









INTRODUCTION

This case study was developed in conjunction with the report "Scaling Impact in Asia: Achieving Purpose and Profit". It is part of a collection of stories that aims to illuminate and provide insights into the impact journey of investors and businesses in Asia.

The report and case studies are jointly developed by the Centre for Impact Investing and Practices (CIIP), Singapore Management University (SMU), and Accenture. In producing this study, our aim is to inspire and encourage more to make every dollar invested in Asia deliver positive, measurable impact. Through these indepth case studies, we hope to extend the scope of existing research in Asia by providing tangible, real life examples from practitioners on the ground.

As part of our efforts to broaden the impact universe, we sought to speak with and showcase a range of organisations, from traditional impact investors and companies, to those who are not typically recognised as agents of impact. These diverse types of organisations are reflective of the broad commercial landscape within which the private sector operates, and we hope they serve as relatable examples for readers on various parts of the impact journey.

The rich and nuanced story told in the ensuing pages is the product of several deep conversations with leaders of the organisation(s) featured. We dug deep into how decisions are made, probed at dilemmas faced, dissected challenges and setbacks, and identified key actions that maximise impact. Thank you to those who participated for your time, insights, candid responses, and above all, your willingness to share about your journey, so that others may learn and be inspired.

You can find our report "Scaling Impact in Asia: Achieving Purpose and Profit" <u>here.</u>



OLAM GROUP

HEADQUARTERS

Singapore

GEOGRAPHY FOCUS

Global

SECTORS

Food and Agriculture

MISSION

To re-imagine global agriculture and food systems



JIVA

HEADQUARTERS

Singapore

GEOGRAPHY FOCUS

India and Indonesia

SECTOR

Agriculture

FOUNDING YEAR

2020

GROWTH MILESTONES

89k+ registered farmers for transactions on Jiva

200,000+ metric tons of crops purchased

More than US\$1.5 million in loans to more than 5.000 farmers

8 million farmers have used Jiva's Agri-Central farmer app to date

MISSION

To build an ecosystem founded on innovation dedicated to improving the lives of farmers by providing access to the best possible advice, products, and trade services

OLAM GROUP'S TRANSFORMATION: BUILDING SUSTAINABILITY AS A DIFFERENTIATOR

A GIANT IN THE AGRICULTURE SUPPLY CHAIN

Established in 1989 to trade cashews from Nigeria to India, Olam Group ("Olam") has since grown to become a leading food and agribusiness, supplying food, ingredients, feed,

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"For Olam, because of its complex and long supply chain, the challenge is: 'how do you make sure you have the processes and systems to be able to scale what you're doing?'

Whatever Olam tries to do has to be repeatable and scalable across many products and across many countries for the same product. The execution of this is a function of how strong underlying systems can be built."

SURESH SUNDARARAJAN, CEO OF OLAM VENTURES and fibre to 20,900 customers worldwide. Its value chain spans over 60 countries and includes farming, processing, and distribution operations, as well as a global network of farmers. It oversees a complex agricultural supply chain from farm to fork, or seed to shelf. At present, Olam has an unparalleled presence in rural communities, reaching over five million farmers directly or indirectly across 45 crops and 66 countries.

REFRESHING OLAM'S CORE PURPOSE

Driven by Olam Co-Founder and Group CEO Sunny Verghese's vision for long-term sustainability, Olam refreshed its core purpose in 2017. This was also driven by the need to align with Olam's larger stakeholders, for greater transparency, traceability, and accountability across its vast supply chain.

Until then, Olam's purpose was to ensure that profitable growth is achieved in an ethical, socially responsible, and environmentally sustainable manner. However, Olam realised over time that a response based mainly on doing less harm, for example by eliminating unacceptable practices such as deforestation at the scale of individual farms or driving incremental improvements in companies representing a small fraction of the supply chain, would not be enough to meet pressing global sustainability challenges.

