



SOCIAL IMPACT REPORT

Supporting Communities and Workers, Enhancing Livelihoods





CONTENTS

- 1 Foreword**
- 2 Executive Summary**
 - Key Highlights
- 3 Introduction**
 - 3 The importance of palm oil and challenges faced
 - 4 Oil palm development in Indonesia
 - 5 Our approach: Improve the Lives of Smallholders, Workers, and Communities
 - 8 Purpose and scope of this study
- 9 Supporting Smallholder Farmers**
 - 9 Context: The importance of the palm oil industry in enhancing the livelihoods of smallholder farmers
 - 11 Our programs: Improving the livelihoods of smallholders
 - 14 Our Impacts
- 19 Preventing Fires**
 - 19 Context: A threat to the environment, public health and economy
 - 21 Our programs: Sustainable farming policies and fire-free villages
 - 23 Our Impacts
- 25 Improving Rural Education**
 - 25 Context: Barriers to education
 - 26 Our programs: Uplifting the community through quality education
 - 27 Our Impacts
- 30 Improving Infrastructure in Remote Communities and Workers Compounds**
 - 30 Context: Lack of access to basic infrastructure and services
 - 32 Our programs: Improving quality of life through infrastructure development program
 - 34 Our impacts
- 36 Looking Ahead**
- 37 Methodology**

FOREWORD

THIS IS THE FIRST MUSIM MAS SOCIAL IMPACT REPORT, AIMING AT CAPTURING OUR POLICY COMMITMENTS IN ACTION WHERE THEY COUNT MOST: IN THE COMMUNITIES INTERACTING WITH US.

In September 2020, we updated our Sustainability Policy, laying out a renewed and deepened commitment to improving the livelihoods of smallholders, workers, and communities, and maintaining a strict stance on No Deforestation, No Peat, No Exploitation (NDPE).

At Musim Mas, we are cognizant that palm oil production is above all, a people business. We rely on a workforce of more than twenty thousand people in our plantations and mills, as well as the communities and villages that host us and live near our operations. We also rely on hundreds of thousands of smallholders who supply their crop to our mills or those of our third-party supplier mills, who in turn employ thousands more.

We believe that we have an immense opportunity to help transform the sector in a way that goes hand-in-hand with the goal of sustainable development. For us, this means increasing the positive impacts on livelihoods and the environment while maintaining sustained profitable growth.

Through our community investment programs, we have been continuously investing in communities where we operate as we strive to improve the standards of living for our workers, suppliers and communities. We believe that this is not only the right thing to do, but also that it brings tangible benefits to our business in the long-term. Our hope is that Musim Mas and our communities can grow and prosper together, and that our work will leave behind a lasting and positive legacy.

This report brings together the context needed to understand the sustainable development challenges and the interventions aimed at addressing these challenges. We also sought to provide a collection of stories to bring life to the report and better illustrate what it means to improve the lives of smallholders, workers and communities. We also hope to inspire others by sharing our learnings and invite opportunities for collaboration.

Launching this report is a significant moment for us. It comes at a time when the world continues to deal with the extensive effects of the COVID-19 pandemic, making our work with communities even more important and meaningful.

This report, and the process of preparing it, are guiding us to review and update our community investment strategy and ensure we are increasing the impacts we can have.

I would like to sincerely thank our partners and colleagues, who share and spread our values, and who invest their time and efforts in improving the lives of communities, very precious and yet very intangible assets.

OLIVIER TICHIT

Director of Sustainable Supply Chain at Musim Mas Group



EXECUTIVE SUMMARY

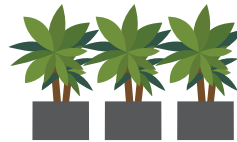
KEY HIGHLIGHTS

For this report, we have limited the scope to cover our subsidiary PT Musim Mas Sorek plantation, Riau province. The purpose of this report is to access our impacts in our efforts to improve the livelihoods of smallholders, workers and communities.

SUPPORTING SCHEME SMALLHOLDER FARMERS



3,587 smallholders/villages covered under our scheme smallholder programs – almost **14 times** more than when the programs were first launched in the 1990s and 2000s



5,796 ha of planted area under our scheme smallholder programs



Our scheme smallholders earn an income **60% higher** compared to the minimum wage in Riau Province



1,733 scheme smallholders achieved RSPO certification, covering **3,494 ha** of land



108,470 MT of FFB produced by our scheme smallholders



Our scheme smallholders achieved a **higher average yield of 22.9 MT FFB/ha** than the average smallholder yield of 18.8 MT FFB/ha in Indonesia

PREVENTING FOREST FIRES



74 villages included in our Fire Free Village Program as of December 2019



419 training sessions, **8,183** participants trained on fire prevention, monitoring, and suppression over the past 3 years



Awarded up to **IDR 3 billion** (~USD 213,250) to villages that remained fire-free for the past 3 years.

IMPROVING RURAL EDUCATION



9 schools with 20 learning units, including kindergartens, primary schools and secondary schools



5,983 students enrolled in our schools, 47% of which are girls



97 teachers trained this year



Our teachers earn a **87.8%** higher income than the regional teacher wages in Riau Province

IMPROVING INFRASTRUCTURE FOR REMOTE COMMUNITIES



120L of water provided to every individual living on our estates – more than 50-100L recommended by the Indonesian government



15 methane capture facilities installed, saving **537,965 MT CO₂e** and providing **54,184,137 kWh** in national grid



More than 13,000 households provided with access to safe drinking water, and electricity



INTRODUCTION

OVERVIEW OF MUSIM MAS

Headquartered in Singapore, Musim Mas is a privately-owned, vertically integrated company involved at each point of the palm oil value chain – from cultivating and milling fresh fruit bunch (FFB) in our upstream operations, to refining, manufacturing, shipping and merchandising our products downstream. A full list of our activities can be found on our website.

Supported by a direct workforce of more than 37,000 people, we have a presence in 13 strategic locations worldwide to serve the needs of our customers, with our main operations located in Indonesia.

A significant part of our operation is our upstream business. Musim Mas has 14 plantations and 17 mills as part of the Group's production base in Indonesia. Three out of these 17 mills are independent and source from third-party plantations or independent smallholders.

Our total concession area spans across 199,154 ha, of which 122,828 hectares (ha) (62%) comprises of planted area. Out of our planted area, 5,796 ha (4.7%) is managed by our scheme smallholders.

In 2019, our mills processed 3.44 million tons of FFB, 70% of which came from our nucleus plantations, 3% from scheme smallholders and the remaining from third parties, including independent smallholders.

THE IMPORTANCE OF PALM OIL AND CHALLENGES FACED

Palm oil is the most widely used vegetable oil today. Found in products ranging from food to cosmetics and fuel, palm oil is a significant component of our daily lives. It has also become a dominant oil used for cooking and is an important part of people's diets, especially in Africa and Asia.

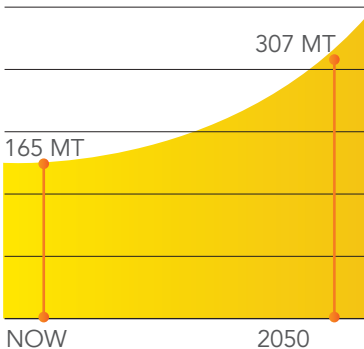
Through its unique properties and versatility, it can be processed into a variety of goods. Its production cost also makes it cheaper than other alternatives. What makes palm oil exceptional though, is its land-use efficiency. Oil palms produce 35% of the world's vegetable oils, on less than 10% of the land allocated to oil crops. This means that oil palms can yield up to nine times more oil per ha than other major oil crops.¹ With the world population soaring, global demand for vegetable oil estimated to grow from 200 million tonnes (MT) in 2019 to 310 million MT by 2050.² Palm oil is set to play an important role to feed the world.

PALM OIL SUSTAINABILITY MATTERS

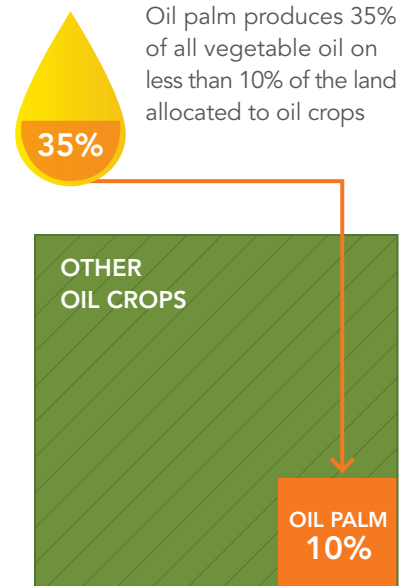
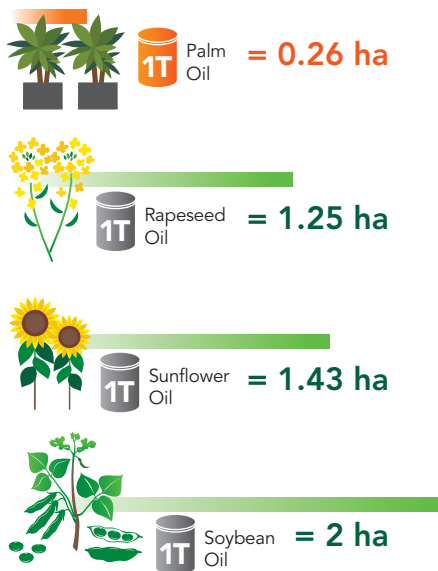
PALM OIL IS HERE TO STAY

Land required to produce 1 TONNE of major types of oil:

GLOBAL DEMAND FOR VEGETABLE OILS



Source: IUCN and Oilworld



1. Palm oil and biodiversity. (2019, May 07). Retrieved April 06, 2021, from <https://www.iucn.org/resources/issues-briefs/palm-oil-and-biodiversity>
 2. Ibid



INTRODUCTION

The industry has supported the livelihoods of millions and has been instrumental in reducing poverty, especially in rural areas. The sector directly and indirectly employs over 17 million in Malaysia and Indonesia,³ which produce over 84% of the world's palm oil.⁴ Aside from employment, growth in the sector also contributes to the development of remote areas via the provision of infrastructure, including road, healthcare, and schools.

However to the critics, these developments have come at too high a price. The rapid expansion of oil palm plantings is deemed to be a major cause of deforestation, loss of biodiversity, and degradation of the natural environment. Another area that has come under increased scrutiny is the industry's impact on communities and workers, particularly land and social conflicts and loss of traditional livelihoods. Human rights assessments and studies have also exposed labor rights issues on some of the plantations, which include job insecurity for casual workers, low wages, poor health and safety conditions as well as cases of forced and child labor. Women have been disproportionately affected by workers' rights violations, as they typically make up the majority of casual workers.

The challenge facing the sector is one which reflects the global sustainable development challenge, similar to other agricultural commodities: To lift millions out of poverty and continue to develop our society, while protecting the important environmental ecosystems on which we rely on.

OIL PALM DEVELOPMENT IN INDONESIA

Palm oil has been produced in Indonesia for over a century, since the opening of the first commercial plantations in Aceh and Deli, North Sumatra, in 1911.⁵ With oil palm best suited to grow in the equatorial band, palm oil production quickly became a part of the Indonesian economy and a driver of development. Today, Indonesia is the world's largest producer of palm oil, with oil palm operations in almost all provinces. The country supplies more than 45 million MT of palm oil per year,⁶ accounting between 1.5 and 2.5% of the nation's Gross Domestic Product (GDP) and a significant proportion of its export earnings – at around 11%.⁷ The islands of Sumatra and Borneo alone contribute more than 90% of the country's total output.

According to the Ministry of Environment and Forestry, 8.4 million people are employed in the palm oil industry in Indonesia, from farmers and mill workers to service providers.⁸ Smallholder farmers play a key role in the industry. It is estimated that Indonesia has 2.67 million smallholder farmers that manage a combined 40% of the total oil palm area in the country.⁹ They account for 35% of the nation's palm oil output, meaning that smallholders are typically less productive than the larger commercial plantations.¹⁰

Smallholder farmers face several unique challenges in terms of their productivity, profitability and sustainability. These include land tenure issues, poor agricultural practices and a lack of access to markets or to finance for replanting and certification. Yet, in comparison with other types of crops, oil



3. Aseansc. (2019, May 12). The Challenges of Indonesia's Palm Oil Industry: An Overview. Retrieved April 06, 2021, from <https://asc.fisipol.ugm.ac.id/2018/12/21/challenges-indonesias-palm-oil-industry-overview/>
4. Palm Oil Top Global Producers (n.d.) Retrieved April 07, 2021 from <https://www-statista-com.libproxy.smu.edu.sg/statistics/856231/palm-oil-top-global-producers/>



INTRODUCTION

palm growers in Indonesia receive higher wages, and have a higher than average wage growth.¹¹

Farming and production of palm oil has formed the backbone of many communities in Indonesia. Nevertheless, there are still many oil palm growers and communities living in poverty. Each region in Indonesia is different and has unique challenges to address. If managed responsibly, the palm oil sector has a huge potential as a solution to alleviate poverty and improve the living standards for communities across Indonesia.

