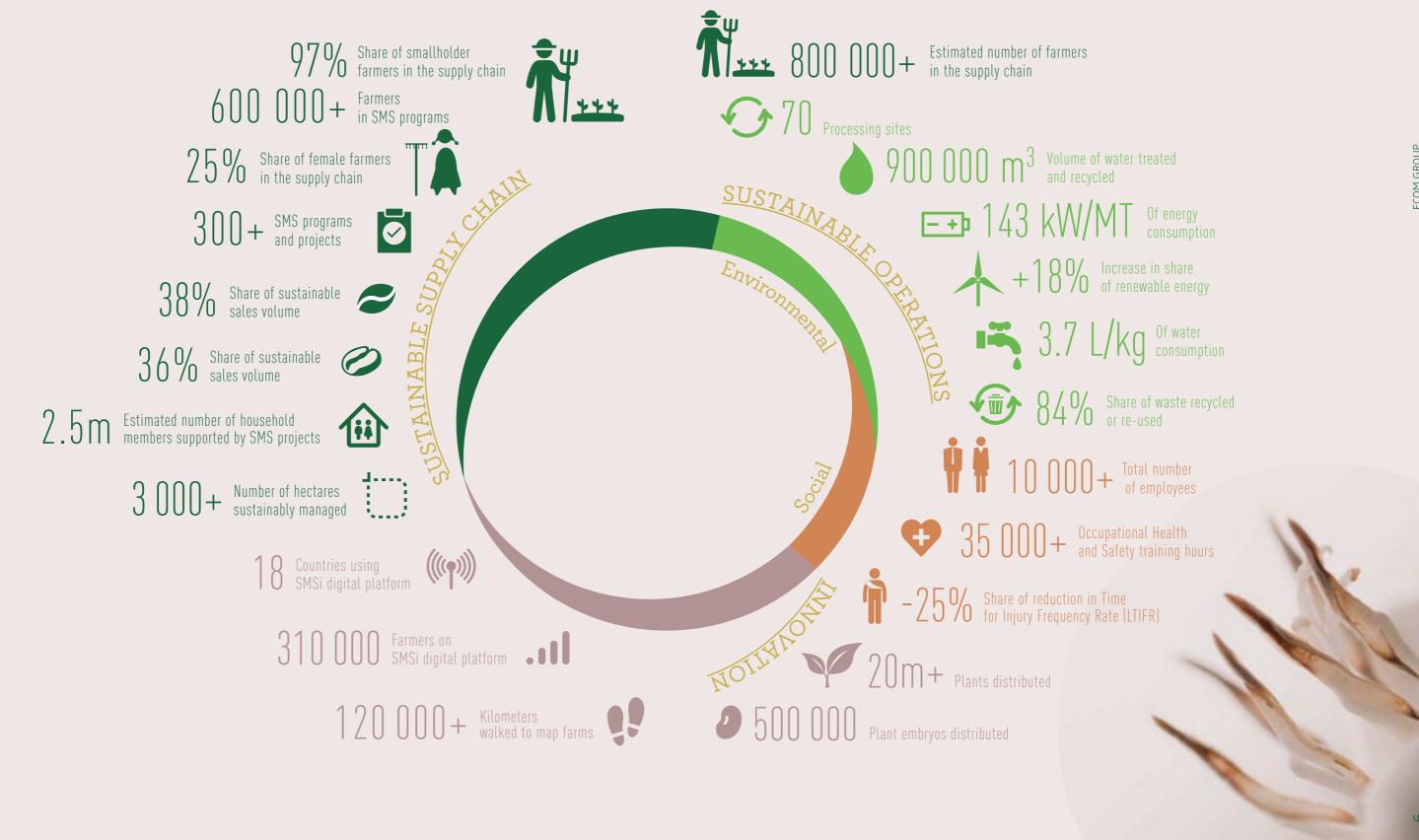
Processing



Trading

## **ECOM GROUP**

# GLOBAL SUSTAINABILITY **INDICATORS**



# ROOTED SUPPLY CHAIN INTEGRATED COMPANY

The ECOM Group, as a global leader in its core businesses of coffee, cocoa and cotton, invests from commodity to customer, to create a more efficient and agile agricultural value chain. Farmers and producers benefit from convenience and higher productivity, while buyers and clients receive better-quality products and greater

traceability. As an origin-integrated business, our network extends efficiencies and

innovation throughout its network, while creating shared value for our suppliers and

clients through transparency and accountability. The ECOM Group created the Sustainable Management Services (SMS) division to support sustainable farming and greater traceability in its supply chains. SMS is able to identify and strengthen local synergies, community assets and partnerships to allow for greater foresight in planning and adaptation to agriculture's unpredictable landscape.

