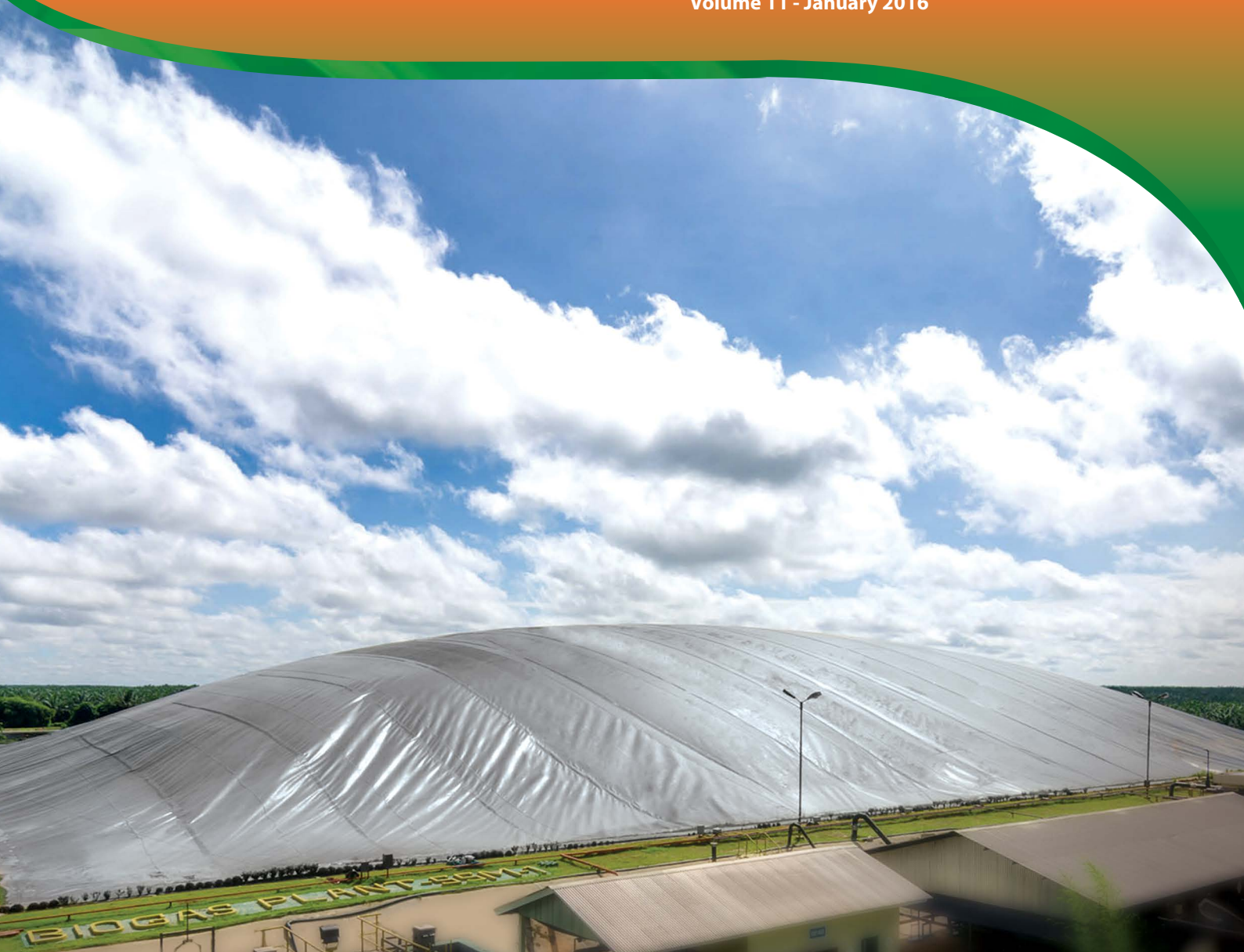


SUSTAINABILITY



JOURNAL

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Dear Reader

When we first announced our Sustainability Policy in December 2014, we did not anticipate the domino effect that would follow from our policy actions. Fast forward to January 2016, we are gaining momentum to transform the industry into an interesting model of sustainable development.