Palm oil is a people business. We see the investments we make in our smallholders, workers, and communities as a strategic component of our business objectives and an important contribution to sustainable development. We believe that they also support tangible benefits for our business, including enhancing stakeholder relations, securing the supply of quality raw materials and developing our future workforce.

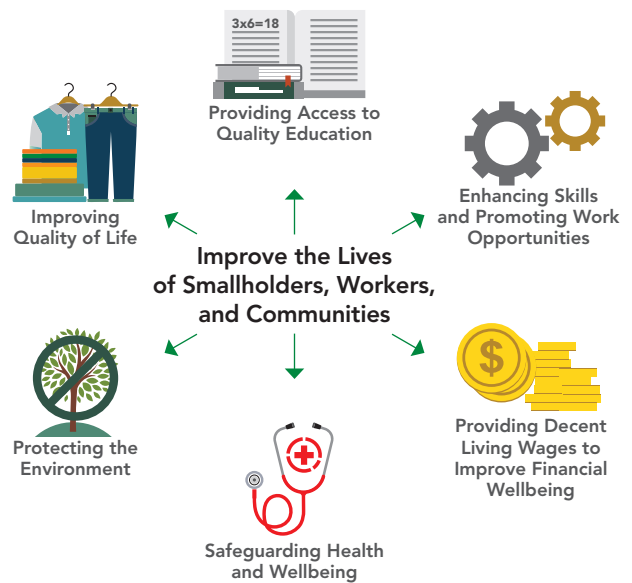
OUR APPROACH: IMPROVE THE LIVES OF SMALLHOLDERS, WORKERS AND COMMUNITIES

As one of the major producers of palm oil in Indonesia, Musim Mas aims to increase positive impacts on livelihoods and the environment while maintaining sustained profitable growth. For us, this means conducting business in a socially responsible, environmentally appropriate and economically viable manner throughout our global operations including those of all our suppliers.

Our guiding compass for achieving this is our [Sustainability Policy](#). Originally launched in 2014, this policy outlines our commitment to sustainability, including No Deforestation, No Peat, No Exploitation (NDPE). We have updated the Policy in 2020, to reflect our renewed commitments to bring benefits to the community by improving the livelihoods of smallholders, workers and communities in our supply chain, and investing in the sustainable development of communities through our Social Impact Framework.

Through consultations with local and regional stakeholders and considering the existing local and regional development plans, we establish programs that support community development, education, health care, infrastructure, disaster relief and conservation. We aim to create positive social impact across six key areas, presented in our Social Impact Framework below.

OUR SOCIAL IMPACT FRAMEWORK



Our social impact framework will guide the review of our strategy to ensure we focus our resources on programs that have the biggest impact in improving people's lives. We will progressively measure and monitor our impact through our impact indicators and report on our results.

- Hadinaryanto, S. (2014, April 24). Special report: Palm Oil, politics, and land use in Indonesia Borneo (Part I). Retrieved April 07, 2021, from <https://news.mongabay.com/2014/04/special-report-palm-oil-politics-and-land-use-in-indonesian-borneo-part-i/>
- Indonesian Palm Oil Association (GAPKI IPOA). (2020, November 08). Thanks to Oil Palm, Indonesia's remote areas developing. Retrieved April 06, 2021, from <https://gapki.id/en/news/19366/thanks-to-oil-palm-indonesias-remote-areas-developing>
- Badan Pusat Statistik. (n.d.). Retrieved April 06, 2021, from <https://www.bps.go.id/>
- Richardson, A. (2019, January 16). What do Indonesians really think about palm oil? Retrieved April 06, 2021, from <https://www.eco-business.com/news/what-do-indonesians-really-think-about-palm-oil/#:~:text=According%20to%20the%20Ministry%20>
- Jong, H. N. (2020, April 29). Indonesia aims for sustainability certification for oil palm smallholders. Retrieved April 07, 2021, from <https://news.mongabay.com/2020/04/indonesia-aims-for-sustainability-certification-for-oil-palm-smallholders/#:~:text=They%20will%20have%20%20five%20years,an%20area%20greater%20than%20Switzerland>
- Glenday, S., & Padi, G. (2015, November). Overview of Indonesian Oil Palm Smallholder Farmers. Retrieved April 07, 2021, from http://daemeter.org/new/uploads/20160105233051.Smallholders_Book_050116_web.pdf
- Gabungan Pengusaha Kelapa Sawit Indonesia (GAPKI) (2017, July 03). Benarkah, pendapatan petani non Sawit Lebih tinggi Daripada Pendapatan petani sawit? Retrieved April 06, 2021, from <https://gapki.id/news/924/benarkah-pendapatan-petani-non-sawit-lebih-tinggi-daripada-pendapatan-petani-sawit>



INTRODUCTION

SUPPORTING THE SUSTAINABLE DEVELOPMENT GOALS

At Musim Mas, we are committed to playing our part in advancing the United Nations' Sustainable Development Goals (SDGs). Launched in 2015, the SDGs provide a unified vision for what the world should look like in 2030. Each goal, underpinned by specific targets and indicators, offers a roadmap for all actors, including businesses, to contribute and measure progress. Through a mapping exercise, we have identified the goals and targets we believe we can make the biggest contribution through our programs and initiatives.

GOAL	TARGET	MUSIM MAS PROGRAMS
 <p>1 NO POVERTY</p>	<p>1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day</p>	<ul style="list-style-type: none"> • Smallholders Oil Palm Development Program <i>Kredit Koperasi Primer Anggota</i> (KKPA) scheme
	<p>1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance</p>	<ul style="list-style-type: none"> • Village Oil Palm Development Program (<i>Kebun Kas Desa</i>) • Indonesian Palm Oil Development for Smallholders, collaboration with International Finance Corporation
	<p>1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters</p>	<ul style="list-style-type: none"> • Developing the Smallholder Hubs to build capacity for independent smallholder farmers in rural Indonesia
 <p>4 QUALITY EDUCATION</p>	<p>4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes</p>	<ul style="list-style-type: none"> • Building Primary and Secondary Schools for children living in our plantations and mills
	<p>4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education</p>	<ul style="list-style-type: none"> • Providing scholarships to workers' children and communities to permit access to higher education
	<p>4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</p>	<ul style="list-style-type: none"> • Building and renovating communities' school buildings as well as providing school supplies to improve their learning conditions
	<p>4.B By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries</p>	<ul style="list-style-type: none"> • Building childcare center for workers' children (toddlers or below school age) living in plantations and mills • Providing equal training opportunities and encouraging our teachers to participate in activities that will improve their capacities and qualifications
	<p>4.C By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states</p>	<ul style="list-style-type: none"> • Preference to qualified community members for vacant jobs • On the job training and professional qualifications for workers



INTRODUCTION

GOAL	TARGET	MUSIM MAS PROGRAMS
 <p>6 CLEAN WATER AND SANITATION</p>	<p>6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all</p>	<ul style="list-style-type: none"> • Building and constructing water wells within communities
	<p>6.B Support and strengthen the participation of local communities in improving water and sanitation management</p>	<ul style="list-style-type: none"> • Providing free drinking water and clean water for use to all workers living in our plantations and mills
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p>	<ul style="list-style-type: none"> • Building methane capture facilities in our palm oil mills, for electricity production by biogas engines
	<p>8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors</p>	<ul style="list-style-type: none"> • Engaging in Research and Development (R&D) activities to improve oil palm yield • Increasing incomes of villages through scheme smallholder programs such as KKPA
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services</p>	<ul style="list-style-type: none"> • Providing free education to children living on our plantations and mills • Implementing a strict policy of no forced and child labor at all operations and in our supply chain
	<p>8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value</p>	<ul style="list-style-type: none"> • Providing training, capital, or facilities (hydroponics, agronomic socialization, provision of fish seeds, etc.) for local communities to support them in achieving financial independence
	<p>8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training</p>	<ul style="list-style-type: none"> • Innovation programs for the workforce: Improvement days
	<p>8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms</p>	<ul style="list-style-type: none"> • Maintaining RSPO P&C certification for all plantations and mills • Maintaining Palm Oil Innovation Group (POIG) verification for all operations • Member of High Carbon Stock Approach (HCSA) Steering Committee and adoption of the HCSA methodology • Enhancing riparian areas and conservation corridors through reforestation
	<p>15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p>	<ul style="list-style-type: none"> • Maintaining RSPO P&C certification for all plantations and mills • Maintaining Palm Oil Innovation Group (POIG) verification for all operations • Member of High Carbon Stock Approach (HCSA) Steering Committee and adoption of the HCSA methodology • Enhancing riparian areas and conservation corridors through reforestation
 <p>15 LIFE ON LAND</p>	<p>15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p>	<ul style="list-style-type: none"> • Maintaining RSPO P&C certification for all plantations and mills • Maintaining Palm Oil Innovation Group (POIG) verification for all operations • Member of High Carbon Stock Approach (HCSA) Steering Committee and adoption of the HCSA methodology • Enhancing riparian areas and conservation corridors through reforestation



INTRODUCTION

PURPOSE AND SCOPE OF THIS STUDY

Since establishing our NDPE commitments, we have come a long way. As we look back at our progress, we are very cognizant of the opportunities to build on our successes and address areas for further improvement. Part of our NDPE commitment is to improve the livelihoods of smallholders, farmers and the communities. And we have come a long way to implement our commitments.

Our [sustainability report](#) provides a comprehensive account of how we have progressed towards our NDPE commitments. This includes our approach to respecting the rights of indigenous people and local communities as well as workers' rights.

By publishing this report, we have sought to assess our programs that aim to improve the lives of smallholders, workers and communities, and the social impact that they have.

As our first social impact report, we hope to provide transparency and context of our challenges, and the opportunities to spearhead sustainable development. The

approach used and sources of information are detailed in the Methodology section. We have focused this study on our five most established programs which are:

- Smallholders Oil Palm Development Program (*Koperasi Kredit Primer Anggota - KKPA*)
- Village Oil Palm Development Program (*Kebun Kas Desa - KKD*)
- Education
- Fire-Free Village Program (*Masyarakat Bebas Api - MBA*)
- Cultural, Religious and Infrastructure investments

For our inaugural report, we have limited its scope to cover our subsidiary PT Musim Mas, Sorek plantation, located in the regency of Pelalawan in the province of Riau, Indonesia. Our operations and activities in Sorek have been operational since 1991. Where applicable, we also provide group-level data to show the reach of our programs across our plantations in Sumatra and Kalimantan. In the future, we will be looking to increase the scope to include other sites in Indonesia, both in Sumatra and Kalimantan. The data will be consolidated in our Sustainability Report.



SUPPORTING SMALLHOLDER FARMERS



THE IMPORTANCE OF THE PALM OIL INDUSTRY IN ENHANCING THE LIVELIHOODS OF SMALLHOLDER FARMERS

Palm oil production is a powerful engine for rural development in Indonesia, with the potential to raise millions out of poverty through employment opportunities. Through the multiplier effects that the sector has created, the livelihoods of around 50 million people in Indonesia are currently directly or indirectly dependent upon palm oil and its derivatives. As mentioned previously, oil palm growers in Indonesia receive higher wages, and have a higher than average income growth, compared to other farmers.¹²

Smallholder farmers, defined as individuals with farms smaller than 25 ha, play a key role in the Indonesian palm oil sector. It is estimated that smallholders cultivate

around 40% of the total oil palm plantation area in the country.¹³ By 2030, this figure is expected to rise, with smallholders managing 60% of oil palm plantings.¹⁴ Yet, smallholder farmers only contribute about 35% to the total output. In fact, while the total area of farms managed by smallholders increased by 35% between 2013 and 2018, their per-ha yield during that period fell by 4%, according to agriculture ministry data.¹⁵ If we can improve the yield of the smallholder farmers without expanding land, we can also improve their incomes and livelihoods.

THE CHALLENGES FACED BY SMALLHOLDER FARMERS

Smallholder farmers face complex and interlinked challenges in terms of their productivity, profitability and sustainability. These include:

- 1. Lack of access to high yielding seeds and ageing oil palm:** Smallholder farmers tend to use poor-quality seed stock. They are reluctant to replant ageing palms as it takes about four years for oil palms to produce fresh fruit bunches (FFB) suitable for harvest. These two factors limit how much yield is produced per ha of land, potentially leading to further land developments and deforestation as they try to increase their income.
- 2. Lack of training in plantation management:** Inadequate knowledge of sustainable farming practices often means that farmers are unable to protect oil palms from pests and diseases, losing out on yield and income.
- 3. Land ownership:** Many smallholders have uncertain land ownership status and lack legal land titles, preventing them from getting access to finance.
- 4. Lack of financial means and access to loans:** The lack of legal land titles, along with factors such as low income and unfavorable debt repayment history further decrease their probability of receiving loans. This means that they may not be able to replant to replace aging palms, switch to higher yielding seeds, purchase fertilizer or obtain relevant certifications.