First, Olam acknowledged that agriculture faces the immense challenge of producing enough food and fibre for 9.8 billion people by 2050. Second, it affirmed that agriculture was crucial in alleviating poverty, providing employment and decent livelihood opportunities in rural areas, while conserving natural habitats and biodiversity. Lastly, it recognised that the unsustainable conversion and exploitation of natural habitats for food, feed, fibre, fuel,

and related purposes threatened natural life support systems including soil, air, water, all living things, and the global climate, with serious implications for future generations.¹

Hence, in 2017, Olam's refreshed its purpose to 'Re-imagine Global Agriculture', shifting away from destructive resource extraction and towards achieving a net positive impact at scale based on the creation and restoration of natural and social capital within living landscapes.² Olam aims to meet the needs of a growing global population while achieving positive outcomes for farming communities, the planet, and its stakeholders. Since then, Olam's sustainability practice has been driven by their purpose to Re-imagine Global Agriculture and Food Systems within the ethos of Growing Responsibly.

"Sustainability has always

been something that we

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"Being in agriculture gives us a unique opportunity to create impact by establishing sustainable business practices."

SURESH SUNDARARAJAN, CEO OF OLAM VENTURES

Olam measures success by how well it achieves and maintains three key outcomes: Prosperous Farmers and Food Systems, Thriving Communities, and the Regeneration of the Living World. Olam ensures that its business model resonates with all its stakeholders, ranging from farmers, cooperatives, and suppliers to multinational corporation (MNC) clients, to ensure sustainable operations overall. As Suresh Sundararajan, CEO of Olam Ventures, opines, "Being in agriculture gives us a unique opportunity to create impact by establishing sustainable business practices".



Olam (2017). Re-imagining Global Agriculture: Olam International Limited Annual Report 2017.

OLAM'S SUSTAINABILITY STRATEGY

Olam puts sustainability firmly at the heart of its business. Olam combined its financial and sustainability reporting in 2017, highlighting the importance of creating holistic value and reflecting the interdependence of economic, social, and environmental performance for the global agri-business and the importance of creating value across all three fronts. Olam supports the United Nations Sustainable Development Goals (UN SDGs) and uses the Global Reporting Initiative (GRI) as a

guidance framework for reporting. In addition to annual reporting, Olam also reports against other initiatives such as the Carbon Disclosure Project (CDP) and product specific initiatives such as the Cocoa and Forests' Initiative. It is also a signatory to the 10 Principles of the UN Global Compact. Since June 2020, Olam Group has been included in the FTSE4Good Index Series, a global sustainable investment index series developed by FTSE Russell. This required a rigorous assessment of Olam's supply chain activities, impact on the environment, and governance transparency.

FIGURE 1: OLAM'S PRIORITY AREAS



Climate Action



Diversity & Inclusion



Economic Opportunity



Education & Skills



Healthy Ecosystems



Healthy Soils



Nutrition & Health



Reduced Waste



Safe & Decent Work



Water

Olam also maps its impact against the ten material areas aligned with the UN SDGs and the 10 principles of the UN Global Compact. For example, against the material area of 'Economic Opportunity', Olam aims to reduce the income gaps of farmer households and strengthen farmer livelihoods while also improving supply chain sustainability. As a member of the World Business Council for Sustainable Development's Olam has committed to its "framework for action", which aims to ensure the planet's forecasted population of 9.8 billion is "living well" within the planet's resource boundaries by 2050.²

Olam uses the Global Reporting Initiative as a guidance framework to report its sustainability and endeavours to incorporate stakeholder focus areas in its assessments. Olam's multi-capital accounting approach assesses and reports across six non-financial capitals: Manufactured, Human, Social, Natural, Intangible, and Intellectual Capital. While each of these capitals is distinct, Olam believes they are interconnected as the challenges of addressing climate change, deforestation, and conserving natural resources cannot be dissociated from improving farmer livelihoods, strengthening food security, and greater transparency across supply chains.

Olam's Finance for Sustainability Function (F4S) has developed Olam's Integrated Impact Statement (IIS), a tool for accounting and measuring the cost of various types of capital at the global portfolio level. Olam recognises its relationship with the environment (Natural Capital), communities (Social Capital), and its employees (Human Capital) and how its operations impact Natural, Human, and Social Capital. This is reflected in the IIS. In particular, Olam recognises that as Natural Capital decreases and demand for Natural Capital benefits increases, it needs to focus on the assets and liability positions of its Natural Capital stocks.