We are channelling our biogas-powered electricity to the national grid, providing electricity to communities in rural Indonesia. ("From methane capture to national grid", p2-3).

We are encouraging our customers to think beyond traceability, to initiatives that will yield practical results on the ground. ("Beyond traceability", p5).

We are pushing for the landscape approach, as the next step beyond our traceability work. ("Landscape approach and green development", p6-7).

Our work on independent smallholders, in joint partnership with the International Finance Corporation (IFC), has started with the commencement of the farmers' training. ("Training smallholder farmers", p8-9).

On another note, we joined the Palm Oil Innovation Group (POIG), the first palm oil major to join the prestigious coalition formed by heavy weight NGOs and progressive companies. ("Musim joins POIG", p10-11).

We are also pleased to announce that we are 100% certified for all our new acquisitions too, as promised in our Sustainability Policy ("Musim Mas is 100% RSPO-certified", p4).

I hope you enjoy reading this issue of our journal.▲▲

Bachtiar Karim

Executive Chairman
Musim Mas Group

Since 2010, Musim Mas has embarked on the installation of methane capture facilities as a standard feature for all of its 13 palm oil mills with a total budget of close to USD 50 million. To-date, Musim Mas has completed nine such projects, making it the Group with the largest number of methane capture facilities in the palm oil industry.

Electricity is the linchpin of modern life: mobile phones, computers, light bulbs and practically everything in the modern world runs on electrical power. Access to energy is crucial to achieving poverty alleviation, health, education, equality and environmental sustainability. However, one-third of Indonesia's 250 million-strong population still lives off the grid. In rural areas, stand-alone power generators such as the diesel generator are the dominant technology.

Palm oil mills can provide solution to increase rural electrification and at the same time reduce greenhouse gas emissions.

In 2014, the Group sponsored and built the infrastructure that connects to the rural electrical network, making Musim Mas an energy producer - significant for remote areas where palm oil mills are typically located and where electrical infrastructure is limited. Six of the Group's mills are connected to the grid and plans are underway for more mills to develop the infrastructure.

Musim Mas' electrical power runs on the back of the energy-positive palm oil mills that it operates on the islands of Sumatra and Kalimantan. Palm oil mills in Indonesia are self-sufficient in energy with the use of their by-products (biomass) as fuel to generate electricity.

With additional capital investment, the mills can go further to reduce emissions by installing methane capture facilities to collect the waste gas - methane - as another source of fuel (biogas). Methane is a by-product of the anaerobic digestion of palm oil mill

From methane capture to national grid

effluent (POME), which is 34 times more potent than carbon dioxide (CO2). With an average saving of 430kg CO2 per ton of palm oil produced, the Group will stand to save a total of about 250,000 tons CO2 equivalent a year.

Since 2010, Musim Mas has embarked on the installation of methane capture facilities as a standard feature for all of its 13 palm oil mills with a total budget of close to USD 50 million. To-date, Musim Mas has completed nine such projects, making it the Group with the largest number of methane capture facilities in the palm oil industry. The methane capture facilities for the remaining four operating mills are now under construction and will be completed within the next year.