12. Another 2014 study by the Palm Oil Agribusiness Strategic Policy Institute (PASPI) in 2014 found the average annual income of an oil palm farmer (IDR10.58 mil) was found to be much higher than a city worker (IDR4.37 mil) or rural worker (IDR4.12 mil). Gabungan Pengusaha Kelapa Sawit Indonesia (GAPKI) (2017, November 23). Sustainable palm oil – gapki : Moving forward sustainable palm oil. Retrieved April 06, 2021, from <https://gapki.id/news/3618/sustainable-palm-oil-gapki-moving-forward-sustainable-palm-oil>

13. Palm oil. (n.d.). Retrieved April 07, 2021, from <https://www.indonesia-investments.com/business/commodities/palm-oil/item166>

14. Suhada, T., Bagja, B., & Saleh, S. (2018, March 30). Smallholder farmers are key to making the palm oil Industry Sustainable. Retrieved April 07, 2021, from <https://www.wri.org/blog/2018/03/smallholder-farmers-are-key-making-palm-oil-industry-sustainable>

15. Jong, H. M. (2020, April 29). Indonesia eyes sustainability certification for oil palm smallholders. Retrieved April 06, 2021, from <https://www.eco-business.com/news/indonesia-eyes-sustainability-certification-for-oil-palm-smallholders/>



SUPPORTING SMALLHOLDER FARMERS

- Limited access to markets:** Smallholders are sometimes unable to sell their FFB for a higher price due to its poor quality, inadequate sustainability standards and lack of certification.
- Lack of economy of scale:** Usually smallholders are grouped via KKPA and ISH Group to enhance this scale and reduce cost of production (e.g. group purchase of agrochemicals, transportation of FFB etc).

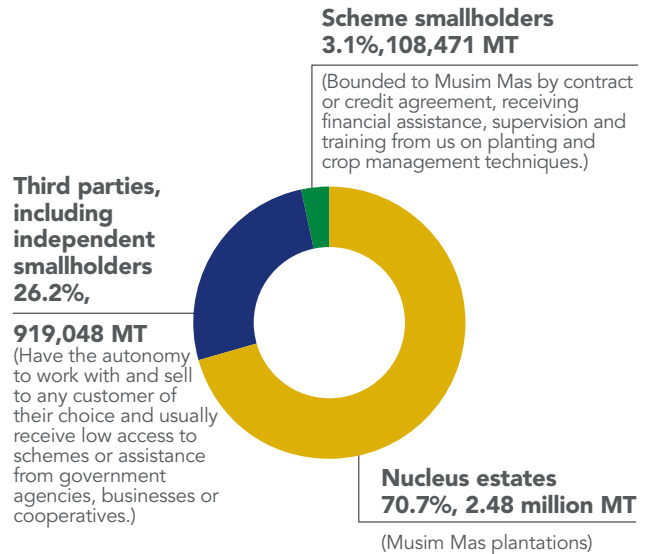
Given the increasing role smallholders play to help the industry meet the growing demand for palm oil, companies like us have an important role to play in helping them address some of the setbacks they face. The Indonesian government also recognizes this. To address some of these issues, the government introduced a regulation in 2007 – the Regulation of Minister of Agriculture Number 26 / Permentan / OT.140 / 2/2007 on licensing guidelines for plantation business – making it mandatory for commercial companies to allocate 20% of their land for smallholders.¹⁷ This bill aimed to ensure rural communities benefit from the large plantations that were operating around them, including receiving training, supplies of seedlings and fertilizer, guaranteed buyers for their FFB, and eventually legal title to the land.¹⁸

If managed responsibly and with the appropriate support from the government, the palm oil sector has a large potential to alleviate poverty and improve the living standards for communities across Indonesia, while supplying the growing demand for palm oil. Musim Mas is fully compliant with this and other government regulations.

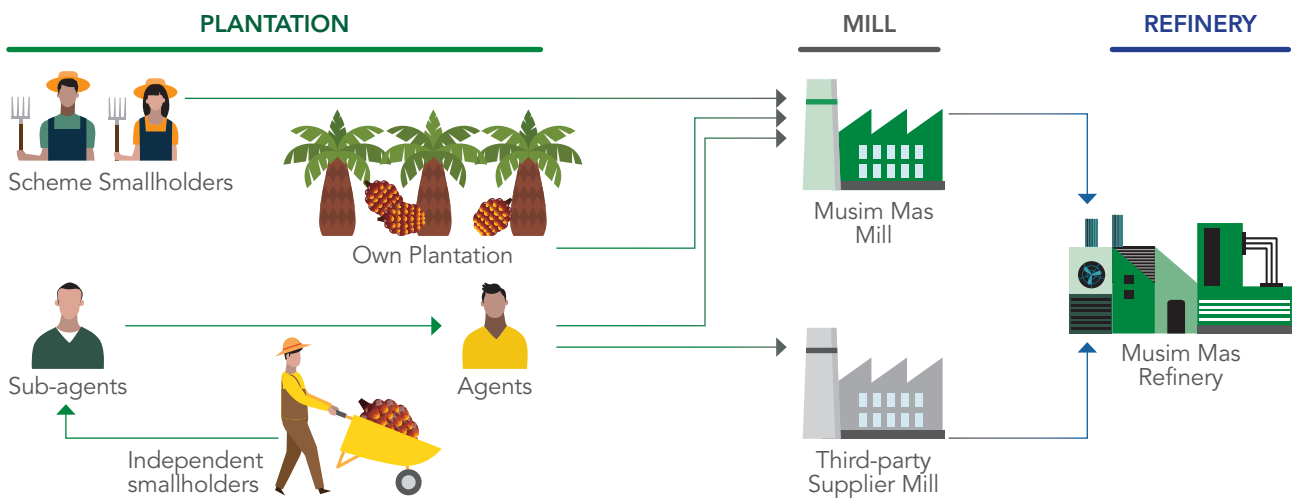
OUR FFB SUPPLIERS

Smallholders play a pivotal role in our supply chain. To meet our needs for raw materials at our mills, Musim Mas sources FFB from various sources:

SOURCE OF FFB (%) OF MUSIM MAS MILLS/ VOLUME OF FFB PRODUCED (MT)



While scheme smallholders sell FFB directly to us, independent smallholders often sell their FFB via agents. Given that smallholders represent a significant proportion of our supply base, we also recognize the importance of their role in the implementation of our Sustainability Policy and for us to achieve our business goals.



16. Replanting is expensive and takes around four years until the new palm reaches productivity, during which farmers need to invest in new seedlings, fertilizers and the protection of the young palms from pests and disease, without a steady source of income.
 17. Regulation of the minister of agriculture. (n.d.) Retrieved April 06, 2021, from <https://www.ecolex.org/details/legislation/regulation-of-the-minister-of-agriculture-no-26permentanot14022007-on-licensing-guidance-for-plantation-business-lex-faoc072955/>
 18. Jong. H.M. (2020, May 12) Indonesia moves to end smallholder guarantee meant to empower palm oil farmers. Retrieved April 06, 2021, from <https://news.mongabay.com/2020/05/indonesia-palm-oil-plasma-plantation-farmers-smallholders/>



SUPPORTING SMALLHOLDER FARMERS

OUR PROGRAMS: IMPROVING THE LIVELIHOODS OF SMALLHOLDERS

OUR PROGRAMS FOR INDEPENDENT SMALLHOLDERS

We have a number of programs supporting independent smallholders, who make up to 50% of the supply going into our refineries and downstream processing plants. Independent smallholders sell to us via agents, who in turn supply mostly to our third-party mills. For the scope of this report, we will not be covering the in-depth impacts of these programs, but rather focus on our own operations. For more information on our programs for independent smallholders, refer to our latest [Sustainability Report](#).



OUR PROGRAMS FOR SCHEME SMALLHOLDERS: KKPA AND KKD

In 1996 and 2000 respectively, we voluntarily set up two programs to provide support to smallholders. We did this well before the establishment of government regulations in Indonesia in 2007, which required companies to facilitate the creation of plasma smallholder schemes for the surrounding communities.

Our two programs to support scheme smallholders, *Koperasi Kredit Primer Anggota* (KKPA) and *Kebun Kas Desa* (KKD), aim to improve the livelihoods of the farmers, their families and communities, but do so through slightly different approaches:

PROGRAM	TARGET BENEFICIARIES	DESCRIPTION
<i>Koperasi Kredit Primer Anggota</i> (KKPA) – or Smallholders Oil Palm Development Program	Individual smallholder family units with two ha of land or less	A primary cooperative credit scheme that provides smallholders with practical support, including bank loan guarantees, agricultural training, and the transfer of quality seeds and fertilizers.
<i>Kebun Kas Desa</i> (KKD) – or Village Oil Palm Development Program	Plantations owned by the village and the community at large	An outreach initiative set up to promote economic independence and improve the welfare of communities in the surrounding areas, by managing oil palm plantations while the land remains under the ownership of the village.



SUPPORTING SMALLHOLDER FARMERS

Koperasi Kredit Primer Anggota (KKPA)

As we began setting up our operations in Sumatra and Kalimantan, many villagers were migrants who had received land from the government's transmigration program. They lacked government identification or legal land titles and were not well-versed in agronomic practices. To earn an extra income, villagers took on jobs that included rubber farming, construction, fishing and other professions. In some cases, their plots of land were largely unused, providing a missed opportunity for income.

Our KKPA program was first introduced in 1996 in West Pasaman Regency, in the Indonesian province of West Sumatra, to empower local communities to undertake oil palm cultivation. The program is tailored to family units who own two ha of land or less. For farmers to be eligible for the program, they need to be members of the local community and have legal ownership of their land.

In 2001, we successfully established a cooperative for scheme smallholders in Sorek. To get farmers onboard, we went from house to house to socialize the benefits of joining the scheme. We also helped them with the administrative requirements to obtain land legality, such as obtaining identification cards. We are the first scheme smallholders to be RSPO certified in 2010. In addition, farmers that are part of KKPA receive the following support from Musim Mas:

- **Agricultural inputs:** We provide smallholders with quality seeds/seedlings, fertilizers and other agricultural inputs.
- **Technical guidance and training on farming:** To help smallholders improve their yield, we provide training and socialization on various topics, including:
 - > Best agronomy practices related to harvesting, fertilizing and pest control
 - > Environmental management, including the importance of and management of HCV areas and HCS forests, our zero-burning policy and waste control
 - > Occupational health and safety, including first aid and emergency responses
 - > Obtaining and maintaining RSPO and ISCC certification
 - > Transparent FFB prices according to the Plantation Agency price setting
- **Access to finance:** Bank loans are made available to smallholders, with gradual reductions in interest rates, enabling them to finance the development of plantations.



All smallholders retain ownership of their land. Musim Mas helps to prepare the land for cultivation. Once productive, smallholders sell their FFB to us and for RSPO-certified smallholders will receive price premium of IDR 3 per kilogram (kg) offered on top of the Plantation Agency price.

For every kilogram of FFB sold to Musim Mas, some cooperatives typically contribute an amount to a 'Social Fund' under the auspices of Musim Mas. An example is KKPA Rawa Tengkuluk, which allocates IDR 2,500 per kg into the fund. These funds are then used to address the needs of the cooperatives' members. Examples include supporting families in sickness or death, or financing community projects proposed by the local community such as the construction of roads, schools, religious sites or for example an indoor sports center.

Kebun Kas Desa (KKD)

Our KKD program was first launched in 2000 in Sorek, Pekanbaru in Riau Province, with the objective of promoting economic independence and improving the welfare of our surrounding communities. Unlike KKPA, which targets individual smallholders, KKD is tailored for plantations under communal partnership.



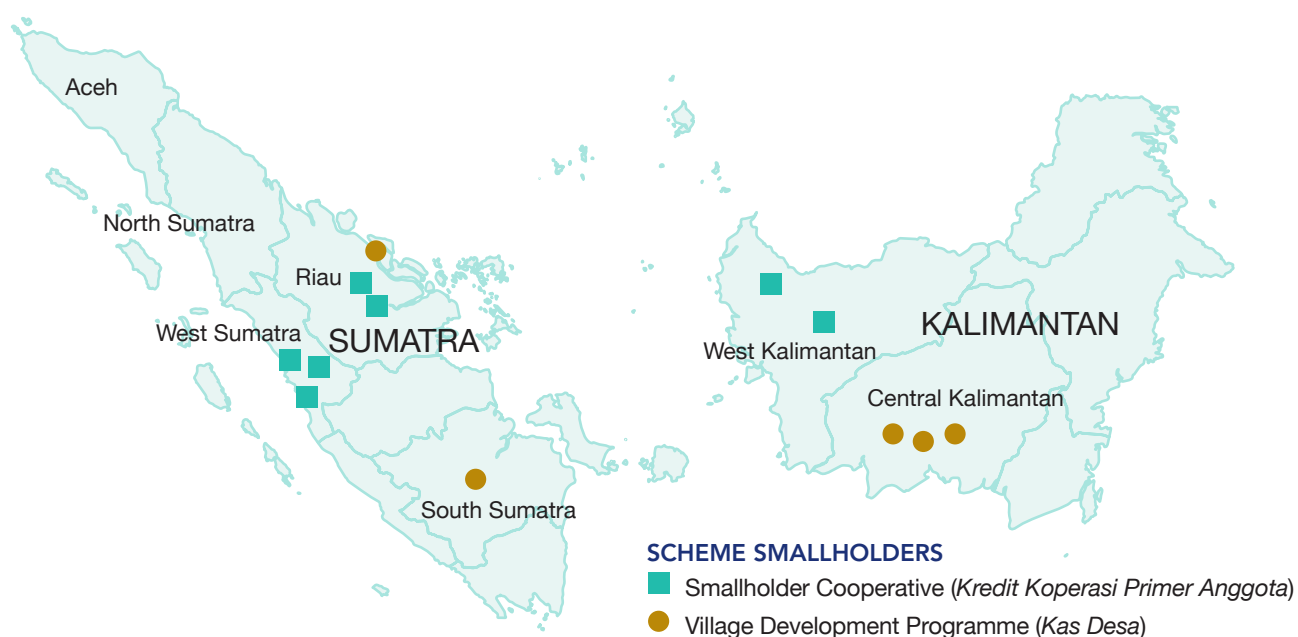
SUPPORTING SMALLHOLDER FARMERS

Through KKD, Musim Mas helps to establish oil palm plantations for communities through interest-free loans. Musim Mas manages the land and harvests FFB on behalf of the village, while the land remains under the ownership of the village. FFB is sold to Musim Mas with the villages receiving the proceeds from the sale of FFB. These proceeds are used to cover operational costs and as instalments towards investment costs.