SMS has the expertise and relationships in the field to tailor our farm management and responsible sourcing solutions to farmers' business realities. It provides technical assistance and access to farming technologies, new markets and credits that facilitate farmers' financial autonomy and entrepreneurship. We are successfully implementing over 300 sustainable projects worldwide.

We offer our farmers, clients and partners the best of both worlds: a vast, rooted network of personnel and expertise globally along with SMS' technicians and agronomists sharing their expertise locally. This symbiosis continually grows as the ECOM Group itself grows through savvy leadership and smart partnerships. Ultimately, farmers are able to farm more sustainably, thereby prolonging their livelihoods and bringing tangible benefits to their communities.

condition..."

We work on long-term, sustainable solutions and try to MONICA PATRICIA MENA

SMS PROJECTS & PROGRAMS RESEARCH COORDINATOR, ECOM GROUP ECUADOR

come to a win-win situation where the farmer is producing more of what helps him improve his living MONICA PATRICIA MENA, ECOM GROUP ECUADOR



## TECHNICAL ASSISTANCE

300+ SMS programs

40+ Countries with ECOM Group presence

Processing sites

250+Warehouses and buying stations

Years of experience

### Coffee SMS Code

SMS Code is a customizable. continuous improvement program in which SMS partners with coffee farmers for the long term to enhance their farm management and productivity. Following a meticulous audit, farmers can achieve international and NGO-standard certification levels of SMS Verified or SMS Diamond Verified criteria which enables them to meet purchasing and growers' ambitions through higher yields and better quality, while demonstrating ECOM's financial transparency and traceability.

As a vanguard for sustainability, the ECOM Group is devoted to developing a traceable supply chain through SMS' technical assistance. We routinely surpass company standards to ensure that most of our supply chains' components can be traced from acquisition to production, and that our farmers, producers and clients comply with traceability regulations. Our business models encourage financial inclusion and combat child and forced labor.

With boots on the ground and roots in the community, SMS reaches small holder farmers with different organizational models to enhance their knowledge and productivity. A trusted network of more than 1500 SMS specialists cultivates and nurtures relationships on the ground to provide meaningful services, like solar equipment for households, and training on a range of issues, from soil management to labor practices. SMS adds further value through certification, which validates the good agricultural practices of our farmers and earns the loyalty of ECOM's preferred buyers through our universally recognized certifications and differentiated products.

SMS' work is firmly entrenched in collaboration at the community level. We develop successful relationships with local organizations, NGOs, clients and banks to support farmers in every aspects of their lives. To date, SMS is successfully implementing over 300 sustainable projects worldwide.



# RESILIENT COMMUNITIES ECONOMIC AND SOCIAL IMPACT

Improving farmers' endurance and responsiveness to climate change and resource scarcity is essential to a more sustainable supply chain. The ECOM Group is  $\frac{1}{2}$ 

absorb, recover and adapt to the environment's disruptions and future shocks. Our comprehensive understanding of farmers' needs, from topography and transport to technology, allows us to adapt solutions effectively.

SMS technicians and agronomists work closely with farmers to implement climateresilient farming systems to enhance productivity, while facilitating access to

affordable agricultural inputs, adapted planting material, tailored financial services and the best markets. We grow farming communities' collective resilience by training women producers and youth on good agricultural practices and income diversification.

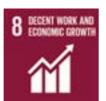
dedicated to leading farmers from risk to resilience by improving their capacity to

SMS' support network is firmly rooted in the communities we serve and lays the foundation for financial autonomy and more inclusive economies. We want to empower the most marginalized farmers to become advocates for themselves and the communities they live in.











# **ECONOMIC**FARM PRODUCTIVITY

400 000+
Training hours provided

>60%
Increase in productivity of coffee (Project in Mexico)

# Colombia farm productivity

In Colombia, improving farm productivity is a critical first step before addressing climate change. SMS supports 9000 farmers from farm to cup through tailored strategies and materials.



AMALIA MUÑOZ ÁLVAREZ SMS MANAGER, ECOM GROUP COLOMBIA

The ECOM Group cultivates farmers' resilience through new technologies and sustainable farm renovation and rehabilitation. Our cutting-edge planting material, including more durable and productive coffee hybrid plants, is second to none, as is our ability to export millions of seedlings globally. Clients and SMS farmers have access to a unique catalogue of cocoa and coffee varieties at low cost and on a large

SMS continually searches for ways to sow professional development and stimulate small enterprises. In each region, we identify climate-smart methods to limit agrochemicals and promote the sustainable use of inputs and their alternatives. Our tailored training methodologies accommodate a wide range of business realities and our demonstration plots provide hands-on learning while ensuring farmers are on track for certification.