Natural Capital refers to the land, water, biodiversity, and other ecosystem services required for food, feed, and fibre crops to grow.

Olam's IIS comprises a multi-capital Profit and Loss statement, a Balance Sheet, and a Risk and Opportunity Statement.³ This helps in better accounting for the long-term sustainability of these capitals that Olam relies on to generate future financial returns. By harnessing the rigour of finance and economics, Olam believes it can effectively measure and therefore manage its multicapital impacts and dependencies.

In addition, beyond measuring its dependencies in its IIS, Olam has made efforts to ensure its negative impact is minimised or eliminated altogether by building partnerships. For example, alongside Mondelēz International, Partnerships for Forests, and The Nature Conservancy, the cocoa team of Olam Food Ingredients (ofi) announced the scaling up of efforts to halt deforestation and restore degraded land in Pará, Brazil. This will help to bring 48,000 hectares of land under sustainable management by 2023.

Another initiative, the Cocoa Compass, achieved 100% deforestation monitoring, and seeks to protect the natural environment by identifying areas and quantifying the loss where excessive or illegal deforestation has occurred. Olam has been able to achieve this across its direct global supply chain, covering almost 12,000 suppliers. Olam also works with Satelligence to improve its deforestation mapping using satellite data. This goes beyond what it was able to accomplish with its Forest Loss Risk Index tool, which helped identify hotspots in cocoa and coffee supply chains by mapping the actual land use change in individual farms over the last 20 years. As Olam seeks to minimise the negative impact of resource extraction across its supply chain, its partnerships have allowed it to actively mitigate environmental destruction and degradation.

² Reuters (2021). <u>Can Olam help turn Biq Aq from climate villain into sustainability hero?</u>

³ Olam (2021). <u>Annual Report 2021, see page 112</u>



OLAM VENTURES: THE CULMINATION OF OLAM'S CORE CAPABILITIES, SUSTAINABILITY PRACTICES, AND DIGITAL TRANSFORMATION

Over the years, Olam has built a competitive edge through data-driven and technology-powered sustainability initiatives and services.⁴ Olam's role as a supply chain manager of agricultural commodities gives it a unique farm-to-fork viewpoint. Olam has sought to reimagine the supply chain through digital solutions that mitigate challenges faced by smallholder farmers without altering its core business. For food businesses, enabling a resilient and agile food value chain remains critical to drive growth for the industry. This includes strengthening digital supply chains that grant visibility across operations.⁵

OLAM'S DIGITAL SOLUTIONS

Olam's success in deploying technological solutions to address challenges such as tracking supply chain transparency, farmer advisory services, and carbon measurement initiatives has helped it realise that these solutions could also be commercially viable and made available to its clients and other businesses. This suite of digital solutions can address stakeholder demands along the entire value chain, from farmers upstream to MNC clients downstream. Olam has been able to leverage some of its digital solutions like AtSource, the Olam Farmer Information System (OFIS), and Olam Direct to meet the traceability and sustainability needs of its customers and suppliers.

⁴ More details on these services and tools can be found in the Annex

⁵ SAP Southeast Asia News Center (2021). Southeast Asia's sustainable growth hangs in balance if future food security and food wastage left unaddressed

Olam's rich information data base system allows it to track environmental, social, and corporate governance (ESG) initiatives and improve services and offerings for its stakeholders. For instance, its AtSource platform has three tiers: Basic, Plus, and Infinity. Under each tier, KPIs are quantified and digitally delivered to customers. This includes several wide ranging KPIs like water usage, land usage, carbon footprint, labor practices, and food safety. At present, AtSource serves almost 300 customers covering several supply chains and products. Olam Direct, on the other hand, was developed to empower Olam's farmers. It disseminates prices and market news, helping farmers make more informed decisions. The app also makes it easier for farmers to sell produce, including an arrangement for the produce to be picked up at the farm gate by micro-collectors.