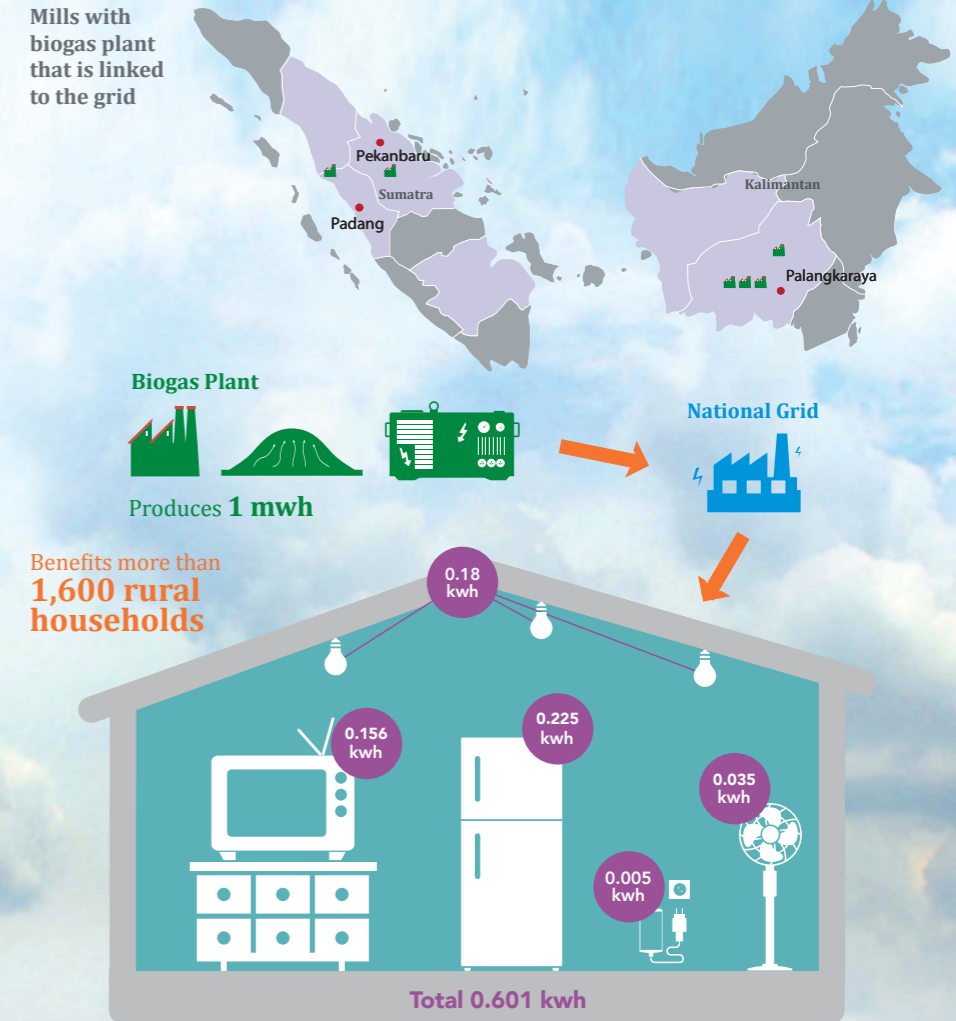
The electricity generated by Musim Mas mills, besides providing 24-hour utilities for all the workers and their families living in the plantations, also goes to the surrounding local communities. On average, 1 megawatt of excess electrical power can be generated by one mill, benefiting some 1,600 households directly.

If such endeavor by Musim Mas can be expanded to the hundreds of mills across Indonesia, more rural households will be able to benefit and reduce their reliance on diesel.

With increased rural electrification, the benefits for the rural population are transformational: more computers for schools, more medical equipment for clinics, pumps for water as well as sanitation and more income-generating

opportunities, among others.

The electricity generated by palm oil mills should be promoted as another form of renewable energy to reduce the carbon footprint of palm oil operations.▲▲



Based on electrical appliance electrical rating from Energy use calculator, and Energy.Gov, http://energyusecalculator.com/calculate_electrical_usage.htm, <http://www.energy.gov/energysaver/estimating-appliance-and-home-electronic-energy-use>



Musim Mas is 100% RSPO-certified

Musim Mas has always been a firm believer in RSPO*. In 2009, not only was the Group plantation the first in Indonesia to be RSPO-certified, it also became the first major group to attain 100% certification for all its plantation in 2012. Its scheme smallholder plantations (KKPA) were also the first to achieve RSPO certification in 2010.