The income generated from KKD is mainly used to finance community activities such as disaster response and religious activities.

COVERAGE: EXPANSION OF OUR PROGRAMS

To date, we have established KKD and KKPA across our communities in Sumatra and Kalimantan in Indonesia:



Over the years, our programs have continued to expand in terms of the number of villages involved and the total planted area covered. In 2019, 1,148 new farmers were enrolled under our KKPA program and two new villages in KKD. As of December 2019, 3,571 scheme smallholders, and 16 villages under 17 KKD programs, covering 5,669 ha and 127 ha of planted area, respectively, benefit from these programs.

	2019		2018		LAUNCH YEAR	
	KKPA	KKD	KKPA	KKD	KKPA (1996)	KKD (2000)
Number of smallholders/villages covered under program (total)	3,571	16*	2,423	14	262	4
Sumatra (total)	1,809	6**	1,733	6	262	4
Kalimantan (total)	1,762	10	690	8	0	0
Total planted area (ha)	5,669	127	4,523	102	524	12
Sumatra (ha)	3,508	27	3,392	22	524	12
Kalimantan (ha)	2,161	100	1,130	80	0	0

* We are running 17 KKD programs across 16 villages, as one of the villages has two KKD running concurrently

** Six villages under seven KKD programs



SUPPORTING SMALLHOLDER FARMERS

OUR IMPACTS

Before the establishment of KKPA, residents in Sorek depended on livelihoods such as rubber farming, construction and rickshaw driving. Among the villagers who owned land, many were independent farmers cultivating a mix of different crops including oil palm.

Since we started our smallholder program, many residents have transitioned to oil palm cultivation as their main source of income.¹⁹ By creating new job opportunities and enabling farmers to earn higher incomes, the program has improved the quality of life for the farmers and their families.



ENHANCED AGRICULTURAL SKILLS THROUGH TRAINING

An important part of our scheme smallholder program is the training provided which helps to enhance their skills, in sustainable farming and commercial practices. In 2019, a total of 132 training sessions were conducted by Musim Mas, involving both men and women. This has also helped them to obtain RSPO certification and reduce the number of non-conformances received.

TRAINING CONDUCTED FOR SMALLHOLDER FARMERS IN 2019

	KKPA	KKD
Number of training sessions conducted	98	34
Sumatra	98	6
Kalimantan	0	28
Number of smallholders trained	286	57
Females	72	15
Males	214	42

IMPROVED YIELD AND QUALITY OF FFB TRAINING

Having access to higher quality seeds, and through training provided by Musim Mas, smallholders have been able to increase their FFB yields. In 2019, KKPA and KKD farmers produced an average of 22.92 MT FFB/ha per year. This is 22.24% higher than the average of RSPO-certified smallholder, who produce an average of 18.75 MT FFB/ha per year.²⁰ In 2018 yields were even 18% higher due to the more favorable climate conditions because 2019 is a dry year.

YIELD AND QUALITY OF FFB PRODUCED BY KKPA AND KKD SMALLHOLDERS

	2019		2018	
	KKPA	KKD	KKPA	KKD
Total FFB produced (tons)	106,242	2,228	107,961	2,075
FFB produced per ha (tons per ha)	22.92		26.98	
Contribution to total FFB production by Musim Mas (%)	4		4	

19. Indonesia oil palm. (n.d.) Retrieved April 06, 2021, from <http://www.yieldgap.org/indonesia-oil-palm#:~:text=Average%20annual%20oil%20palm%20yield,Crops%3B%202012%2D2017>

20. RSPO smallholders. (n.d.). Retrieved April 06, 2021, from <https://rspo.org/smallholders>



SUPPORTING SMALLHOLDER FARMERS

HIGHER INCOMES

Smallholder farmers covered by our program enjoy an average wage (i.e. take-home pay, after deduction of costs such as fertilizers) of IDR 4,343,773 (~USD 310) per smallholder per month, more than 60% higher than the minimum wage in Riau Province of IDR 2,662,026 (~USD 190). By supplying FFB to Musim Mas, these smallholder farmers are also able to benefit from competitive market

prices, additional incentives, guaranteed sales volumes and a more sustainable income and livelihood.

With higher incomes, many farmers were also able to improve living standards for themselves and their family, with many upgrading their homes and ensuring that their children complete higher education.

SMALLHOLDER FARMERS/VILLAGE INCOME COMBINED (IN MILLION RUPIAH)										
	2019		2018		2017		2016		2015	
	KKPA	KKD	KKPA	KKD	KKPA	KKD	KKPA	KKD	KKPA	KKD
Smallholders/ Village combined income generated (IDR)	81,009	800	112,174	1,099	128,416	923	98,552	566	85,676	524
Sumatra	79,829	361	111,547	460	127,209	533	98,476	379	85,676	299
Kalimantan	1,180	439	627	640	1,207	389	77	186	0	225

Note: Total income for 2019 was lower due to depressed global CPO prices and a decrease in FFB/CPO production due to weather factors.

AVERAGE PAYOUT PER SMALLHOLDERS HOUSEHOLDS/VILLAGES (IN MILLION RUPIAH)										
	2019		2018		2017		2016		2015	
	KKPA	KKD	KKPA	KKD	KKPA	KKD	KKPA	KKD	KKPA	KKD
Sumatra	46	60	64	77	80	89	62	63	54	50
Kalimantan	0.99	55	1	80	2	78	0.2	48	0	56



SUPPORTING SMALLHOLDER FARMERS

IMPROVEMENTS IN SUSTAINABLE FARMING PRACTICES

In 2010, the KKPA under PT Agrowiratama (part of Musim Mas Group) became the first smallholder scheme in Indonesia to achieve RSPO certification, by complying with the criteria of the Indonesian National Interpretation of the RSPO Principles and Criteria (P&C). These smallholders

must now strictly adhere to RSPO standards, undertaking one main audit every five years and four annual surveillance assessments.

As of December 2019, 61.6% of the total land belonging to scheme smallholders is RSPO certified – 3,392 ha under KKPA and 102 ha under the KKD, totaling 3,494 ha.

CERTIFICATION STATUS OF KKPA AND KKD SMALLHOLDERS										
	2019		2018		2017		2016		2015	
	KKPA	KKD	KKPA	KKD	KKPA	KKD	KKPA	KKD	KKPA	KKD
Number of scheme smallholders/ villages that obtained RSPO certification	1,733	14	1,733	14	1,733	12	1,733	10	1,595	10
Sumatra	1,733	6	1,733	6	1,733	6	1,733	6	1,595	6
Kalimantan	0	8	0	8	0	6	0	4	0	4
Proportion of scheme smallholders/ villages that are RSPO certified (%)	49%	82%	72%	100%	72%	86%	72%	71%	70%	91%
Land area of scheme smallholders/ villages that is RSPO-certified (ha)	3,392	102	3,392	102	3,392	82	3,392	62	3,190	62
Sumatra (ha)	3,392	22	3,392	22	3,392	22	3,392	22	3,190	22
Kalimantan (ha)	0	80	0	80	0	60	0	40	0	40
Land area of scheme smallholders/ villages that is RSPO-certified (%)	54%	80%	75%	100%	75%	80%	76%	61%	75%	86%

Note: The proportion of scheme smallholders/villages and land area that is RSPO-certified decreased due to changes in the denominator used in the calculation. The actual area remains unchanged.



SUPPORTING SMALLHOLDER FARMERS

LIFE AS A KKPA MEMBER: PAK AMIR, CHIEF COORDINATOR OF KKPA - MERBAU SAKTI

Pak Amir, a native of Sorek, was one of the early smallholder farmers who decided to join KKPA. Before joining the program, his sources of income included planting rubber, durian and other crops, as well as fishing and taking up odd jobs as a construction worker and taxi driver. He was also only able to meet his family once a week as he often had to travel long distance for work.

In 2000, Pak Amir, along with seven smallholder farmers from the same village, joined KKPA. Pak Amir was chosen to lead KKPA *Merbau Sakti*, a newly-formed cooperative in Sorek.

With the support of Musim Mas, members received practical support such as agricultural training, quality seeds, fertilizers and technology to improve their yield. Over time, members were able to increase their FFB harvest and started earning higher and more stable incomes.

Today, the cooperative has 432 members owning 864 has of land, with Pak Amir as Chief Administrator. They manage a fund of between IDR 8-9 billion (~USD 568,660-639,740), which is available for farmers to borrow. Each member can borrow between IDR 25-100 million (~USD 1,780-7,110), at an interest rate of 1%, compared to typical bank interest rate of 6%. The interest collected along with the IDR 50 (~USD 0.004) per kilogram that is taken from the sale of FFB is added to a 'special purpose fund' which is used to support the community in a range of ways. In addition, each member of the cooperative allocates IDR 10,000 (~USD 0.70) per month to the Social Fund. If a member passes away, his family would be given a minimum of IDR 5 million (~USD 360) to help them tide through the difficult period. The funds collected are also used to support community development initiatives such as establishing mosques, schools, and community donations.

Since joining KKPA, the living standards for Pak Amir and his family have improved significantly. He now owns an oil palm plantation, a fully furnished two-story house, a car, and is able to send his three children to pursue higher education. One of his daughters just graduated from medical school. Pak Amir himself only graduated from secondary school but later pursued his high school diploma through the Equivalency Education program offered by the government, and finally completed his Bachelor of Management. With a fixed and stable income from his land, he is also able

to spend a lot more time with his family and has more time to practice his faith.

Pak Amir's wife, Ibu Ernawati, confirmed that the greatest benefit of the KKPA has been economic. The family can now afford luxuries, including traveling abroad.

Apart from higher and stable incomes from oil palm cultivation, Pak Amir also takes pride in the RSPO certification received by the cooperative, which has helped farmers to manage their farms sustainably and build their understanding of how good management of the land is connected to protecting biodiversity. As Chief Administrator of the cooperative, he supports the management to guide new members in their agricultural practices.

KKPA members benefited a lot from the scheme. We earn more these days and we even have a balance for savings. The infrastructure has also improved tremendously. In the past, we would only visit the market once a week as it is too far by foot or bicycle. Now, we can go to the market daily via motorcycle and car for fresh produce as the roads have been developed and we have enough savings to buy a motorcycle or a car.

Pak Amir



KKPA MERBAU SAKTI 'SOCIAL FUND' (IN MILLION RUPIAH)

2019	2018
317	265



SUPPORTING SMALLHOLDER FARMERS

HOW KKD BENEFITED A COMMUNITY: PAK EDI WARMAN, HEAD OF BATANG KULIM VILLAGE

Pak Edi Warman has been the Head of Batang Kulim village for approximately 7 years. In 2019, the village joined the KKD program under Musim Mas. The local government and communities of Batang Kulim were keen on joining the KKD program for a number of years but were unable to provide land (communal land registered under the village government) as required by the company. Similar success models elsewhere made this offer attractive to villagers, who gave their consent and jointly registered 5 ha of land under KKD.

Under the program, ownership remains with the village while Musim Mas is in charge of land management, from land clearing to harvesting. Musim Mas also provides seedlings, fertilizers and provides training on sustainable agricultural practices.

The program is also able to fund community initiatives, from the donation and distribution of basic necessities when the village is hit by a disaster, provide transport for villagers to attend sports games or events, support religious programs, and enable members to generate savings or extra income.

While the plantation is still very new, Pak Edi is already working on priorities he would like to see implemented. He has identified three areas he would like to invest in to benefit the community, including providing further employment opportunities, funding youth

programs, and the development and enhancement of infrastructure. Decisions over allocations to community projects are made by the government officers along with a local community representative, like Pak Edi.

Success to him would include generating additional funding and increasing awareness over the positive aspects of palm oil. While Musim Mas has been mostly welcomed in the community, those who do not own land have been more skeptical as they are less aware of the benefits. Pak Edi plans to conduct capacity building for the communities on palm oil, to address this deficit.