Through the OFIS and Olam Direct platforms, Olam runs several traceability programmes in collaboration with customers for their specific procurement needs. Certain premiums are paid if Olam is able to source from farmers and co-operatives from these programmes for their customers. This allows suppliers to benefit from higher prices for participating in such programmes. Through this, Olam is able to quantify the premiums paid to farmers and co-operatives along the supply chain.

While Olam believes its tools provide a competitive edge, it envisions that it will be instrumental for shaping industry norms as players in agriculture sustainability. According to Sundararajan, several hundreds of Olam's top customers have an agenda centered around ESG. In 2020, through its tools, Olam was able to quantify its work with more than 60 partners by providing direct sustainability services to more than 700,000 farmers, benefiting 1.6 million hectares of farmland as a result. Greater transparency of the food ecosystem will enable better decisions and more targeted interventions.6



POWERING CORPORATE INNOVATION

Olam's innovation efforts have culminated in Olam Ventures, a separate business unit within Olam Group in which Olam is a significant, long-term investor. Olam Ventures develops digital business enterprises focused on but not limited to food and agriculture. Olam's experience has been the enabler to build 'Profit with Purpose' ventures, diversify the group's portfolio, create value at scale, and deliver impact on the ground. Given Olam's ability to provide solutions and impact at scale, it believes many of its services will soon industry-leading offerings more about Olam's Digital Tools and Olam Ventures in the Annex). As CEO Sundararajan "We intend to be long term shareholders of these ventures, for as long as it takes us to deliver impact on the ground".

Olam Ventures has independently established new business enterprises like Jiva and Terrascope to better serve stakeholders across its supply chain. Each venture is a commercial enterprise that also tackles a sustainability issue. Terrascope, for example, is an enterprise

⁶ Reuters (2021). <u>Can Olam help turn Biq Aq from climate villain into sustainability hero?</u>

software-as-a-service (SaaS) product that earns its subscription revenues from customers and in the process helps companies on their decarbonisation journey. Other ventures allow it to provide services directly to farmers. Agri-Central, which is now part of Jiva provides access to information on commodity market prices and aggregated government bulletins in India. thereby preventing the exploitation of farmers through prices set by middlemen. It also provides image-based crop disease detection with its database of more than a million images collected for several crops. By carrying over learnings from Olam's digital solutions and combining it with Agri-Central, Olam Ventures incubated Jiva, a digital smallholder farmers platform. Jiva launched in South Sulawesi with a vision to empower smallholder farmers around the world after running small scale pilots in 2020.



JIVA: A ONE-STOP DIGITAL SOLUTION TO EMPOWER SMALLHOLDER FARMERS

ADDRESSING THE CHALLENGES FACED BY SMALLHOLDER FARMERS

There are 600 million smallholder farmers worldwide who produce up to 70% of the world's food. Yet, the overall number of farmers globally is declining.⁷ The main drivers of this are poor wages and working conditions, leading to fewer younger people going into farming. These challenges are particularly evident in Indonesia. Indonesia lost 5.1 million farmers between 2003 and 2013, with their numbers falling to 26 million.⁸ Over the past 30 years, there has been a 9% drop in agriculture's contribution to Indonesia's GDP (Gross Domestic Product), from 22% to 13%.⁹

In addition, the younger people who do go into farming are often ill-equipped due to a lack of capital, slower adoption of innovation in farmer practices, and insufficient land to generate an attractive income. Typically, they must rely on land inherited from their parents, and due to land shortages, are often left with a quarter of a hectare of land or less.¹⁰ To counteract smaller plot sizes, farmers typically over-apply farming inputs such as seeds, pesticides, and fertilisers to try and maximise their yields. In Indonesia, many farmers work on 1-to-2-acre farms earning less than US\$1,000 to \$2,000 per annum.

⁷ Food and Agriculture Organization of the United Nations (2021). Small family farmers produce a third of the world's food

⁸ Statistics Indonesia

⁹ CNBC Indonesia (2019). <u>Krisis Petani di RI Apakah Benar-Benar Terjadi?</u>

¹⁰ Sri Hery Susilowati, 'Fenomena Penuaan Petani dan Berkurangnya Tenaga Kerja Muda Serta Implikasinya Bagi kebijakan Pembangunan Pertanian (Farmers Aging Phenomenon and Reduction in Young Labor: Its Implication for Agricultural Development)', Forum Penelitian Agro Ekonomi, Vol. 34 No. 1. Juli 2016: 35-55.