Following the Group Sustainability Policy announced in 2014, Musim Mas further commits to achieving RSPO certification for all its new acquisition. This implies that not only will Musim Mas not acquire any plantation that does not conform to RSPO standard, it takes upon itself the mission to transform its acquisition into a fully certified plantation within a relatively short span of time. A case in point is PT Guntung Idamannusa (PT GIN), an acquisition at end 2013. In June 2015 - well within the deadline - PT GIN successfully passed the RSPO audit for its 12,128 hectares of planted area out of a land bank of 13,681 hectares.

With the certification of PT GIN, the Group now produces more than 600,000 tons of Certified Sustainable Palm Oil (CSPO) a year.

Critics of RSPO often cite the inability of RSPO to stop 100% deforestation, loss of biodiversity, exploitative labour practices as its systemic weakness. Despite its shortcomings, voluntary sustainability standards like RSPO remain one of the most effective

ways to promote sustainability implementation of the industry. Globalisation and climate change discussions have arguably established an economic rationale to sustainable production standards. As the world's most efficient oil crop, palm oil is here to stay. Production and use of sustainable palm oil will enhance

ecological and social values.

Musim Mas believes that RSPO standard still provides the most effective means to properly evaluate and monitor all palm oil production and development and should be made the universal standards for the industry. 

RSPO-Certified Area

	Company	Area	Certified Area (Ha)	First Certification Date
1	PT Musim Mas	Batang Kulim Palm Oil Mill	11,128.30	6 Jan 2009
		Scheme Smallholders (KKPA)	864.00	
		Village Oil Palm Development (Kas Desa)	12.00	
2	PT Agrowiratama	Pangkalan Lesung Palm Oil Mill	12,424.12	6 Jan 2009
		Scheme Smallholders (KKPA)	802.00	
		Village Oil Palm Development (Kas Desa)	5.00	
3	PT Berkas Sawit Sejati	Agrowiratama Palm Oil Mill	5,915.29	17 Jun 2010
		Scheme Smallholders (KKPA)	1,524.00	
4	PT Berkas Sawit Sejati	Berkas Sawit Sejati Palm Oil Mill	10,818.03	8 Apr 2010
		Village Oil Palm Development (Kas Desa)	5.00	
5	PT Maju Aneka Sawit	Maju Aneka Sawit Palm Oil Mill	11,549.80	17 Jun 2011
		Village Oil Palm Development (Kas Desa)	20.00	
6	PT Sukajadi Sawit Mekar	Sukajadi Sawit Mekar - 1 Palm Oil Mill	11,365.58	28 Aug 2010
		Village Oil Palm Development (Kas Desa)	10.00	
		Sukajadi Sawit Mekar - 2 Palm Oil Mill	13,600.47	
7	PT Siringo Ringo	Village Oil Palm Development (Kas Desa)	10.00	16 Feb 2012
		Siringo Ringo Palm Oil Mill	568.74	
8	PT Unggul Lestari	Siringo Ringo Palm Oil Mill	568.74	21 Aug 2014
		Unggul Lestari Palm Oil Mill	17,591.70	
9	PT Unggul Lestari	Village Oil Palm Development (Kas Desa)	40.00	4 Sep 2012
		Guntung Idamannusa Palm Oil Mill	12,127.81	
10	PT Guntung Idamannusa	Guntung Idamannusa Palm Oil Mill	12,127.81	1 Jun 2015
Total			110,381.89 (as at January 2016)	

Excludes approximately 20,000 ha of immature plantations (no accompanying mill) which are not eligible for certification.

* Roundtable on Sustainable Palm Oil



Beyond traceability

Customers are starting to realise that paying attention to the most vulnerable spots in their supply chain is not good enough; it is about the actual impact on the ground.