PREVENTING FIRES



CONTEXT: A THREAT TO THE ENVIRONMENT, PUBLIC HEALTH AND ECONOMY

Forest fires and the haze pollution they cause have been a long-standing problem in Indonesia. Since the 1980s, people in Indonesia have been moving from densely populated areas to the less populated outer islands of Sumatra, Kalimantan, Sulawesi and Papua.²¹ This has led to a massive conversion of forested landscape into human settlements, often involving draining a large proportion of peatland. The conversion is done sometimes by small scale farmers and sometimes by companies. This phenomenon, along with prolonged droughts and traditional land clearing methods through the use of fire by small-scale farmers and loggers, has created the optimal conditions for widespread, raging fires that affect Indonesia today.²²

Every year, particularly during the dry months in July to October, forest fires cause a thick layer of haze pollution which blankets large parts of Indonesia and its neighboring countries. These forest fires not only release large amounts of carbon dioxide into the atmosphere – particularly if they spread to peatlands – but also lead to habitat loss for some of Indonesia’s most iconic species such as tigers, orang-utans,

elephants and rhinos. On top of the environmental impact, haze pollution also affects public health. Exposure to these air pollutants can cause respiratory symptoms, irritation of the eyes, nose and throat, as well as aggravate pre-existing health conditions among vulnerable groups such as the sick, elderly and very young. The economic impacts are also significant. Intense periods of haze often disrupt daily operations of businesses and schools, affecting the regional economy. In 2015, Southeast Asia experienced a haze crisis due to forest fires in Sumatra and Kalimantan, in one of the worst ever disasters in the country. Large parts of the country’s forest burned out of control, resulting in billions of dollars’ worth of damages and losses. A Harvard-Columbia study found that the 2015 haze likely caused over 100,000 premature deaths in Indonesia, Malaysia and Singapore.²³ The haze also likely cost Indonesia at least USD 16.1 billion – equivalent to 1.9% of its GDP and roughly twice of the damages caused by the 2004 tsunami.²⁴

As forest fires and haze pollution present a major threat to the environment, public health and the economy, tackling the issue has become a key priority for the region, with the Association of Southeast Asian Nations (ASEAN) setting the goal of a haze-free region by 2020.

21. World Bank Group. Indonesia - the transmigration program in perspective. (n.d.). Retrieved April 06, 2021, from <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/353671468771708841/indonesia-the-transmigration-program-in-perspective>
22. Trihadmojo, B. (2019, May 10). Meanings of Fire: A Pathway to Understanding Indonesia’s Forest and Peat Fires. Retrieved April 06, 2021, from <https://www.edgs.northwestern.edu/documents/bambang-trihadmojo-arryman-paper.pdf>
23. Burrows, L. (2016, September 19). Smoke from 2015 Indonesian fires may have caused 100,000 premature deaths. Retrieved April 07, 2021, from <https://www.seas.harvard.edu/news/2016/09/smoke-2015-indonesian-fires-may-have-caused-100000-premature-deaths>
24. World Bank Group. Indonesia’s fire and haze crisis. (n.d.). Retrieved April 06, 2021, from <https://www.worldbank.org/en/news/feature/2015/12/01/indonesias-fire-and-haze-crisis>



PREVENTING FIRES

FIGHTING FIRES: A COMPLEX PROBLEM

Despite investment and efforts over the years, fighting fires and haze pollution remains a complex issue to resolve for a number of reasons.

- 1. Slash-and-burn is still a practice commonly used to clear land:** Many smallholders and subsistence farmers in local communities continue to practice slash-and-burn methods to clear land. According to Global Forest Watch Fires, of the 318,000 fire alerts in Indonesia during the haze season in 2019, more than three quarters occurred outside concession areas, suggesting that smallholder farmers expanding their plots may be a major cause of forest fires.²⁵ For smallholder farmers, slash-and-burn agriculture is often cost-effective, requires minimal labor and is seen as an alternative to using fertilizer as fires enrich soil fertility according to traditional agricultural wisdom. For farmers with less than 2 ha of land, slash-and-burn forestry is also legal within certain limits.²⁶ While safer methods of clearing land are available, such as the use of heavy machines, they are often out of reach for smallholder farmers due to the higher cost. Research by the Center for International Forestry Research (CIFOR) revealed that it costs around USD 300 per ha to clear land using non-fire methods. In contrast, using fires to clear land only costs around USD 20 per ha.²⁷
- 2. Difficulty in attributing the cause of fires:** It is difficult to identify the exact source and cause of these fires. Fires can often burn for weeks and spread far beyond their areas of origin. While satellite data is helpful in identifying the possible location of the fire, it does not indicate how they start or spread. Ambiguous land rights and lack of data transparency on concessions also exacerbate this problem. For example, boundaries may have changed over time along with landownership, often without formal documentation. Even in concession areas owned by companies, it is common for local communities and smallholders, to resort to slash-and-burn techniques, to occupy parts of the area.

- 3. Historical land conversion and expansion on peatland and drought-sensitive secondary forests:** In 2019, 42% of fire alerts detected in Indonesia occurred on peatland.²⁸ These are carbon-rich swamps which become highly combustible during long dry spells and when excessively drained at the time of conversion into commercial plantations of pulp wood or oil palm. When fires break out on peatland, they can spread several meters underground and get out of control quickly, making the fires very difficult to extinguish. There has also been a significant shift in vegetation from drought-resistant natural forests to drought-sensitive secondary forests, resulting in the increasing accumulation of dry material which can easily become fuel for combustion.
- 4. Increasing global demand for palm oil (and pulp & paper):** As global demand for palm oil continues to grow, the sector has become increasingly attractive. A growing number of small and medium players are entering the industry, with official or unofficial concessions as well as varying degrees of knowledge and capacity to practice sustainable farming.²⁹ While some progress has been made, engaging and educating these players to adopt more sustainable practices, particularly when clearing land, remains a significant problem.

A range of other issues add to the complexity of combatting forest fires and haze pollution. This includes climate change which leads to increased drought and unpredictable weather patterns. Furthermore, there is weak enforcement of laws against the practice of illegally using fire to clear land, exacerbated by a lack of resources and the sheer size of forest and peat areas.

25. Hicks, R. (2019, October 30). After another haze outbreak chokes Southeast Asia, can palm oil smallholders shift to sustainable farming? Retrieved April 06, 2021, from <https://www.eco-business.com/podcasts/after-another-haze-outbreak-chokes-southeast-asia-can-palm-oil-smallholders-shift-to-sustainable-farming/>

26. According to Article 69 Paragraph (2) Law No 32/2009, the burning of land is legal if the following conditions are met: Maximum size of 2 ha per head of family, used only for planting of plants belonging to local varieties, and if the fire is surrounded by burning separators to prevent the flame from spreading to surrounding areas.

27. Charles, D. (2019, September 20). Scientists on Indonesia's polluting haze. Retrieved April 06, 2021, from <https://forestsnews.cifor.org/62105/scientists-on-indonesias-polluting-haze?fnl=en>

28. Haniy, S., Hamzah, H., & Hanifah, M. (2019, October 09). Intense forest fires threaten to derail Indonesia's progress in reducing deforestation. Retrieved April 06, 2021, from <https://www.eco-business.com/opinion/intense-forest-fires-threaten-to-derail-indonesias-progress-in-reducing-deforestation/#:~:text=42%20per%20cent%20of%20fires,are%20notoriously%20difficult%20to%20extinguish>

29. Ewing, J. (2015, October 1). Southeast Asia's Haze Problem: Why So Hard To Resolve? Retrieved April 07, 2021, from <https://www.rsis.edu.sg/wp-content/uploads/2015/10/CO15206.pdf>



PREVENTING FIRES

OUR PROGRAMS: SUSTAINABLE FARMING POLICIES AND FIRE-FREE VILLAGES

Recognizing that the palm oil industry plays an important role in combatting fires and haze pollution, Musim Mas's approach is two-fold: ensure that our operations adhere strictly to sustainable practices as set out by our zero-burning policy and our No Deforestation, No Peat, No Exploitation (NDPE) commitments, as well as support for local communities to transit out of using traditional slash-and-burn methods to clear land. As a major player in the palm oil sector, we are deeply committed to playing our part in addressing the issue of fire and haze pollution to safeguard the health and wellbeing of our communities and planet.

OUR ZERO-BURNING POLICIES

Firstly, Musim Mas operates a strict zero-burning policy for all new development and replanting. This means that we strictly prohibit the use of fire for land clearing, opting instead to use heavy machinery to crush, chip, pile and bury plant residues. The biomass is then left to decompose, providing nutrients to nurture the soil. Secondly, we prohibit new planting on peatland. These are expectations we also extend to all our suppliers, which include smallholder farmers.



MONITORING FIRE ACTIVITY

Within our concessions, we take measures to ensure that we can quickly and effectively respond to any fire outbreak. This includes maintaining teams of highly-trained firefighters, who also support district and provincial governments, at each of our plantations. All factories are equipped with early warning and firefighting systems. We have fire patrol teams and build fire monitoring towers that enable us to conduct early fire detection and monitor our concession during the dry season. We also monitor fire incidence and affected lands using satellite data from sources like the World Resources Institute's Global Forest Watch Fires platform, an online forest monitoring and fire alert system.³⁰ We also funded the development of a new, publicly-available forest monitoring system known as Radar Alerts for Detecting Deforestation (RADD). The enhanced features of the system allow for more accurate monitoring when clouds obstruct the view of forests. Alerts are relayed to ground crews for checking. Recognizing that we may experience delays in responding to fires detected outside our concessions, we also deploy control crews to monitor fire activity in areas beyond our concession boundaries.

OUR FIRE-FREE VILLAGE PROGRAM

To combat forest fires beyond our concessions, we recognize that it is vital to work together with other stakeholders and support local communities in adopting alternatives to slash-and-burn methods for land clearing.

We are a founding member of the Fire Free Alliance (FFA), a multi-stakeholder platform set up in 2016 to support the commitment to a haze-free ASEAN by 2020.³¹ We collaborate with other members, including other leaders in the palm oil industry and civil society organizations, to share information, knowledge and resources to find lasting solutions for fire prevention. Under this agreement, all company members have implemented programs to engage local communities to prevent forest fires and tackle the root of the problem.

30. Other satellite sources we use include Visible Infrared Imaging Radiometer Suite (VIIRS), Moderate Resolution Imaging Spectroradiometer (MODIS) and the National Oceanic and Atmospheric Administration (NOAA).

31. Other members of FFA include APRIL, Asian Agri, Wilmar, Sime Darby, IDH and PM.Haze, with Carbon Conservation acting as Secretariat.



PREVENTING FIRES

At Musim Mas, our approach is the Fire Free Village Program – or Masyarakat Bebas Api (MBA) – first launched in 2016. Operational in many regions across Indonesia, the MBA is a holistic program designed to engage and support the local community to use alternatives to slash-and-burn methods to clear lands. The program targets villages located in the vicinity of the company, as well as villages prone to forest fires. Our program has 74 villages as of December 2019.

Our program includes a number of key components, implemented through close partnership with key stakeholders such as local government bodies (Muspika and Muspida), army, police, fire fighting department (DAMKAR), Indonesian Board for Disaster, Forest Fire Control Brigade (Manggala Agni), and the Regional Disaster Management agency (BPBD).

Components of MBA:

- 1. Raising awareness on the importance of a fire-free environment:** We conduct regular engagements with the community to support a mindset shift away from the use of slash-and-burn methods to clear land, as well as improve their capacity to adopt alternative methods of land preparation. Working with schools and other local community partners, we conduct awareness sessions on the negative health impacts and other dangers of using fire.
- 2. Equipping the community with know-how and equipment to adopt alternative land-clearing methods:** We provide training for communities on best practices in alternative agricultural methods to clear land without the use of fire. We do this by collaborating with partners such as the Faculty of Agriculture at the University of Riau (UNRI). One component of the training includes teaching the community to convert waste to fertilizer using specialist technology, instead of burning it. In addition to imparting know-how, we also provide heavy equipment to enable community members to clear up to five ha of land per village each year. Chopping machines for organic matter are also loaned to villages on a rotating basis. Through the MBA, many villagers have received assistance to clear their land for community farming and food security purposes, planting crops such as mustard greens, eggplants and pumpkins.
- 3. Equipping the community with know-how and equipment for fire prevention and suppression:** At least twice a year, we conduct training on fire prevention, reporting and suppression methods to villages participating in the MBA program. Trainings are conducted in collaboration with the local Forest Fire Control Brigade (Manggala Agni), using the Incident Command System in our training curriculum, an international standard for fire incident response and management. Our training sessions cover a range of topics, from briefings on current rainfall patterns, and simulations on land and forest fire control, to the use of the latest methods – such as drones and CCTVs – for early fire detection. We also provide participating villages with fire-fighting equipment to help them prevent fires. These include fire extinguishers, portable water tanks, farm tractors, excavators, and bulldozers, as well as safety uniforms and shoes. To build leadership within the community, we recruit local individuals as fire prevention advocates and fire suppression specialists at the village level. Through these efforts, we ensure that every village has one fire prevention team consisting of five individuals to monitor and patrol the land during dry seasons. Village heads and community members are also regularly reminded to be vigilant in preventing fires, through direct letters of appeal sent to villagers, as well as signages erected within the community. In addition, we funded the drilling of wells in a few villages to improve their ability to access water for fire suppression.
- 4. Awarding financial incentives to fire-free villages:** We further incentivize villages that remain fire-free within each calendar year, by awarding them with 'no-burn' financial incentives of IDR 25 million per village (~USD 1,750). An assessment is carried out the following year by a committee consisting of our management, village administration, district government and related government agencies to ascertain that the village remained fire-free during the previous calendar year. Villages found to have no fire or hotspot will then receive a reward which is used to purchase equipment or transportation that will be used to prevent and control fires or can be used to fund community projects.
- 5. Providing healthcare:** There are 26 clinics within our estates, which collaborate with local health facilities to provide healthcare and counseling for workers and their families. In this way, we can ensure that we address the environmental impact of forest fires, and the impact on community health.