We hope to inspire the next generation of farmers, who have historically seen coffee as a synonym for poverty, through our tangible results. We want coffee farmers in Colombia and worldwide to be able to reimagine their livelihoods in a more a sustainable way.





# **ECONOMIC**

# FARMER FINANCIAL **INCLUSION**

The ECOM Group recognizes that financial inclusion benefits everyone in the supply chain, starting with the farmers at each country's origin. By improving farmers' access to land, labor, capital and management, agricultural resilience can flourish.

With our quality and affordable agro-inputs, as well as our ability to overcome issues of poor infrastructure to deliver in-kind packages of inputs, we ensure farmers have what they need to produce and be profitable. Partnerships with community-based organizations can open the door to financing from the formal banking sector. We anchor farmers in an industry that is volatile with intricate financing requirements. Our advisory services grow farmers' local financial capacities, so they can better manage risks, like unemployment and exclusion. With improved financial intelligence, farmers can become a source of community empowerment and contribute to a more sustainable customer life cycle.





SALAMATU YAKU COCOA FARMER. ASHANTI REGION, GHANA

### Homegrown Finance

In 2018, the ECOM Group established the Village Savings and Loan Association (VLSA) with 20 members from the Bedabour Society in Ghana to encourage farmers to save a portion of their cocoa income. We champion independent, flexible models like the VLSA to democratize access to financial services in rural or remote places. Members are able to accumulate savings and improve their financial security.

VI SA member Salamatu Yaku and her husband own an 18-acre cocoa farm. Cocoa is their main source of income, but they also grow other crops on a smaller scale. What Salamatu appreciates most about the VLSA is what the savings will mean for her family's future.

[The ECOM Group] really cares about us farmers...We didn't hesitate to join. because we understood that it was to help us avoid hardship during the off-cocoa season when money was scarce. The fact that I have my own money saved for times of need gives me peace of mind." SALAMATII YAKII ASHANTI REGION GHANA

# SOCIAL IMPACT FINANCIAL PARTNERS



### ECOM GREEN DIVIDEND

Ten-plus years ago, the business of Marine Insurance and Commodities Trading joined to present the World's first "Green Dividend" to the ECOM Group community of Agricultural producers. This was led by Rekerdres & Sons Insurance Agency,

The "Green Dividend" grew from the idea that Insurers could make an unconditional recognition of risk management all the way back to more careful producer-partners.

In the early days, the terms 'organic' and 'sustainable' simply referred to a more responsible practice of agriculture. Indeed, good agriculture should use less chemicals, water, carbonbased energy, and most importantly, raise living standards.

But why would the long standing 'Slip' of ECOM Marine Underwriters be interested?

Insurers like the numbers.

We postulated that sustainable agriculture might just be running with a lighter 'risk touch' against the exposures of water, contamination, fire, theft, and infestation losses, when careful producers are motivated to do their part to minimize up-country risk.

A 2-year loss study bore this theory out, thanks to the hallmarks of counting, training, and tracing. These are the critical metrics from various entities who validate trade in sustainable agriculture products.

Ten-plus years later, the resulting Green Dividend and its constancy, have proven to be 'good seed', with new Satellite Schools, immunization and health clinics, new water wells and filtration, just to name a few of ECOM Foundation projects operating on five continents.

So, while we gained a 'trifecta' between producers, insurers and the ECOM Foundation, a healthier planet Earth for our grandkids has always been the main point.

### ECOM SOCIAL IMPACT REVOLVING CREDIT FACILITY

ABN AMRO Bank N.V., BNP Paribas and Commerzbank AG were mandated by ECOM Agroindustrial Corp. Ltd ("ECOM")

to arrange the refinancing of their Multicurrency Revolving Credit Facility (RCF). The refinancing added 3 years (with a 1 year extension option) to the existing 1 year RCF structure (including three 1 year extension options), including an innovative social impact incentive to interlink ECOM's social impact objectives. Any social impact discount received by the Company is distributed to the ECOM Foundation and ECOM's Sustainable Management Services division. ECOM Foundation is a not-for-profit organization supporting projects in origin producing communities. ECOM's Sustainable Management Services division is a support function within the ECOM focused on providing agronomy services and technical assistance to farmers and communities.