Most smallholder farmers in Indonesia live in subsistence conditions that are not efficient, productive, or sustainable. Yet, the reliance of many farmers on established practices can be attributed to the fact that many have no way of mitigating the risks of unexpected shock to their routines or failure from new methods. Hence, the incentive for adopting new technology is often overshadowed by the risks of doing so.¹¹

In addition, the COVID-19 pandemic also adversely affected smallholder farmers. According to the report titled 'Southeast Asia Rising from The Pandemic' published by the Asian Development Bank in March 2022, the pandemic also highlighted the lack of updated data on poverty and vulnerable populations, causing difficulties in implementing cash transfers.¹² Olam's survey of over 3,000 smallholders across 19 countries in Africa, Southeast Asia, and Latin America indicated that 68% of smallholder farmers across its supply chain witnessed a reduction in income during the pandemic. This reduced income stemmed from a variety of factors, including difficulties in reaching markets and the reduced availability of farm inputs and labourers. This contributed to a multitude of adverse effects such as reduced food consumption and increased child labour.13

To reimagine the food system and supply chain for small farmers, a tech intervention that is affordable for farmers and larger players is necessary.

JIVA'S TECH-ENABLED OFFERING

Jiva is designed to solve critical challenges facing smallholders by offering key services to farmers: personalised agronomic advice, the opportunity to sell crops at harvest, digital loans, and app-based e-commerce for farm inputs. By disintermediating the agricultural supply chain, Jiva is able to prevent the exploitation of smallholder farmers, increase crop yields, and ensure income is pushed directly into villages. As Sundararajan explains, "If we want to make sure the farmer is engaged, we have to take care of all their needs in a one stop solution."

Jiva's key impact on farmers is its potential to improve their yields significantly through its smart agronomist advisory service. With information from farmers such as the seeds planted and the size of the land, Jiva provides Al-powered advice in accordance with real time rainfall and weather patterns. Integrated with technology such as machine learning systems and satellite data, Jiva's digital platform can predict the growth of crops in real-time. If there are diseases and insect pests that farmers are not familiar with, farmers can use their mobile phones to photograph them, send the photos to Jiva, and receive immediate diagnoses. To encourage more farmers to use this platform, Jiva has been running demo plots every season by leasing land from farmers and in doing so, have been able to demonstrate yield increases through Jiva's agronomy practices.

¹¹ Forbes (2021). <u>Transformative Technology Requires A Journey Of Trust</u>

¹² Asian Development Bank (2022). <u>Southeast Asia Rising from the Pandemic</u>

¹³ UNICEF and the International Labour Organization (2021). Child Labour: Global estimates 2020, trends and the road forward

Through Jiva, farmers also get better access to markets and services and can make more informed decisions that improve their livelihoods. For example, farmers can arrange for pickups of their harvest through the Jiva app, through which they can also cross-check prices and see cost breakdowns. Furthermore, Jiva allows smallholder farmers' crops to be purchased at market price, providing transparency to the process. Jiva supplies farmers' crops to feed mills, which in turn enjoy reliability of supplies in terms of quantity and quality.

In doing so, Jiva helps to ensure farmers are not exploited by middlemen. Previously, intermediaries, or agents, were not transparent in their dealings, leading to the exploitation of farmers. Sundararajan acknowledges that eliminating intermediaries comes at risk if they are put out of business, which is something Jiva must manage properly.

Finally, Jiva also helps to reduce financial inconveniences for farmers in their everyday practices. Jiva provides low-cost, digital loans through its app, allowing farmers to purchase supplies and repay the loans at harvest. In addition, through the e-commerce store on Jiva's app, Jiva farmers can purchase high-quality supplies which are delivered at no extra charge. For example, Jiva provides access to purchasing inputs, such as fertiliser, at an affordable cost and through an easy-to-use interface. These benefits to farmers serve as a natural extension from the efficacy they experienced when selling their crops through Jiva.