While traceability as a risk management tool has aided the progress in identifying and sieving out errant suppliers, it is but a stop-gap measure in the wider context or at best a basis for pursuing further action on the ground. The industry is recognising that real impact involves an entire slew of socio-economic endeavours, and is moving from dialogues on tracing palm oil to focusing on creating net socio-environmental benefits.


The dialogue on going beyond traceability is one of the main takeaways from a recent Musim Mas traceability workshop for customers, conducted on the sidelines of the 13th RSPO Roundtable meeting in November last year.

Additionally, one of the frequent topics was the inclusion of smallholders in the supply chain of Musim Mas and the implication of legality for smallholders - an increasing concern for development to be inclusive and equitable, especially

for local communities with vulnerable livelihoods. The Group believes that the best way forward is not just to stop purchasing from errant suppliers. The optimal approach hinges on empowering suppliers and the local communities through initiatives that effectively address their unique set of challenges. In the North Sumatra region, the Group is implementing an independent smallholder project, aimed at improving their livelihoods through a customised curriculum that will be replicated elsewhere upon its success.

Along with the industry, Musim Mas is working to address concerns on the issues of transparency and accountability. Customers at the workshop further raised queries such as the availability of the Group's concession coordinates. As a committed member of the RSPO, by extension, Musim Mas' concession maps are also made public. RSPO has recently announced that palm oil

concession maps of RSPO members will be publicly available. Besides, through the Indonesia Palm Oil Pledge (IPOP), the Group has a Memorandum of Understanding (MoU) with the World Resources Institute to support the Riau OneMap initiative - efforts that will be favourable for conserving the Tesso Nilo National Park through clarity of ownership and responsibility.

Notably, there was a debate at the workshop regarding how realistic it is for the Group to target end 2016 for completing its plantation - level traceability and indeed the relevance of such exercise in the pursuit of sustainability. The completion of traceability to the plantation would ultimately depend on the verification work undertaken by independent verifiers. With the dialogue going beyond traceability, Musim Mas will also be channelling greater efforts on landscape level initiatives where the ground work will add substantial value. 



Landscape Approach & green development

Sustainable landscape management (Landscape Approach) has been a major topic of national and international policy discourse in recent years.

A landscape approach is about having stakeholders discuss and agree on land and water-use decisions that provide an optimal balance between community, commercial and conservation interests.

It is seen by the palm oil industry as an efficient way to implement concrete field action and address the sustainability principles of People, Planet and Prosperity.

The landscape approach is gaining traction in palm oil industry and is used to develop strategies for areas based on green economics and inclusive development.

What exactly are landscapes? In ecology, landscapes mean large areas of diverse and interacting ecosystems such as forests and rivers. In the context of Musim Mas, the Group's concept of landscapes also includes social system patterns such as land tenure system,

legal land-use systems, cultural beliefs as well as natural resource use and practices.

In practice, a landscape approach is a collaborative effort among multiple parties to implement conservation on a landscape level. It is usually headed by a lead organisation or agency, along with other partners such as NGOs, private sector players and government agencies, working on a common goal to move forward. With smart collaborations, groups with different perspectives can turn the world's most efficient oil crop into a model of sustainable development.

The landscape approach represents the next step beyond the existing traceability work, building upon the efforts of the latter.

The Group's traceability work on third-party supply chain has shown that verifying third-party compliance against the Group's Sustainability Policy may not be sufficient. A stop-purchase will not always yield positive results because Fresh Fruit Bunches (FFBs) can be sent to other mills within the

geographical proximity. Furthermore, there are actors from other industries within the same landscape such as forestry products or mining. Traceability does not adequately address the environmental challenges.

The industry is looking at various landscape models for conserving large, ecologically valuable landscapes and the wildlife that depends on these landscapes - a model that will combine private and public resources with a commercially viable approach to secure land, restore wildlife and benefit people.