The social impact syndicate comprises 27 banks, with the following titles:

### **BOOKRUNNER AND MANDATED**

#### **LEAD ARRANGER**

- ABN AMRO BANK N.V.
- BNP PARIBAS (SUISSE) SA
- COMMERZBANK AG
- HSBC
- NATIXIS
- RABOBANK
- ZÜRCHER KANTONALBANK

#### LEAD ARRANGER

- BANCO DO BRASIL S.A.
- DEUTSCHE BANK
- KFW IPEX-BANK
- UNICREDIT

- AGRICULTURE BANK OF CHINA
- BANK OF TOKYO-MITSUBISHI
- CREDIT AGRICOLE (SUISSE)
- DZ BANK
- GARANTI BANK
- KBC BANK
- NEDBANK
- OCBC
- SOCIETE GENERALE
- WELLS FARGO

#### **PARTICIPANT**









# SOCIAL

SOCIAL GENDER EMPOWERMENT CHILD PROTECTION, GHANA

Women producers make invaluable contributions to farms through labor, financial management and higher yields, yet have limited access to training, financing and additional farm labor, which only serves to diminish their autonomy. According to the UN Food and Agriculture Organization, if women farmers had equal access to these resources, they could increase farm yields by up to 30 per cent. Studies also show that they spend their income on family and health-related items, which bolsters community resilience.

training, market information, adapted finance products and extension services, which can unlock their decision-making power and new business opportunities.

The ECOM Group increases women producers' farming literacy by providing financial

Share of female farmers in supply chain

Hours of training to female farmers

30+ Gender empowerment initiatives

After 17 years as Global Sustainability Director for the Coffee Division of ECOM, I am proud of our commitment to the empowerment of women and the strengthening of their communities. Joining forces with our partners has enabled us to implement initiatives that have created value for our producers and rewarded them for their commitment

to sustainability. I am also deeply grateful to our Roaster clients for putting their trust in us as we join forces to improve the way farming ecosystems function and to rectify power imbalances. We could not have done it without you, thank you for your trust in us."



SUE GARNETT DIRECTOR OF SUSTAINABLE BUSINESS PROGRAMMES. ECOM COFFEE

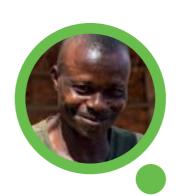
### Women's Capacity **Building Vietnam**

In Vietnam, Atlantic Commodities Vietnam Limited began the Women's Capacity Building Project to address the realities of rural women's lives as farmers and caregivers by simplifying the training for underprivileged women farmers with poor literacy in remote areas. The on-site, technical assistance covered intercropping, income management and training on gender, health and labor safety. A 70 per cent participation rate indicates the success of this tailored approach.

2000+ Schools mapped

distance from schools

Average distance of household to school (in Ghana)



YAW MANU COCOA FARMER. ANKRANSO DISTRICT, EASTERN REGION, GHANA

Child labor in the cocoa supply chain is a far-reaching and urgent issue in agriculture. A traceable supply chain is a necessity for responsible companies, who want to ensure its absence. The ECOM Group and SMS employ a multi-faceted team and our data-intensive platform, SMS Integrity (SMSi), to combat child labor within farming populations.

In Ghana, we collaborate with the International Cocoa Initiative (ICI) to implement their Child Labor Monitoring & Remediation System (CLMRS), a system of due diligence in chocolate and cocoa supply chains. Local SMS teams received training from ICI on child labor issues and identification. Our local team's expertise and presence in cocoa-growing communities is capitalized upon to conduct monitoring visits, raise awareness and identify child labor cases.

SMSi's analytical abilities enable it to synchronize the data into an education dashboard with a straightforward visualization of child labor risks. Mapping farmers' households against school facilities enables the ECOM Group to assess high-risk households so that SMS technicians can prioritize their visits. Through this additional training of SMS staff, ICI can identify and refine its remediation strategies, which can stabilize and strengthen farming communities.

> Life would not have been so difficult for my boys if they had gone to school. They all do menial jobs for a living now and I really regret that...I tell the story of my own kids as an example [to other farmers]. [Children] now understand child labor even more than

> > the farm to do hazardous work... They would rather go to school."

us parents... [They] will not stay on

YAW MANU, ANKRANSO DISTRICT, EASTERN REGION, GHANA

## **ECOM FOUNDATION**

# FOR DEVELOPMENT OF ORIGIN RESOURCES

great opportunity according to the needs of the community, especially in the field of education."

ECOM FOUNDATION SATELLITE SCHOOL PROGRAM

Now, we are seeing a big change with a Member of the Community Development Council, Chacaya, Guatemala



ECOM FOUNDATION SATELLITE SCHOOL

double of that typically seen in Latin America.