These commitments are renewed on an annual basis with the local government at the regency level.



PREVENTING FIRES

COVERAGE

Since the inception of the program, the number of villages and areas of farmland covered by the MBA remained constant. As of December 2019, 74 villages covering 458,361 ha of farmland were part of the MBA program.

VILLAGES AND AREAS OF FARMLAND COVERED BY MBA				
	2019	2018	2017	2016 (inaugural year)
Number of villages covered by MBA	74	73	73	75
Area of farmland covered by MBA (ha)	458,361	466,117	456,531	456,531

Note: The area of farmland covered by MBA decreased despite the expansion of villages due to an administrative change in village boundaries.

OUR CONTRIBUTION

We have been increasing our investments towards the MBA program since we first joined. In 2019, Musim Mas invested a total of IDR 8,604,919,027 (~USD 611,660) in the MBA program, more than a threefold increase since 2017. This amount includes contributions towards training, equipment, educational collaterals as well as the rewards given to villages that remain fire-free.

TOTAL FUNDS INVESTED IN THE MBA (IN MILLION RUPIAH)			
	2019	2018	2017
	8,605	4,486	3,436

OUR IMPACTS

ENHANCING SKILLS

In 2019, Musim Mas conducted a total of 148 trainings, covering a combination of topics including alternative land-clearing methods as well as fire prevention, monitoring and suppression. Participants are now trained on the negative impacts of fires, beyond health and economic effects, such as school closures due to haze that affect their children's education or pulmonary disease, the importance of stopping burning and protecting the surrounding land and forest and on origin of fires and managing fires.

FIRE-RELATED TRAINING IN VILLAGES			
	2019	2018	2017
Number of trainings conducted by Musim Mas	148	139	132
Number of individuals who attended the trainings	2,442	2,167	3,574

PROTECTING THE ENVIRONMENT AND IMPROVING QUALITY OF LIFE

We have seen notable changes among the community, who have begun to understand the impact and danger forest fires can cause. Villages also have better fire prevention and suppression facilities, such as a patrol team to monitor risks during the dry season. Most importantly, we have seen the community shift their behavior in adopt non-fire farming methods. As of December 2019, Musim Mas has awarded up to IDR 3 billion (~USD 213,250) to 31 the villages that have successfully prevented fire occurrences.²⁰

FIRE-FREE VILLAGES			
	2019	2018	2017
Number of villages that remained fire free	31	40	41
Sumatra	6	10	13
Kalimantan	25	30	28
'Zero-incidence' rewards for fire-free villages (In Million Rupiah)	775	1,000	1,025

Note: The decrease in the number of villages that received MBA rewards in 2018 and 2019 is due more fire occurrences as a result of drier weather conditions compared to 2017.



PREVENTING FIRES



85% DROP
in the number of fire incidents

The program has successfully reduced the number of land and forest fires year-on-year, and fire incidents have become less severe compared to before the MBA was implemented. Over the years, we have seen an 85% drop in the number of fire incidents occurring within Musim Mas concessions – from 89 in 2015 to only 16 in 2019. We will continue to work with villages to further reduce these incidents.

FIRE INCIDENTS AND AFFECTED AREA					
	2019	2018	2017	2016	2015
Number of confirmed fire incidents within Musim Mas concessions	16	18	4	14	89

CASE STUDY: TANJUNG BERINGIN VILLAGE

Tanjung Beringin Village is located in close proximity to Musim Mas' Sorek plantation and has been prioritized to be part of MBA. In 2016, the village signed a Memorandum of Understanding (MOU) with Musim Mas to participate in the program.

'NO-BURN' FINANCIAL INCENTIVE

Additional support is also available and reviewed annually. The village head meets with Musim Mas at least once a year to agree on the plans for the year ahead. Villagers are able to propose projects to be supported by the company. If they have maintained fire-free, Musim Mas provides support for programs – up to IDR 25 million (~USD1,780). Priorities are decided through village engagement and consultation, and would usually involve initiatives that will benefit communities at large, such as the development of infrastructure or to purchase equipment that will be use to prevent and manage fires.

CHALLENGES

The program seeks to address ongoing challenges in Tanjung Beringin Village. This includes traditionally-held beliefs that land clearing through the use of fire is preferable as it leads to more fertile soil. Other challenges include a lack of equipment to manage and extinguish fires, and well as a lack of training among villagers to operate land-clearing equipment.

RESULTS

Despite these challenges, continuous socialization has helped to create a fire-free village at Tanjung Beringin. Since signing the MOU in 2016, no fires or hotspots have been detected in the village.



IMPROVING RURAL EDUCATION



CONTEXT: BARRIERS TO EDUCATION

Education is key to paving the way to improved livelihoods and social mobility. We recognize that every child has the right to education for securing a successful future. In Indonesia, educational outcomes, in terms of literacy rates and completion of primary and secondary education, have traditionally been low. Today, only about 40% of working age Indonesians have primary school education, while 9% of the labor force have a university degree.³²

Access to education in rural areas has been particularly challenging due to the lack of facilities and the uneven distribution of well-trained teachers. Statistics show that only 60% of children living in rural Indonesia are enrolled in primary school compared to almost all children in urban areas.³³ A UNICEF report revealed that despite substantial investment by the government in the educational sector, the quality of education remains of critical concern. Indonesia's performance in international learning assessments is among the lowest during the last five years.³⁴

When Musim Mas first established our operations in Sorek in 1991, we discovered a lack of educational facilities for families living within and adjacent to our plantation estates, this was due to the geographical remoteness of our concessions and the lack of infrastructure at the time. Consequently, girls living in our estates were often at a higher risk of not enrolling in education or dropping out from school. For the farming-based community, formal education was not highly valued. In many cases, it is also not uncommon for children to help their parents on the farm instead of pursuing an education.

For Musim Mas, it was critical that the children of parents who work at our estates have access to education. We wanted to ensure that we can contribute to providing inclusive, quality education to all children, regardless of gender, in line with SDG targets 4.1 and 4.2 (see [page 6](#)) and with the development goals of the government of the Pelalawan regency.

32. Badan Pusat Statistik. (n.d.). Retrieved April 06, 2021, from <https://www.bps.go.id/subject/28/pendidikan.html#subjekViewTab3>

33. Asia Philanthropy Circle. Field report: Improving rural education in Sumatra. (2016, December 20). Retrieved April 06, 2021, from <https://asiaphilanthropycircle.org/field-report-improving-rural-education-in-sumatra/>

34. Government - United Nations Partnership for Development Framework (UNPDF) 2016 - 2020. (n.d.). Retrieved April 06, 2021, from https://sites.unicef.org/about/execboard/files/Indonesia-UNPDF_2016_-_2020_final.pdf



IMPROVING RURAL EDUCATION

OUR PROGRAMS: UPLIFTING THE COMMUNITY THROUGH QUALITY EDUCATION

PROVIDING EQUAL AND FREE ACCESS TO EDUCATION

Since 2002, we have been supporting children's education across Indonesia through the Anwar Karim Foundation (Yayasan Anwar Karim – YAK). Set up in commemoration of the late founder of Musim Mas, Mr Anwar Karim, the YAK follows his passion for providing education to children and youth, among other social welfare activities.

Perguruan Sutomo in Medan, Indonesia, was one of the earlier educational foundations where Mr Anwar Karim dedicated his time and energy. He developed an early childhood education program to provide education opportunities to all children. In continuing his legacy, Musim Mas has extended our support for education to our Group's plantations in Riau, West Sumatra, South Sumatra and Central Kalimantan.

We aim to provide equal and free access to kindergarten, primary and secondary education for all children of our employees. As of end 2019, we have built and funded the running of nine schools across our plantations in Indonesia. In some operations we also provide pre-kindergarten "cribs" for toddlers, if both parents are working.

While the schools were primarily built for the children of our workers living on plantations, we also welcome students from the surrounding communities. As of December 2019, 5,983 students enrolled in our primary and secondary schools, 99.5% of which are the children of our workers and the remaining from surrounding villages. The split between female and male students in our schools is 47% and 53% respectively, in line with the average ratio in other schools as reported by the education ministry.

As we built the schools, we encountered some challenges in encouraging parents to enroll their children in education. At first, some parents were not convinced about the importance of education. To overcome these challenges, socialization was important. We conducted several home visits to challenge traditional beliefs, convey the value of education and encourage families to send their children to school. Alongside these traditional families were others who did want good schooling for their children.

ENSURING HOLISTIC AND QUALITY LEARNING

The curriculum taught in our schools is based on the syllabus that is approved by the Ministry of Education and Culture (*Kementerian Pendidikan dan Kebudayaan*). To ensure that our schools provide quality education, we equipped



them with facilities that include libraries, computers and art rooms. In addition to a focus on academic performance, our schools offer extra-curricular activities in sports, arts, music and leadership development to ensure children receive a holistic education.

We also work with partners to provide further services. For example, we work with book publishers to host book bazaars aimed at keeping students updated about the latest literature. Book publishers Penerbit Erlangga and Yudisitra visit the school at least three times a year, providing students with the opportunity to borrow or buy books. The schools also provide healthy meals for kindergarten students while health centers ensure children have access to healthcare.

For students who demonstrate strong performance in both their academics and extra-curricular activities, the AKF also offers scholarships to pursue higher education. In 2019, Musim Mas was proud to have offered 73 scholarships to outstanding students, three more than the previous year.

PROVIDING QUALITY TEACHING JOBS AND LIFELONG LEARNING FOR TEACHERS

Apart from providing education to students, our efforts are also focused on offering quality teaching jobs, especially for the local community, in line with SDG target 4.C. Being able to attract highly qualified and motivated teachers, ideally from local communities is key to making our schools unique and highly successful.



IMPROVING RURAL EDUCATION

Our teachers at PT Musim Mas in Sorek are paid over twice the average wage of teachers in Riau Province. Additional financial incentives are also provided for teachers who receive a positive evaluation based on their teaching ability, attitude, discipline, creativity, initiative and dedication.

We also place a great emphasis on equipping teachers with the right skills and encouraging lifelong learning. We frequently provide opportunities for our teachers to participate in training, covering topics such as curriculum development, storytelling and character building for students. This also includes a monthly meeting with teachers at the sub-district level, where the discussion usually touches on student learning activities, school administration, and various educational activities from the education ministry.

The school reports on teachers' performance to the government on a monthly basis. Five teachers were selected to attend a three-month advanced training program in Malang in Java, which Musim Mas fully supported. We are proud that YAK schools had the highest representation of teachers in the training.

By ensuring that teachers are well-trained and well-resourced – for example, having Internet access to research on additional teaching material – we are able to achieve our dual objectives of providing both livelihood opportunities as well as quality education to the community.

OUR CONTRIBUTION

OPERATIONAL COST AND PROGRAMS (IN MILLION RUPIAH)		
	2019	2018
Anwar Karim Schools (under YAK), including teacher salaries and overall operational costs	16,021	13,685
Other education programs	980	1,015
Total	17,001	14,700

OUR IMPACTS

PROVIDING ACCESS TO QUALITY EDUCATION

The perception of education among community members has shifted over the years. We have seen a change in community acceptance of the value in education, and parents prefer to send their children to Musim Mas schools which are recognized as having high standards. Our schools have received an 'A' grade from the education ministry, typically awarded to schools with high standards of educational facilities and infrastructure, teachers, curriculum, school administration and management. The number of students enrolled each year has increased, as we continue to build more schools and increase the capacity to provide access to quality education. We are also pleased to see a good split between girl and boy students.

STUDENTS ENROLMENT			
	2019	2018	2015 (baseline)
Total number of Students enrolled	5,983	5,717	4,471
Girls	2,805	2,678	2,094
Boys	3,178	3,039	2,377

As the availability and quality of schools increased over the years, we have also seen educational attainment increasing. The student alumni form a very close community, with many having become professionals and gone on to work, in some case for Musim Mas, and in roles as diverse as genetic research, in the police, national army, or as doctors.

To date, we have built and funded 20 school units including:



IMPROVING RURAL EDUCATION

HEARING FROM OUR STUDENTS

“I think the facilities are hugely different as my current school does not provide extracurricular activities. I used to join the Science Olympic preparation class and drum band. The classes started at 7am until 1.20pm, then I continued studying for Science Olympic preparation until 4pm.”