BUILDING TRUST WITH JIVA'S FARMERS

Jiva's ability to expand its presence is built on its ability to gain farmers' trust. For many who work and live in rural communities, an inherent trust of, and comfort with, digital products does not yet exist. In Indonesia and India, many smallholder farmer communities lack basic infrastructure, including reliable roads, electricity, and fresh drinking water. Owing to traditional farming practices built over 20 to 30 years, farmers are also often apprehensive about taking advice from mobile devices.

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"Jiva has a physical-digital, or 'phygital', model. It is a very intense and complex model that requires a lot of technological intervention and physical operations on the ground."

SURESH SUNDARARAJAN, CEO OF OLAM VENTURES

Hence, Jiva relies on a community-first approach to build trust in their products among farming communities and village councils. Farmers who have benefitted from Jiva have also been able to encourage their peers to adopt the app.

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"I was on the ground in South Sulawesi and if you ask the farmers what comes to mind when somebody talks about Jiva, most of them would say honesty. Jiva is trustworthy."

SURESH SUNDARARAJAN, CEO OF OLAM VENTURES

Moreover, Jiva is focused on building its ecosystem to provide farmers with trusted, nearby facilitators who can help them use technology. Jiva recruited rural microentrepreneurs who could serve as brand ambassadors by canvassing farmers, providing updates, and enabling their adoption of Jiva. Some of these micro-entrepreneurs include former middlemen. These actors bridge technology gaps and cultivate trust with farmers. Their expertise helps Jiva to evolve and tailor their solutions. In doing so, Jiva

operates a hybrid model that preserves key face-to-face interactions while improving and altering inefficient and unfair processes with new technologies.

In addition, through demo plot arrangements, Jiva paid farmers their income from the previous year in exchange for farmers following their specific farming instructions on their plots. Through these demo plots, Jiva showed that yields could be improved by 30 to 40% through the platform's recommended practices, helping to cultivate trust toward Jiva's platforms and outcomes among smallholder farmers.

As a result of its community-oriented approach, Sundararajan explains, "I was on the ground in South Sulawesi and if you ask the farmers what comes to mind when somebody talks about Jiva, most of them would say honesty. Jiva is trustworthy."

ADDRESSING THE CHALLENGES OF RURAL FARMING

Despite promising traction, Jiva faces some challenges on the ground. For example, it has found that technology adoption within rural communities has been slow due to low rates of digital literacy as well as poor infrastructure for technology at large. Penetration of smartphone ownership is still low in many areas. Coupled with poor connectivity and a high proportion of unbanked farmers, this limits the impact Olam can make on the lives of farmers.

This lack of technological adoption runs in tandem with the challenge of financial inclusion amongst smallholder farmers. Currently, the annual financing gap for smallholder farmers is estimated at US\$170 billion.¹⁵ According to Findex data, only 4.7% of adults in rural areas in developing countries globally have a loan

¹⁴ Forbes (2021). <u>Transformative Technology Requires A Journey Of Trust</u>

¹⁵ International Fund for Agricultural Development and the European Union (2022). Partnering to transform rural realities

from a formal financial institution and only 5.9% have a bank account. Additionally, smallholders are susceptible to high interest rates, with monthly rates offered by village-level lenders often exceeding 10%. This exacerbates farmers' vulnerability, as they are particularly exposed to weather patterns, environmental risks, and climate change.

To address this, Olam has been working with public sector banks to see how they can further rural outreach, though they have met with slow progress. Farmers continue to transact primarily in cash rather than e-money and digital wallets in Indonesia. Sundararajan observes that financial inclusion is a base enabler for sustained impact for rural consumers. With technological advances, open platforms on apps may be better able to serve rural consumers than physical banks.

Olam has also observed that a new generation of farmers see the value in digital technology and are willing to digitise their operations where possible. As digital technology bridges the gap between customers and farmers, farmers are better positioned to set competitive prices and make better business decisions.

While Jiva is a technology start-up, its relationships and actions within the community have an inherent physical component. The experience of Jiva's farmers is heavily shaped by Jiva's employees on ground. Jiva's on-ground network and its ability to embed the brand and its purpose within community-consciousness drives customer acquisition, activation, and retention. In doing so, Jiva is able to actively address the challenges of technology adoption and financial inclusion, deepening its positive impact on farmers' livelihoods and communities.