In alliance with the NicaFrance Foundation, Exportadora Atlantic S.A., and

the Costa Foundation, the school at Las Escaleras is reaching the largest

Foundation Satellite School program, as the average family size is nearly

number of direct and indirect beneficiaries of any single school in the ECOM

#### ECOM FOUNDATION SATELLITE SCHOOL

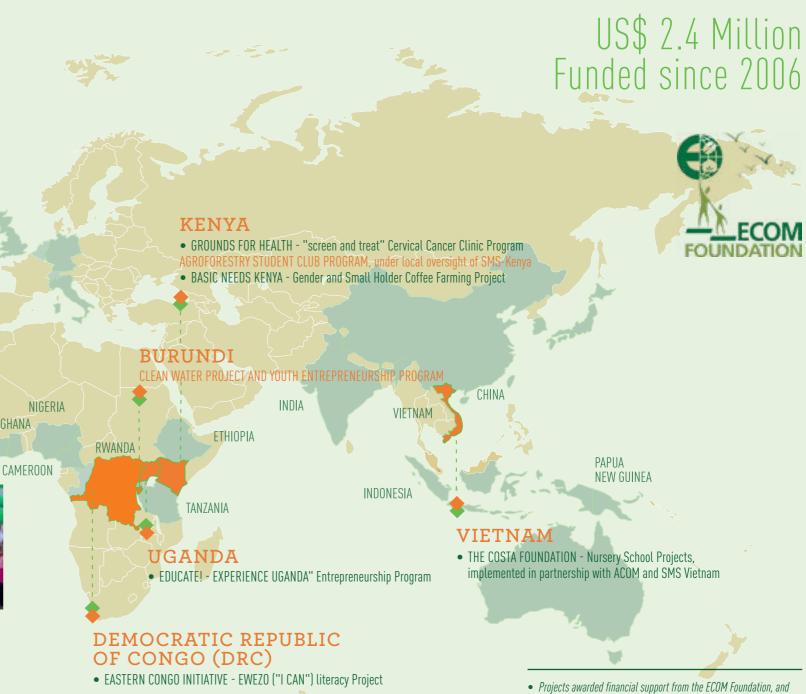
The home of inception of the program in 2011 in partnership with Cafetalera del Pacifico S.A de C.V with three schools self-sustaining and a new school scheduled to open in 2020. The schools in El Salvador have largely served as a model of excellence for the program.

The ECOM Foundation is a U.S. 501(c)3 non-profit founded in 2006, striving to make a difference in impoverished coffee, cocoa and cotton farming communities around the world. We focus on community-based projects that have a direct and sustainable impact on the well-being of farmers, their families and future farming generations. We work together with other public charities, industry partners, and governments to be a force for positive change, delivering education, humanitarian and health care services and addressing social equity and environmental concerns.

With education at the heart of driving sustainable impact, we instituted the ECOM Foundation Satellite School program to eliminate the disadvantages producing communities face due to geographic isolation. Our program also addresses a key need of today's global market - closing the digital divide by providing internet access, computers, and an opportunity to acquire hard skills in computer technology. Additional benefits include workshops for farmers to learn environmentally friendly agricultural techniques and a recent offering of an on-location university degree program.

With eight Satellite Schools operational and a new school scheduled to launch in 2020, the ECOM Foundation is reaching over 17,000 beneficiaries through this program. We rely on the support of our donors and implementation partners, which reminds us:

"Together, WE can make a difference in their lives!"



## PROTECTING THE PLANET

### **CLIMATE CHANGE**

### AGROFORESTRY AND CARBON INSETTING INITIATIVES

The planet is at a tipping point when it comes to climate change. Entire ecosystems have been stressed beyond their capacity to adapt as farmers compete for natural resources and job security. The ECOM Group strives to minimize its carbon footprint and the transformation of farming systems through impactful, sustainable projects and good agricultural practices to build more robust land and safeguard biodiversity.

The root to a sustainable agricultural ecosystem is one in which people, productivity and biodiversity can co-exist and thrive. We partner up with industry leaders to support sustainable innovations powered by trees, like agroforestry initiatives, in which trees are integrated into farming systems to improve soil and water health, while diversifying farmers' income through fuel, fodder, shelter and shade.

The Agroforestry Cluster (AFS-Cluster), which the ECOM Group developed with the French Agricultural Research Centre for International Development (CIRAD), the Moringa Fund and Cafetalera Nicafrance, is a versatile, inclusive model that incorporates high-yielding coffee hybrids and a local value chain into its agroforestry cropping systems to combat environmental degradation and produce high-quality, shade-grown and traceable coffee. In 2016, the pilot cluster produced the Nespresso "Nicaragua" pod. To date, the program has sown 435 hectares of forest plantations and the coffee production of "The Moringa Project" has been sold for two years with great success.