Suci Istiatu Solihah, Formally attended Anwar Karim IV (Central Kalimantan) Primary School for 6 years



“I used to attend a government/public school before moving over to SAK I 2 years ago. The biggest differences are the facilities. In my current school, we have a computer room, library and art rooms, compared to my previous school where these facilities were not adequate. I would like to pursue higher education after graduating from secondary school, because I believe education widens our opportunities and career choices.”

Adolf Goren Siahaan, Currently studying at Anwar Karim I (Sorek) Secondary School



ENHANCING SKILLS AND PROMOTING WORK OPPORTUNITIES FOR TEACHERS

The Musim Mas schools create work opportunities for teachers, in particular women. As of December 2019, we hired 237 teachers, of which over 70% are female. This number continues to increase as the demand for schools and the establishment of new schooling facilities continues to grow. We are also pleased by the training opportunities for our teachers whom are able to benefit from. In 2019, around 40% of all our teachers attended training. This is an important incentive we provide to our teachers, which ultimately helps them to feel more fulfilled in their jobs by being better teachers.

PROVIDING DECENT LIVING WAGES

Musim Mas school teachers are also well remunerated. On average in 2019, our teachers in Sorek earned IDR 5,000,000 (~USD360) which is almost twice the regional minimum wage for teachers in Riau Province of IDR 2,662,026 (~USD190).

NUMBER OF TEACHERS HIRED

	2019	2018	2015 (baseline)
Total number of teachers hired	237	213	175
Female	171	157	129
Male	66	56	46

TRAINING ATTENDED BY TEACHERS

	2019	2018	2015 (baseline)
Total number of teachers that attended training	97	60	49
Female	74	40	31
Male	23	20	18



IMPROVING RURAL EDUCATION

HEARING FROM OUR TEACHERS

Popo and Rosmidar have been teachers in Musim Mas-established schools for a number of years. Both are passionate about their job, believing that they play an important role to nurture the next generation in Indonesia.

“Sekolah Anwar Karim I (SAK I) provides good-quality education and facilities, as many of SAK I Alumni are successful and have good jobs. It shows that schools in plantations can actually compete or even perform better than non-plantation schools. I used to teach at another school. The main difference is SAK I is stronger discipline, the facilities are better and the chance to participate in a teacher’s competency training is also much higher. SAK I teaches me life lessons on how to be a more responsible person. It also allows me to be more creative and expressive as well.”

Popo Hartopo, S.Pd, Mathematics teacher at Anwar Karim (Sorek) for past 10 years



“I like kids and I’ve always dreamed of being a teacher. For me, being a teacher is a noble profession – a figure that people can lean on and look up to. I teach children in kindergarten, between 4-5 years old. For children at that age, the most important thing is teaching moral lessons to shape their character. We prioritize discipline and strong work ethics. We set an example for our students by arriving on time, with no tolerance for lateness. We also introduce local culture to the students by conducting traditional food cooking classes, introducing traditional clothes, etc.”

Rosmidar Yati S.Pd, Kindergarten teacher at Anwar Karim 1 (Sorek) for past 7 years



The construction and operation of the schools also enabled Musim Mas to gain a positive reputation and helped us to develop a good relationship with the local government. Investing in building and running high-quality schools demonstrates our commitment to tackling child labor, providing equal education to all children. It also demonstrates a wider perspective that plantations can pave the way for improved livelihoods through enhanced education for children and quality employment for teachers in the local community.

RECOGNITION FOR OUR SCHOOLS

‘Best School in the District’ accolade was awarded to several of our schools, including the Anwar Karim School in Padang and Central Kalimantan. Beyond this the following awards were granted:

National recognition from the President (Guru Berprestasi dan Berdedikasi Tingkat Nasional Tahun 2015)

The only teacher from Riau province receiving recognition from the President was one of our teachers

Adiwiyata School Award by Minister of Environment

Awarded to schools which educate students on environmental awareness and implement environmentally-friendly practices such as recycling.

Principal Achievement at the Provincial Level by Provincial Education Office

Awarded to schools for their teaching and learning systems, school facilities and infrastructure, school achievements, and personal achievements of the school principal.



IMPROVING INFRASTRUCTURE IN REMOTE COMMUNITIES AND WORKERS COMPOUNDS



CONTEXT: LACK OF ACCESS TO BASIC INFRASTRUCTURE AND SERVICES

As an archipelago consisting of 17,000 islands and a mountainous topography, Indonesia has one of the world's most challenging territories to achieve equal infrastructure development across the nation. According to the World Economic Forum's Global Competitiveness Report 2019, Indonesia ranks 72nd out of 141 countries in infrastructure.³⁵ In addition, data collected by the Ministry of Villages, Disadvantaged Regions and Transmigration shows that

around 52% of villages, consisting of as many as 39,000 people, in Indonesia are underprivileged, with the majority lacking access to electricity and telephone lines.³⁶

In Indonesia, oil palm plantations are often located in remote and rural areas. Residents in these locations often lack access to core infrastructure and basic services that populations in urban areas benefit from. Specific needs will often vary between different communities, but common challenges include:

35. Schwab, K. (Ed.). (2019). The Global Competitiveness Report 2019. Retrieved April 07, 2021, from http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
36. Tarahita, D., & Rakhmat, M. Z. (2017, May 16). Solving Indonesia's Infrastructure Gap. Retrieved April 07, 2021, from <https://thediplomat.com/2017/05/solving-indonesias-infrastructure-gap/>



IMPROVING INFRASTRUCTURE IN REMOTE COMMUNITIES AND WORKERS COMPOUNDS



Access to safe drinking water and sanitation: Safe drinking water and sanitation are basic human rights and essential to sustain life and health.³⁷ In Indonesia, 63% of people in the poorest wealth quintile do not have access to safe drinking water, and 34% do not have access to improved sanitation. Poor water, sanitation and hygiene (WASH) drives water-borne diseases, for example diarrhea which causes 31% of mortality in infants under one year of age, and 11% of mortality in children under five years of age.³⁸ Improving access to WASH is therefore a key priority in Indonesia. Addressing this also has knock-on benefits for communities, including easing financial strains from medical bills due to better health, better school attendance for children, and helping households to save time traditionally used for fetching water.



Access to electricity: Access to electricity is considered to be an important indicator for measuring quality of life and is needed to increase prosperity. In Indonesia, around 25 million people, many of whom live in remote places, do not have access to the electricity grid and are still without electricity.³⁹ Based on studies, low population density, low income and low electricity demand were found to be the main challenges in rural electrification.⁴⁰



Construction and quality of roads: A good road network enables cost-effective movement of people and goods. Roads are therefore important in facilitating local economic development, providing people access to economic and social facilities such as markets, financial institutions, schools and health services. The remoteness of some oil palm plantations means that access via roads is limited, and often characterized by dirt paths instead. This makes traveling long and slow, and prone to accidents.



Mosques and religious centers: Religion is an important part of everyday life in Indonesia. According to a survey by the Pew Research Center, Indonesians are amongst the most religious people in the world. 96% of those surveyed indicated a connection between believing in God and having good values.⁴¹ The Indonesian constitution guarantees all people freedom of worship, according to his or her own religion or belief. The state recognizes six official religions, namely Islam, Protestantism, Catholicism, Hinduism, Buddhism and Confucianism. The majority of the population – around 87% – are Muslim.⁴² Individuals identify strongly with their religion, influencing their daily life and activities.⁴³ Religious people often need easy access to places of religion and the lack of such infrastructure is a problem in remote areas.



Healthcare: The healthcare system in Indonesia remains decentralized, with significant regional disparities in terms of health status and in the quality, availability and capacity of health services across locations. Despite notable progress over the last decades, problems of maternal and child health, nutrition and communicable diseases persist as a result of some of these disparities, with rural and remote areas most highly affected.⁴⁴



Food Security: Access to food is uneven in Indonesia, influenced by factors such as poverty, inequality and lack of infrastructure. This situation is compounded by high food prices – with rice being 50 to 70% more expensive than in neighboring countries. As a result, 19.4 million people in the country are unable to meet their dietary requirements.⁴⁵

37. The right to water. (n.d.). Retrieved April 07, 2021, from <https://www.ohchr.org/Documents/Publications/FactSheet35en.pdf>

38. Indonesia. (n.d.). Retrieved April 07, 2021, from <https://www.globalwaters.org/wherewework/asia/indonesia>

39. Sustainability. (n.d.). Retrieved April 07, 2021, from file:///C:/Users/JWettstein/Downloads/sustainability-12-01603-v2.pdf

40. Enabling electricity access to rural areas in Indonesia. (n.d.). Retrieved April 07, 2021 from file:///C:/Users/JWettstein/Downloads/Enabling_electricity_access_to_rural_areas_in_Indo.pdf

41. Tamir, C., Connaughton, A., & Salazar, A. M. (2020, July 20). The Global God Divide. Retrieved April 07, 2021, from <https://www.pewresearch.org/global/2020/07/20/the-global-god-divide/>

42. Hirschmann, R. (2020, April 29). Share of Indonesian population in 2010, by religion. Retrieved April 07, 2021, from <https://www.statista.com/statistics/1113891/indonesia-share-of-population-by-religion/#:~:text=In%20the%20latest%20population%20%20census,Buddhism%2C%20Hinduism%2C%20and%20Confucianism>

43. Hays, J. (2008). Religion in Indonesia. Retrieved April 07, 2021, from http://factsanddetails.com/indonesia/History_and_Religion/sub6_1f/entry-3975.html

44. Mahendradhata, Y., Trisnantoro, L., Listyadewi, S., Soewondo, P., Marthias, T., Harimurti, P., & Prawira, J. (2017). The Republic of Indonesia Health System Review (K. Hort & W. Patcharanarumol, Eds.). Retrieved April 07, 2021, from <https://apps.who.int/iris/bitstream/handle/10665/254716/9789290225164-eng.pdf;sequence=1>

45. United Nations World Food Program. Indonesia. (n.d.). Retrieved April 07, 2021, from <https://www.wfp.org/countries/indonesia>



IMPROVING INFRASTRUCTURE IN REMOTE COMMUNITIES AND WORKERS COMPOUNDS

OUR PROGRAMS: IMPROVING QUALITY OF LIFE THROUGH INFRASTRUCTURE DEVELOPMENT PROGRAM

Scheme smallholder programs including KKPA and KKD, as well as community initiatives including FFVP bring positive contributions in terms of infrastructure development to villages (see chapters on [Supporting Smallholder Farmers](#) and [Preventing Fires](#) for more details). To further support the socio-economic development of our local communities, we run programs that address community needs through our CSR Fund set aside by the Anwar Karim Foundation (YAF).

To ensure that we are meeting the unique needs of the community, we work with local representatives such as village heads to maintain a two-way dialogue. This is often done either through formal channels – including meetings with local representatives – or informal channels, such as day-to-day conversations with members of the community.

Every year, we invite each village bordering our operations to submit proposals on how best to utilize the budget allocated for infrastructure development. Potential proposals are assessed before a final decision is made. Approved projects are then implemented the following year. Support from Musim Mas can either be through direct funds or by providing relevant materials (e.g. cement, roofing).

Over the years, our efforts for infrastructure development have improved the communities' access to the following necessities.



SAFE DRINKING WATER AND SANITATION

WATER ALLOCATION SYSTEM

We provide free clean water to all our employees and their households (of up to 5 people). Through our water allocation system, we ensure that every individual receives 120 liters of water per day – which goes beyond recommended requirements by the Indonesian government and the World Health Organisation (of 50-100 liters). This ensures that all of our workers receive an adequate supply of water to meet their needs. At the same time, we continuously promote the efficient use of water.

CONSTRUCTING WELLS

While clean water is already accessible to our workers living in plantations, more can be done for communities in neighboring villages.

As such, Musim Mas has drilled wells for communities to gain access to water in their vicinity for general purpose use, not for consumption. Drinking water is provided by the government through a public company, so our emphasis is to provide water for other uses. We partner with the public health office to monitor the quality of the water from wells to track the potential risk of contamination or other issues. There have been no cases of contamination.

In 2019, we built wells in the following villages:

1. Pangkalan Lesung Village, Pelalawan Regency – Riau
2. Kuala Semundam Village, Pelalawan Regency – Riau
3. Teluk Merbau Village, Indragiri Hilir Regency – Riau
4. Lahang Hulu Village, Indragiri Hilir Regency – Riau
5. Sikilang Village, Regency, West Pasaman Regency – West Sumatra
6. Berlian Jaya Village, Musi Banyuasin Regency – South Sumatra
7. Betenung Village, Ketapang Regency – West Kalimantan
8. Pebihingan Village, Ketapang Regency – West Kalimantan

ADDRESSING SANITATION

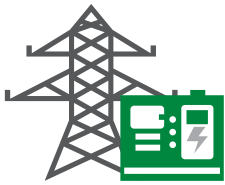
We have also built toilets for communities, undertaking a process of FPIC – free prior informed consent – with community members, to understand the impacts and concerns related to hygiene and health. We also conducted 'socialization workshops' to raise the importance of proper sanitation.