One example of an industry initiative based on the landscape principle is the Roundtable on Sustainable Palm Oil (RSPO)'s Jurisdictional Approach. To scale up current certification efforts, RSPO is looking at certifying palm oil production based on provincial landscapes instead of company level, emphasising on High Conservation Values, High Carbon Stocks and other elements.

Nonetheless, the landscape approach has its challenges. While identifying



ecosystems in need of conservation and engaging private organisations are part of the journey, the real challenge is to devise initiatives that operate within the constraints and opportunities of the landscapes. Moreover, the landscape approach is still a concept and will need to be trialed to find a way for practical implementation.

Its abstract nature is also its strength; as the Centre for International Forestry Research has rightly pointed out: "It is about

muddling through and being flexible enough to adapt to change." To this end, Musim Mas will work with other palm oil players to scale-up conservation efforts via the landscape approach and ultimately hope to provide real protection for ecologically valuable landscapes.▲▲

Landscape initiatives which Musim Mas is linked up to:

Province	Region	What is at stake here?	What is Musim Mas doing for this landscape?
Riau	Tesso Nilo - Bukit Tigapuluh landscape	Tesso Nilo is a lowland forest and one of the international NGO, WWF's Global 200 Ecoregions.	Musim Mas has a partnership to support WWF's conservation work on Sumatran elephants (<i>Elephas maximus sumatranus</i>). Musim Mas, via the Indonesia Palm Oil Pledge (IPOP), also has an MoU with the World Resources Institute (WRI) to kickstart the OneMap Riau initiative.
North Sumatra and Aceh	Leuser Ecosystem	It is the last great swath of intact rainforest that hosts many critically endangered species.	Musim Mas is working with other palm oil majors via IPOP to coordinate efforts in this landscape. IPOP recently signed an MoU with partners such as USAid and WinRock International to pledge commitment to conserve this landscape.
South Sumatra	Sembilang - Dangku landscape	The peat swamp forests provides a vital habitat for approximately 15 percent of Indonesia's surviving Sumatran tigers (<i>Panthera tigris sumatrae</i>).	Musim Mas is committed to the South Sumatra Eco-Alliance, which is an integrated landscape project overseen by international conservation charity, Zoological Society of London (ZSL). The provincial government of South Sumatra has also announced its commitment to the RSPO Jurisdictional Approach.
Central Kalimantan	Sebangau Peat Ecosystem	Kalimantan has one of the highest number of hot spots during the haze crisis at end-2015. Forest fires and peat decomposition are the largest drivers of emissions in the province.	Musim Mas is working via IPOP to coordinate efforts in this landscape. IPOP has an MoU with the non-profit group, Earth Innovation Institute Indonesia, to move the region to a more sustainable development model. The provincial government of Central Kalimantan has also announced its commitment to the RSPO Jurisdictional Approach.

Training smallholder farmers

Rudman Simanjuntak works as an agronomist in the Musim Mas Research and Development division. He has ten years of experience in Musim Mas, having recommended fertilisers to the plantations, provided advice to overcome problems such as pests and diseases in the plantations, and trained new agronomists.

One morning, he boards a waiting car at Sorek Estate, Pekanbaru. His backpack is filled with clothes and copies of training materials as he makes himself comfortable for the long ride to Rantau Prapat in North Sumatra where he will be working with groups of independent smallholders in his new assignment.

He has been selected as a trainer for the Indonesia Palm Oil Development for Smallholders (IPODS) project, which is starting as a partnership between Musim Mas and the International Finance

Corporation (IFC), a member of the World Bank Group.

Rudman is looking forward to his journey. After a decade of working in Musim Mas, he now can use his knowledge to help independent small-scale farmers who struggle with issues such as poor yields, weak agricultural practices and lack of access to quality planting materials and other inputs. With his experience in oil palm cultivation, Rudman knows he can make a difference to the lives of these farmers. The 31-year-old Rudman is now based permanently in Rantau Prapat to assist with the IPODS programme. The project aims to improve the livelihoods of independent smallholders and help them attain certification.