### Carbon insetting in Ecuador

Carbon insetting reduces a company's carbon footprint within its own supply chain rather than outside of it, creating more opportunities to take responsibility and action. SMS Ecuador assists chocolatemaker Original Beans in their reforestation and forest and cacao variety conservation in the Mono Bravo community in Ecuador's last coastal cloud forest, where Original Beans sources its Arriba Nacional cacao. SMS Ecuador provides technical assistance in organic cocoa production and training on post-harvest processing.

3800+ Hectares of farms sustainably managed

Hectares of farms rehabilitated or renovated



FRÉDÉRIC GEORGET CIRAD RESEARCHER AND ECOM GROUP TECHNICAL ADVISOR

Good environmental practices aim to counteract the significant pressures that agriculture puts on the environment. The ECOM Group encourages organic transition to satisfy the business and environmental aspects of farming and supplies farmers with high-quality, economical agricultural inputs to combat high transaction costs and harmful or counterfeit products.

**ENVIRONMENTAL** 

**ORGANIC TRANSITION &** 

**PRACTICES** 

**HYBRIDS** 

SMS' local agronomic support also includes environmentally-friendly alternatives to agro-inputs like the BROCAP® trap, a cost-effective solution designed by the CIRAD and PROCAFÉ to eliminate one of the world's most destructive pests, the coffee berry borer (CBB)." In Indonesia, the BROCAP® has proven to be very successful: 97 percent of insects caught are CBBs meaning its natural predators remain at large, resulting in reduced pesticide use and more wholesome coffee.

The ECOM Group and CIRAD are proud to support a more productive future in smallholder farmers' hands with coffee rust-resistant varieties, like "Marsellesa", F1- or first generation - clone hybrids and "Mundo Maya", which have higher yields, better cup quality and disease resistance. Over the past couple of years we have distributed over 20 million plants to 11 countries annually, including "Starmaya", the first coffee hybrid plant propagated by seed, which has the potential to be produced at scale, and is easily handled, stored and transported.



BROCAP® TRAI

Because of climate change, we need[ed] to develop more resilient agricultural systems and more virtuous agricultural business models. [The Agroforestry Cluster] is a model that we [want] to promote and replicate worldwide." FRÉDÉRIC GEORGET ECOM GROUP NICARAGUA-COSTA RICA





# ENVIRONMENTAL PRACTICES

# FARM LEVEL & OPERATIONS: ENERGY, WATER, WASTE

Given the ECOM Group's global presence and the nature of our facilities and operations, we endeavor to reduce our environmental impact and carbon footprint through sustainable operations in energy, water and waste, including the use of fossil-fuel alternatives. We use solar power and biogas as alternative power sources at the farmer and facility level. And we use sophisticated techniques to treat coffee wastewater and recycle waste.

By making our supply chains more ecologically friendly, we can improve the natural environment and the welfare of surrounding communities. We regularly surpass local environmental regulations by implementing new innovations that can minimize our global and local impact. A team of experts conduct meticulous research and monitoring to ensure best practices are met, thereby providing sustainable business models that can be replicated in other countries of origin.



143 kW/MT of energy consumption

180+ Energy saving initiatives

 $3.7_{\text{L/kg of}}$  water consumption

100% Share of process water treated

 $0.08\,\mathrm{MT}$  of waste/MT

84% of waste recycled or re-used

### Kenya Biodigester Initiative Creates Wealth out of Waste

Bio-digesters are one of the ECOM Group's many agricultural innovations and could be the key to a circular economy for smallholder farmers by providing clean energy, sanitation and greater productivity. A biodigester decomposes organic matter from animals, plants or sewage with bacteria in an anaerobic (or oxygenfree) tank. This fermentation process provides farmers with bio-gas, which is clean, cost-effective and carbon neutral and allows farmers to cook and light their homes and produced bio-slurry, which enhances coffee productivity and reduces soil erosion and pesticide use.

The five-year-program began in 2014 with the ECOM Group advancing credits to cooperatives so that they could buy biodigesters. Quarterly clinics shared best practices and diagnosed issues affecting their uptake. By project's end, a total of 1087 bio digesters were constructed, 6870 metric tons of bio slurry was applied to coffee fields and they prevented 93,583 tons of CO2 from being discharged into the atmosphere.



> + 18% increase in share of renewable energy

> 1.48
million kW produced
by solar energy at
our offices in Kenya

### ECOM Operations switch to solar energy

In Nigeria, electrical supply is a major concern and large businesses are heavily dependent on diesel and gas generators, which contribute to global warming and air pollution. The ECOM Group partnered with Alfen B.V., specialists in energy solution for the future, and Solar Century, one of the world's leading solar energy companies, to transform its industrial cocoa processing plant, Tulip Cocoa Processing (TCP) into a model for solar energy as a cost-effective, clean and renewable resource.