Between 2018 and 2019, Musim Mas built public toilets for the community in the following villages:

1. Rambah Village, Rambah Hilir District, Rokan Hulu Regency
2. Tambun Hamlet, Pangkalan Lesung Village, Pangkalan Lesung District, Pelalawan Regency
3. Tanjung Simpang Village, Pelangiran District, Indragiri Hilir Regency
4. Kenyala Village, Telawang Subdistrict, East Kotawaringin Regency
5. Penyang Village, Telawang Subdistrict, East Kotawaringin Regency
6. Rimba Sari Village, Teweh Tengah District, North Barito Regency
7. Kiab Jaya Village, Bandar Sei Kijang District, Pelalawan Regency
8. Tanah Putih Village, Telawang Subdistrict, East Kotawaringin Regency



IMPROVING INFRASTRUCTURE IN REMOTE COMMUNITIES AND WORKERS COMPOUNDS



ELECTRICITY

Palm fruit kernel milling activities produce palm oil mill effluent (POME), which emits methane, a powerful greenhouse gas. POME can be used as an energy source by harnessing its biogas byproduct for electricity production. As part of our efforts to mitigate climate change, Musim Mas installs methane capture facilities at all our mills. To date, we have built 15 methane capture facilities, across our mills. This enables us to eliminate methane emissions, and helps to generate electricity for our estates, powering the mills, homes of our workers and other facilities. Surplus electricity is then sold to the national grid which Musim Mas has built.



ROADS

Another focus of our efforts to develop the infrastructure for our communities is to build roads and bridges. We sponsor or provide the machinery and equipment to build quality roads. This significantly improves access to villages, benefiting communities by helping them to save time commuting and reducing road accidents. Building roads has the additional benefit of easing transport region-wide for neighboring communities.

INFRASTRUCTURE AREA (WITHIN PLANTATION) (ha)	
2019	2018
7,621	7,320



MOSQUES AND RELIGIOUS CENTERS

Musim Mas understands the importance of religion in the daily lives of communities. Musim Mas contributes towards building new and upgraded places of worship to ensure the community has better facilities to practise their faith, while Islamic centers provide higher standards of religious education to the community.



HEALTHCARE

All our operational sites are equipped with medical centers, providing free health care to all workers and nearby communities. The medical centers offer services including medical check-ups and routine vaccinations for infants. Our medical centers are registered with the Badan Penyelenggara Jaminan Sosial (BPJS) Kesehatan, the Indonesian Social Insurance Administration Organisation, which provides all employees and community members access to the national health insurance.



FOOD SECURITY

Our food security program was implemented at the plantation based on Musim Mas' food security policy which is centered around the principle of maximizing access to food and increased economic opportunities. Employees receive seeds and land to grow vegetables for their own consumption or for sale to others. We guarantee to buy any produce the employees and community members do not need for sale in our stores or provide stands in our local markets.

OUR CONTRIBUTION

In 2019, 60.4% of our CSR funding was allocated to YAK schools. The remaining 39.6% was spent on the following areas: Religious, social, and cultural programs, Infrastructure projects, Education (outside of YAK); Environment, Community health facilities; Economic development; Supplementary and others.

PROGRAMS AND PROJECTS (IN MILLION RUPIAH)		
	2019	2018
Social, Religious, and Cultural (SRC) Programs	2,596	1,908
Infrastructure	2,531	1,886
Total spent on SRC and infrastructure projects	5,127	3,795



IMPROVING INFRASTRUCTURE IN REMOTE COMMUNITIES AND WORKERS COMPOUNDS

OUR IMPACTS

SAFEGUARDING HEALTH AND WELLBEING AND IMPROVING QUALITY OF LIFE

As of December 2019, more than 13,000 households were provided with access to clean water and electricity and religious centers. We also have 26 clinics across our operations and offer free healthcare to all workers and their families.

On top of providing new and upgraded infrastructure to the community, these initiatives also create employment and increase income levels for locals. Providing education is another important part of what we do. For more information on this, refer to chapter 8.

PROTECTING THE ENVIRONMENT

Through our methane capture facilities, we avoided the emission of 537,965 MT CO₂e in 2019. In addition, this helped to provide 54,184,137 kWh of surplus electricity generated that we exported to the national grid.

ACCESS TO INFRASTRUCTURE			
	Number of households provided with access to safe drinking water	Number of households provided with access to electricity	Number of households provided with access to religious centers
Total	13,152	13,152	13,697
Sumatra	6,344	6,344	6,597
Kalimantan	6,808	6,808	7,100

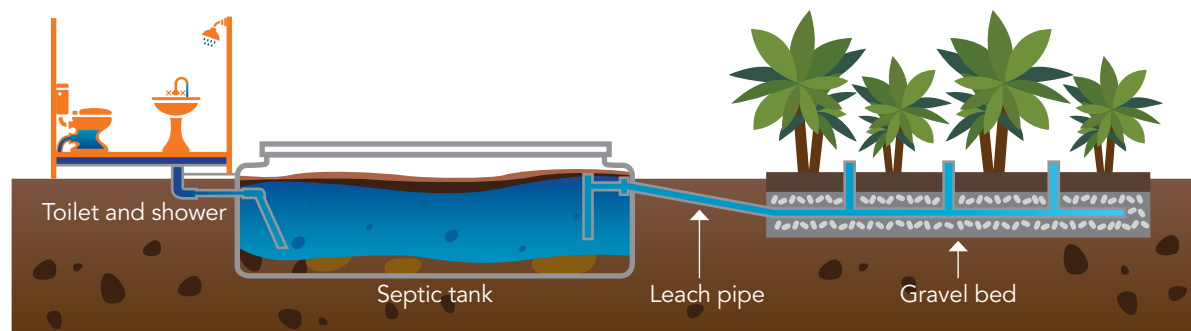
CASE STUDY: SAFE WATER GARDENS

In 2018, Musim Mas sponsored a project – Safe Water Gardens (SWG) – to improve access to clean water for households of workers. SWG is a maintenance-free autonomous sanitation system which collects wastewater from toilets and showers in households, before filtering it into clean water to be used in gardens.

This brings a number of benefits for households:

- Access to clean water to nourish their gardens:** Many locals plant bananas, chili and other plants in their gardens – also provided by Musim Mas – providing additional sources of nutrition and improving food security in the village. Clean water provided by SWGs can be used to nourish these gardens.

- Upgraded sanitation and hygiene systems:** Installing a household SWG costs Musim Mas less than USD 300, similar to the cost of a traditional soak pit – a toilet with porous-walled chambers used by many lower-income families. As soak pits are often not properly covered, they run the risk of overflowing during rainy seasons, spreading pathogens and contaminating water sources in the area. The SWG sanitation system prevents this problem from occurring. Furthermore, plants in the garden also absorb nutrients from the wastewater, which would otherwise also pollute groundwater or neighboring water bodies.



IMPROVING INFRASTRUCTURE IN REMOTE COMMUNITIES AND WORKERS COMPOUNDS

CASE STUDY: ADNAN, HEAD OF SUBDISTRICT PANGKALAN LESUNG

Pak Adnan has been the head of the subdistrict Pangkalan Lesung for the past few years, overseeing all new infrastructure development in the area. In his role, he engages with Musim Mas on a regular basis, ensuring that all social and environmental regulations are adhered to. He also plays an important role to ensure that all new infrastructure developments are in line with the interests and needs of the community. To do this, he conducts both formal meetings at the district and village levels, as well as informal consultations with villagers at his house. He hopes to continue this level of close engagement with the community, in particular with youth representatives.

In 2018, the community raised a proposal to build a new Islamic center to provide a space for children to gather and learn about their faith. He played a central role in reviewing and approving their proposal, before submitting it to Musim Mas for consideration.



Over the years, he also oversaw the construction of an Islamic kindergarten and a hot spring to attract tourists to the area.



LOOKING AHEAD



As a leading palm oil company, we recognize our responsibility and influence in helping to improve people's lives. We see the investments we make in our smallholders, workers, and communities as a strategic component of our business objectives and an important contribution to sustainable development.

Through our work, we have set up programs that specifically target the needs of our employees, smallholder suppliers or communities around our operations. We believe that these programs not only improve the livelihoods of people, they also bring tangible benefits for our business.

Through this report, we have laid the foundation to develop our social impact strategy to ensure we focus our resources on programs that have the biggest impacts in improving people's lives. We will progressively measure and monitor our impact through our impact indicators and report on our results. We will use this information to continue review our programs on a regular basis and ensure we are delivering against our strategy.

We have already made plans to scale up and enhance our existing programs. For example, we have set ourselves a target to register over 300 ha of new land under KKPA in 2020, more than double what was registered in 2019 (145 ha).

We also have extensive programs to support independent smallholder farmers, who face similar problem to our KKPA and KKD smallholder farmers prior to joining our schemes. For example, they tend to be disadvantaged by limited financial resources as well as knowledge and access to sustainable farming practices. In subsequent impact reports, we plan to include these programs within our reporting scope.

We also plan to build on our current successes and contribute to President Jokowi's vision – outlined in his 2019 state of the nation address – to develop Indonesia's human capital by raising the quality of education.⁴⁶ We have official plans in place for our schools to attain the *Rintisan Sekolah Bertaraf Internasional* (RSBI), which helps to ensure that we are providing a quality school environment and producing the best graduates. This is a step up from the 'A' grade which our schools have already received.

46. Negara, S. D. (2019, September 1). Commentary: Indonesia has big plans for education but severely lacks good teachers. Retrieved April 07, 2021, from <https://www.channelnewsasia.com/news/commentary/indonesia-education-quality-teachers-budget-jokowi-schools-11852570>



METHODOLOGY

This study was prepared by Corporate Citizenship, a global consulting firm specializing in responsible and sustainable business. The study was undertaken with two main aims:

1. To account for the cumulative impact of Musim Mas' programs on local communities in Indonesia;
2. To better understand Musim Mas' contribution to the community and develop areas for learning and improvement.

SCOPE

For our inaugural report, we have limited the scope to cover only our subsidiary PT Musim Mas Sorek, located in the regency of Pelalawan in the province of Riau, Sumatra, Indonesia. Our operations and activities in Sorek are one of our most established and provide the greatest opportunity for social impact reporting, with Musim Mas having had a presence there since 1991. Where applicable, we also provide group-level data to show the reach of our programs across our plantations in Sumatra and Kalimantan. In the future, we will be looking to increase the scope to include other sites in Indonesia, both in Sumatra and Kalimantan.

SOURCES OF INFORMATION

Quantitative and qualitative information included in this report was gathered through the following stages:

1. Desktop research included a review of internal documentation from Musim Mas, NGO and media reports, academic research papers and government census data.
2. Internal data that is currently being tracked and collected by Musim Mas
3. Internal interviews conducted by Corporate Citizenship over phone calls and during a site visit to Sorek in January 2020. This included the core team overseeing sustainability and community initiatives at Corporate level, as well as plantation managers based on the ground in Indonesia.
 - Siswondo Parman, Manager of Corporate Affairs, Medan Head Office
 - Rendy Bangun, Manager of Corporate Affairs, Medan Head Office
 - Ibrahim – Manager of Corporate Affairs, Sorek Estate
 - Jerry Liu, General Manager, PT Musim Mas
 - Ade, School Coordinator of Anwar Karim Foundation
 - Robert Nicholls, General Manager, Programs and Projects, Independent Smallholder Division

4. External Interviews conducted by Corporate Citizenship during a site visit to Sorek were conducted in January 2020. This included face-to-face interviews with key community stakeholders to better understand the impact of programs on communities. Interviewees were:

- Amir Syaripuddin, Coordinator of KKPA Scheme (Merbau Sakti) and his wife, Ernawati
- Jakfar, Treasurer of KKPA Scheme (Rawa Tengku)
- Syafri, Head/Chief of Tanjung Beringin Village
- Edi Warman, Head of Village Bukit Kulim of Kebun Kas Desa (Village Development Program)
- Adnan, Head of Subdistrict Pangkalan Lesung

5. Interviews with teachers and students conducted by Musim Mas in July 2020, including:

- Popo Hartopo, S.Pd, Mathematics teacher at Anwar Karim (Sorek)
- Rosmidar Yati S.Pd, Kindergarten teacher at Anwar Karim 1 (Sorek)
- Suci Istiatius Solihah, Attended Anwar Karim IV (Central Kalimantan) Primary School for 6 years
- Adolf Goren Siahaan, Currently studying at Anwar Karim I (Sorek) Secondary School

STUDY LIMITATIONS

The findings of this study have to be seen in light of some limitations. These include:

Methods used to collect data: Part of the original scope of this study involved surveying a sample of direct program beneficiaries, including smallholder farmers, fire-fighters, villagers, students and teachers to gather additional quantitative and qualitative data on the benefits and impacts Musim Mas programs have had. Due to the COVID-19 pandemic and travel restrictions, we were not able to conduct those surveys.

Limited access to data: We relied on limited data already collected by Musim Mas and available in the public domain from government sources.

Limited scope: While data was available for Musim Mas operations across Indonesia, including Sumatra and Kalimantan, case studies and anecdotal information is limited to the company's operations in Sorek and not representative of the entire Indonesia context.



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