Months of farmer engagement, registration, farmer-group strengthening and curriculum planning finally culminate in the commencement of training. The

curriculum has been designed with a focus on Good Agricultural Practices to boost yields in a sustainable manner and to adopt health and safety practices; on improving the independent smallholders' financial literacy and book-keeping capacity to increase their access to finance; and on improving smallholder access to global markets through obtaining certifications.

The training team welcomes the smallholders as they stream into the room in eager anticipation. Most of them have never had the chance to attend any oil palm related training. Farmers who spend most of their time on their farms are intrigued by the opportunity to be students. They are eager to seek knowledge which they hope will help to improve their farms and yields. They collect their training notes and logbooks and flip through the materials with furrowed brows. The training commences in small-sized groups to facilitate better learning and engagement. Future training topics will include herbicides, pesticides, land clearing, nursery management, soil, pest diseases and field upkeep for mature and immature areas. For now, Rudman kick-starts the training by sharing his knowledge and experience on fertilisers. The smallholders listen attentively and ask questions on suitable



Rudman conducting the training.

fertilisers for different soil types, on whether it is good to mix various types of fertilisers, and many other issues. At the end of the training session, the smallholders share that the practical tips in applying fertiliser and identifying nutrient deficiencies in palm trees will immediately serve them well. Also, understanding the importance of fertiliser application as an ongoing process is important to get the best out of their oil palms in the long run.

Rudman said, "We hope to engage more independent smallholder farmers. If the project is successful, it can be repeated in other places. Our aim is to help all smallholder farmers increase their income and eventually improve their livelihoods."



Explaining contents in the training textbook to the smallholders



Smallholder asking a question



Participants enjoying the training

Rudman speaking on the application of Empty Fruit Bunches (EFB) and the dosage.



Musim Mas joins POIG

On 16th November 2015, Musim Mas announced its membership entry to the Palm Oil Innovation Group (POIG). It is the first palm oil major to do so, thereby bringing its vast network of Indonesian-based plantations, mills and refineries to POIG's list of innovation-minded organisations.

Musim Mas has always been a supporter of the RSPO Principles and Criteria (P&Cs) since the early days of the Roundtable's inception. In 2012, the Group became the first major plantation company to attain 100% certification, and then took a step forward in announcing its sustainability policy at end-2014. With the focus on sustainable business practices gaining momentum, the Group wishes to build further on the current RSPO standards and leverage on its capacity as a major player in the palm oil industry to push the sustainability agenda forward.

On 16th November 2015, Musim Mas announced its membership entry to the Palm Oil Innovation Group (POIG). It is the first palm oil major to do so, thereby bringing its vast network of Indonesian-based plantations, mills and refineries to POIG's list of innovation-minded organisations. Other members of POIG include Greenpeace, Rainforest Action Network, WWF and palm oil players who are recognized as sustainability leaders and innovators in the industry.

POIG represents a different movement to push for innovation and embrace standards that can bring novel methods of sustainability implementation to the industry. As a start to the Group's POIG membership, Musim Mas' sustainability policy will be updated to

align with the POIG Charter. Through participation in the coalition, Musim Mas hopes to function as a lead catalyst for positive changes on the ground and push forward the sustainable palm oil agenda by sharing best practices with other industry players, and by developing innovative solutions to maximise yields.

Having said that, the Group also recognises that innovation aside, the progressive initiatives which may

consider how the positive impacts can be scaled-up by other stakeholders such as governments.