In 2018, Solar Century created a solar-hybrid system for TCP with solar panels, semiconductors, and a full battery energy storage system (BESS) system. During the day, TCP is completely solar-powered and only uses diesel generators when the system cannot support load requirements. Annually, TCP's solar-hybrid system saves enough energy to power 5,500 Nigerian households and will prevent an estimated 2.5 tonnes of CO2 from being discharged, thereby improving air conditions for the Ibeju Imushin community. TCP is currently the largest industrial solar park in the country and Solar Century's largest project in Africa to date.

The ECOM Group's headquarters for East Africa located outside of Nairobi also transitioned towards solar energy. This exciting new venture is based on the collaboration of the ECOM Group and the local industrial park and energy provider.

The office's roof space will be used for this ground-breaking project which will:

- Include 2,880 solar modules mounted on 5,700 square meters of roof space
- Produce 1.4 million kilowatt-hours per year
- Reduce carbon dioxide emissions by at least 1 million kilograms per year
- Provide our operation with a clean source of energy whilst also insulating the warehouse roofs to help with climate control for the coffee being stored within the warehouses

Any excess power produced from the plant is sold back to the grid for distribution and used by nearby homes and businesses thereby cementing the ECOM Group's aim to be a valued partner and neighbor.

### DRIVING INNOVATION

# **DIGITALIZATION**

### ECOM'S SMS INTEGRITY

Two of the world's greatest environmental challenges — climate change and resource scarcity - offer an opportunity for agricultural innovation to flourish and become a source of wealth for farmers. Access to innovation and new technologies is an essential building block for farming families, revitalizing rural areas and creating job opportunities for youth and women.

The ECOM Group wants to liberate farmers from the physical hardship of agricultural life to boost efficiency, productivity and quality, while reducing costs. With our diverse array of partners, we can scale up innovation and facilitate the adoption of custom solutions.

For centuries, farmers have found innovative ways to address farm productivity, but digitalization is the key to sustainable agriculture. We are laying the groundwork for more intelligent farms through the combined application of information and communication technologies for greater productivity and efficiency. SMS' strong relationships on the ground facilitate the data collection necessary to make this progress.

With the rising demand for transparency and responsible sourcing, authenticating a product's origins has never been more important. The supply chain stewardship of ECOM's innovative, in-house database, SMS Integrity (SMSi), is essential to our delivery of the programs and services that matter most. SMSi's advanced data technologies deliver a holistic view of farmers, and can adapt as information changes and goals evolve.

Since its launch eight years ago, SMSi has been implemented in 18 countries, with over 310,000 farmers and over 400,000 farms registered. Armed with valuable insights like detailed farmers' profiles and environmental risk assessment, the ECOM Group is able to directly contribute to poverty alleviation and livelihood security by helping farmers work faster and smarter.

Digital data is the fuel of the new economy. Now we have data about household, farm, plantation, environmental and social aspects, and we can better understand the challenges each farmer has, identify common challenges per regions or communities and propose innovative solutions" TADEO CWIERZ. ECOM NICARAGUA -**COSTA RICA** 



TADEO CWIERZ TECHNOLOGY DIGITAL





INCUBATOR, COSTA RICA

## **IMPACT INNOVATION** PARTNERSHIPS FOR **IMPACT ASSESSMENT**

310000+ Farmers on SMS digital platform

430 000+ Farms on SMSi digital platform

Kilometers walked to map farms

360+ Data point

520 000+ Surveys undertaken

O Years of SMSi

At ECOM, measuring the ways the Group grows farmer wellbeing and farm productivity are as important as the innovations we deliver. The Social Progress Imperative, a non-profit think tank, created the Social Progress Index (SPI) to measure a country's wellbeing from an environmental and social perspective, rather than an economic one. It aligns itself with the 17 Sustainable Development Goals (SDGs), but focuses on 12 core areas, which cover subjects like sanitation, education and personal rights.

We have chosen to apply SPI's exacting framework to its own farming communities to find ways to make our supply chains more prosperous and inclusive. SPI's robust and far-reaching data can provide an accurate picture of people's lives in coffee and cocoa-growing communities and signify who is most in need of our help.

In 2017, we conducted a SPI pilot in Nicaragua. SPI provided the necessary data for us to focus interventions and create the right partnerships. We have partnered with INCAE, a leading Central America university to scale up SPI. Like us the INCAE, believes in removing barriers to market intelligence so that underserved communities can also benefit.