THE PATH FORWARD

WHAT IS NEXT FOR OLAM VENTURES AND JIVA

As a corporate venture with a global parent, Jiva has been able to build on the goodwill that Olam has cultivated, given its involvement with farmers in South Sulawesi for over 20 years. Gaining confidence from strong positive feedback from farmers in South Sulawesi, Jiva expanded to Java Island in late 2021 and is now a major player in the corn supply chain in Indonesia. The benefits Jiva brings to farmers upstream will have positive effects



downstream for shareholders and consumers, reflecting Olam's whole of supply chain approach to addressing challenges in the agriculture industry.

Going forward, Jiva plans to significantly ramp up operations in India and Indonesia, having successfully completed two seasons of harvest and generated revenue of over US\$50 million in Indonesia, Jiva has surpassed 89,000 registered farmers, with over 200,000 metric tons of crops purchased and US\$1.5 million in financing to more than 5,000 farmers. In India, Jiva's Agri-Central farmer app hit the eight million farmers milestone. This increase has spurred over 400 new hires in Singapore, India, and Indonesia and over 3,000 new on-the-ground agents with an aim to transact with one million farmers in Indonesia by 2025.

Jiva is targeting strong top line growth, its number of participating farmers, exploring adjacent commodities, and expanding a suite of services and new markets. For example, it is expanding to newer crops in Indonesia like chilis and is ramping up its services in India. Jiva is also continuing to improve supply chain efficiencies at scale and develop simpler and more intuitive interfaces for farmers and agents. Lastly, Jiva is also perfecting its advisory offering to be able to scale and handle large volumes of farmer interaction.

Looking ahead, Olam Ventures will continue incubating ideas that utilise technology and integrate sustainability to address challenges in the food and agricultural sector. Through Olam Ventures' digital sustainability solutions, Olam is hoping to consolidate ESG standards across the agriculture sector and deliver impact across the entire supply chain. For example, as more clients join AtSource, Sundararajan explains that "if all players come on to that platform, it means they conform to the basic ESG definitions which really helps in standardising."

PARTNERSHIPS AND COLLABORATIONS: OLAM'S STRATEGY FOR ADDRESSING SUPPLY CHAIN CHALLENGES

For Olam broadly, the company's approach so far has allowed it to see how it can expand an idea and provide the breakthroughs needed to transcend supply chain challenges, ranging from those faced by smallholder farmers to its MNC clients. There are some fundamental challenges for the agricultural sector to mitigate and Olam is determined to address the important ones, such as the digitisation of the supply chain, engaging directly with farmers, solving first-mile logistics, and ensuring crop resilience.

All of this signifies the need for a systems approach. Olam believes in the power of partnerships and collaborations to address global sustainability issues. Olam is working with farmers, banks and development finance foundations. shareholders. institutions. employees, and other organisations. These collaborative partnerships will improve the chances for success in its ten priority areas. In addition, such public-private-partnerships will be crucial to deliver the essential support needed to safeguard investments, livelihoods, and to enable farmers to make a full and prosperous recovery after the pandemic.

Olam is beginning its transition to being an impact-oriented enterprise by developing solutions to address challenges at scale. Good agricultural practices have enormous potential to address issues ranging from poverty, food security, to climate change and biodiversity loss. As Olam adopts more innovative climate-smart agriculture through Olam Ventures, including tracking soil quality information, availability of water and changing crop patterns, while collaborating with competitors and customers, it is expected to play a pivotal role in mitigating the negative impact of food production on the environment.