Together with the recently announced RSPO-Next standards, Musim Mas hopes to play its role in shaping the market transformation by embracing standards at the forefront of the industry. The Group is playing an active role in the Indonesia Palm Oil landscape projects and the Indonesia Palm Oil Pledge (IPOP).[▲▲](#)



arise from POIG also need to fulfill the fundamental objectives of lifting marginalised smallholder farmers out of poverty, while reducing environmental impacts such as deforestation. The innovation agenda needs to further

2015 Sustainability Diary of Events

First Quarter

- Traceability Workshop for Musim Mas employees
- RSPO FFB Legality and Traceability Task Force
- RSPO Compensation Task Force
- RSPO Biodiversity and HCV Working Group
- RSPO Emission Reduction Working Group
- RSPO Board of Governors meeting
- RSPO Secretariat meeting
- ISPO GHG Working Group
- Indonesian Growers Caucus meeting
- HCS Study - 10th Steering Committee meeting

Second Quarter

- RSPO 3rd European Roundtable
- RSPO+ and Growers meeting
- HCV - HCS - FPIC integration technical workshop
- Meeting with ISPO Commission
- World Resources Institute workshop on Land Use Change
- Indonesia HCV Network Workshop

Third Quarter

- Innovation Forum, Singapore: 'How Business can tackle deforestation'
- PT Musim Mas, Pekanbaru and Batam EPA RFS 2 Segregation audit
- Stakeholder outreach with the Compensation Task Force on Remediation and Compensation procedure draft
- Italian national standards audit briefing and training on double counting for Palm Fatty Acid Distillate waste (internal)
- ISCC Technical Committee South East Asia (TC SEA)
- ISPO Implementation acceleration in North Sumatra Workshop by GAPKI and PPKS
- PT Multipersada Gatramegah Participatory mapping
- Remediation and Compensation Procedure implementation review

Fourth Quarter

- 13th RSPO Roundtable & 12th Annual General Assembly
- 9th CSR Asia Summit
- 11th Indonesia International Palm Oil Conference
- Musim Mas' suppliers palm oil mill verification assessment with CORE Consortium
- Traceability workshop for customers
- Global Landscapes Forum, Paris
- COP21, Paris
- Innovation Forum, London: 'How business can tackle deforestation - innovation in sustainable forestry'
- Neste Oil Workshop on Social and Labour issues
- Commencement of IPODS training for smallholders
- NGO Zoological Society of London (ZSL) visit to Musim Mas estate
- Launch of HCS+ methodology by SPOM

Acronyms

CORE Consortium	- Consisting of Proforest, Daemeter Consulting and Rainforest Alliance
EPA RFS 2	- Environmental Protection Agency Renewable Fuel Standard 2
FFB	- Fresh Fruit Bunch
FPIC	- Free, Prior Informed Consent
GAPKI	- Indonesian Palm Oil Association (<i>Gabungan Pengusaha Kelapa Sawit Indonesia</i>)
GHG	- Greenhouse Gas
HCS	- High Carbon Stock
HCV	- High Conservation Value
IPOP	- Indonesia Palm Oil Pledge
ISCC	- International Sustainability and Carbon Credit
ISPO	- Indonesian Sustainable Palm Oil
IPODS	- Indonesia Palm Oil Development for Smallholders
NPP	- New Planting Procedure
POIG	- Palm Oil Innovation Group
PPKS	- Palm Oil Research Centre (<i>Pusat Penelitian Kelapa Sawit</i>)
RSPO	- Roundtable on Sustainable Palm Oil
SPOM	- Sustainable Palm Oil Manifesto



Headquartered in Singapore, Musim Mas operates globally across the palm oil spectrum. Its business activities run the gamut of the palm oil supply chain: from managing oil palm plantations to refining crude palm oil and manufacturing value-added products. It also has a fleet of ship tankers and barges that enhances its logistical capability. The Group has operational presence in 13 countries across Asia-Pacific, Europe and the Americas, backed by a multi-national workforce of 28,500 people. Musim Mas, a pioneer member of the Roundtable on Sustainable Palm Oil (RSPO), is committed to doing business in a socially responsible and environmentally friendly manner.

This newsletter is published by Musim Mas. Comments and suggestions are welcomed. Please contact the Sustainability Team at sustainability@musimmas.com or visit our website at www.musimmas.com.