In addition to the SPI, the Latin American Center for Competitive and Sustainable Development (CLACDS) is also supporting the ECOM Group's coffee and cocoa operations in the development of an SMS focused impact assessment module. This Monitoring and Evaluation Impact Assessment (IA), a methodology to evaluate SMS' programs and services impact, will be plugged into the SMSi digital platform. SMS can learn from and expand best practices throughout other regions, and can show clients the impact of their programs.

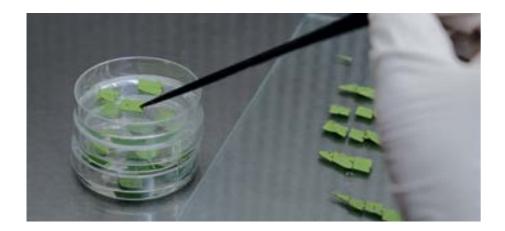








# GROUNDBREAKING R & D PARTNERSHIPS FOR PLANT INNOVATION



The ECOM Group and CIRAD are advocates for agriculture and science, and share a passion for improving farmers' lives. With the assistance of a leading research institution like CIRAD, the ECOM Group has been able to improve agriculture below and above ground through the development of cutting-edge technologies.

Agritech, the ECOM Group's laboratory in Nicaragua, is the product of a public-private strategic alliance with the CIRAD, which began in 2004. As one of the world's biggest laboratories, Agritech has the capacity to produce 1 million embryos a year. We have created a diversified catalog of cocoa and coffee varieties that are highly productive, resistant to diseases and climate change, and of great cup quality. The ECOM Group drives innovation at scale by rapidly reproducing these embryos at its numerous commercial nurseries.

Together with the CIRAD, we have also contributed to the new manuals of best practices for coffee seed producers and nursery managers of World Coffee Research (WCR). The ECOM Group is also participating in the International Multi-Location Variety Trials from WCR. This project involves the distribution of over 30 top-performing coffee varieties from 11 different countries, to coffee-growing partners in order to be evaluated in research plots. Collaboration such as the one with the CIRAD or WCR is aimed at providing underprivileged communities with access to the world's best planting material. Ultimately, the ECOM Group hopes to duplicate the harmony it shares with CIRAD between farmers and the planet's natural resources.

We believe that the choices we have made together to modernize coffee growing can have a profound impact on practices.

And we will continue our passionate advocacy for agro-ecological coffee growing."

BENOIT BERTRAND FRANCE

17 Years of partnerships with international research

1.5 m +
Plants produced in our
commercial nurseries
(cocoa / coffee)

12 Countries to which we export our planting material

500000+Plant embryos produced

20m+
Plants and seedlings distributed

5 Plant varieties developed and registered on the World Coffee Research catalogue



BENOIT BERTRAND
RESEARCH DIRECTOR, CIRAD

# THANK YOU TO OUR FARMERS, PARTNERS AND STAFF

Collaboration is one of the most important tools in agriculture. And farmers are among our most important allies in sustainability, inspiring us to take innovations further and become more self-sufficient in an increasingly burdened environment. Without their hard work and willingness to share their livelihoods with us, we could not imagine a more sustainable future.

What we learn from their collective experience helps us develop resilience. The empathy we have for our farmers extends to the consumer, who may not know of our good work in laboratories and on farms. By bridging the gap between our innovations and the consumers' awareness about how we use them, we can make our customers care as much as we do about farmers' livelihoods.

For generations, the ECOM Group has been laying the groundwork to empower farmers through its conscientious choice of partners. Agriculture is a business with many faces and our partners help us be answerable to each one. Our powerful, interdisciplinary alliances breathe life into innovation and spur great outcomes throughout our supply chains.

Partners like CIRAD help us innovate above and below ground, breaking down obstacles that stifle farmers' capacity to thrive. And the Latin American Center for Competitive and Sustainable Development (CLACDS), shares our goal of removing barriers to market intelligence so that underserved communities can benefit. This varied support also allays farmers' concerns about the compatibility of farm productivity and sustainability.

I am truly grateful to our clients, who also recognize farmers as the most vital part of a vibrant supply chain. We align our efforts to create abundance through innovation and the exchange of information, while uplifting the most underprivileged members of the farming industry so that they can embrace their potential. Together, we strengthen local networks to engage women producers and youth in training and new entrepreneurship opportunities. They gain the initiative and ability to grow. And in turn, we learn and grow.

I believe we can transform farming from a vulnerable occupation into one of greater empowerment and vitality. Thank you for helping us break new ground in agriculture, and joining us on this complex journey from farm to final product.

Sincerely,

EMMANUEL TOUREILLE

CHIEF SUSTAINABILITY OFFICER, ECOM GROUP





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