ANNEX

TOOLS	FOCUS ISSUES	FEATURES	USERS	REACH
AtSource	Supply Chain Transparency and ESG KPI tracking (Whole of Supply Chain)	Farm-by-farm sustainability metric tracking and traceability. KPIs that AtSource maps include land usage, water usage, carbon emission, child labor safety practices, and food manufacturing practices Supply chain footprint analyses conducted by I ife-cycle experts Information on supply-side risks and issues Progress tracking against sustainability targets	Large customers such as Costco and Nestle (Commercial)	Nearly 312,000 farmers registered on the system
Olam Farmer Information System (OFIS)	Farm-Level Data Acquisition (Upstream)	Draws on insights from GPS and detailed surveys, generating actionable, rich, farm-level data for smallholder farmers 4750-plus field enumerators collect data directly from farmers Access to information about the location of the farmer's land, land size, crop types, yield size, and infrastructure points near farms Opportunities for devising specific farm-management plans that lead directly to increased yields	Olam and its farmer clients (In-house)	OFIS tool reaches more than 700,000 farmers involved in its sustainability programmes
Olam Direct	Supply Chain Disintermediation	Direct interfacing with farmers to purchase commodities Dissemination of prices and market news helping farmers make informed decisions Make it easier for farmers to sell produce including arrangement for picked up at the farm gate by micro-collectors. Designed to cut out intermediaries and provide better prices to farmers	Olam and its smallholder farmer clients (In-house)	Olam Direct runs in 18 supply chains, 13 countrie and engages more than 140,000 farmers

FIGURE 3: OLAM VENTURES **TOOLS FOCUS ISSUES FEATURES USERS REACH** Providing access to information on commodity market prices and aggregated government bulletins in India Smallholder farmers (Commercial) Farmer Advisory (Upstream) Agri-Central is the second largest app in India with 8 million farmers and was Agri-Central Imaging for crop disease detection with its database of more than a million images collected voted as the best made app in India, by Google in 2020 for several crops. Chat functions for farmers to communicate with one another Carbon footprint measurement across Scope 1, Scope 2, and Scope 3 emissions Terrascope Carbon Measurement Large corporations Clients include Olam and many other CPG companies (Whole of Supply Chain) (Commercial) • Advanced emissions analytics and visualisations Verifiable and auditable reports compliant with external disclosure frameworks



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ABOUT THE CENTRE FOR IMPACT INVESTING AND PRACTICES (CIIP)

The Centre for Impact Investing and Practices ("CIIP") fosters the growth of impact investing and practices in Asia and beyond by building and sharing knowledge, bringing together stakeholders in the community, and bringing about positive action that accelerates the adoption of impact investing. Based in Singapore, CIIP was established in 2022 as a non-profit centre by Temasek Trust, a steward of philanthropic endowments and gifts. Temasek and ABC Impact are our strategic partners.

To achieve a sustainable future for all mankind, the world needs companies that can drive positive changes at scale through products and services. Impact investing can spur the growth of such companies and help advance solutions to address the challenges that the world faces today. We believe that sustainable companies are those who pursue social and environmental impact as avidly as they pursue profits and shareholder value. By striving to generate positive and measurable social and environmental returns alongside a financial return, both impact investors and companies can achieve returns with purpose.

We are SDG Impact's anchor partner for Asia. SDG Impact is the United Nations Development Programme initiative tasked to develop resources that accelerate investments towards achieving the United Nations Sustainable Development Goals by 2030.

For more information, please visit www.ciip.com.sq



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Institute for
Financial Economics

ABOUT SIM KEE BOON INSTITUTE FOR FINANCIAL ECONOMICS AT SMU

The Sim Kee Boon Institute for Financial Economics (SKBI) at Singapore Management University (SMU) is the premier Asian institute for applied financial economics research and training. This is done through multidisciplinary collaborations involving research talent from the SMU community, around the world as well as industry. The institute's focus is in the area of financial education and inclusion, sustainable finance, financial technology, and macro markets.

Besides conducting fundamental and applied research which aims at solving real-world issues, SKBI also actively engages in outreach, executive training and research dissemination through organising courses, seminars and conferences. Our purpose-oriented activities are designed to bridge the gap between theory and practice, and to act as accelerators with regard to financial policies and regulations. To maintain our relevance to finance practitioners and policy-makers, SKBI adopts a view on Asian and global economic trends.

SKBI is led by an Advisory Board that consists of prominent leaders of local and international organisations in the finance industry that have footprints across Asia, and of government agencies

For more info about SKBI, please visit https://skbi.smu.edu.sg/

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