



FFA
FIRE FREE
ALLIANCE

Members Review

2016



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Our Fire Free Future

Bringing communities together to prevent forest fires in South East Asia

Welcome to the Fire Free Alliance 2016 Members Review

The Fire Free Alliance (FFA) is a voluntary multi-stakeholder group made up of forestry and agriculture companies, NGOs, and other concerned partners keen to resolve Indonesia's persistent fire and haze problems.

The current members of FFA are APRIL, Asian Agri, Wilmar International Limited, Musim Mas, IDH, PM.Haze, with Sime Darby and IOI recently joining in 2017. Members collaborate to share information, and open source knowledge and resources to achieve lasting solutions that lead to a fire free Indonesia.

FFA is based on the Fire Free Village Program (FFVP), initiated and officially launched by APRIL in July 2015 with support from local NGOs, local government, police, military and Riau's Disaster Mitigation Agency. FFVP is a fire management program focused on prevention through community engagement and FFA was launched in response to the devastating El Nino fire season which unfolded, causing massive damage to forested land with an estimated USD \$16 billion in economic losses and significantly impacting people's health, as estimated by the World Bank.

Based on the success of the program, in one of the most difficult fire seasons in Indonesia's history, APRIL co-founded an innovative alliance of agricultural companies to share experiences, knowledge and expand the FFVP via the Fire Free Alliance (FFA).

FFA was launched on 29 February 2016 in Jakarta and has held 4 panel meetings in Indonesia and Singapore along with several technical workshops in Indonesia over the course of 2016. FFA has created a new culture of sharing, trust and collaboration between its members and a members' based information sharing platform (www.FireFreeAlliance.org). The next major event will be the first anniversary of FFA on 15 March 2017 in Jakarta.

Companies in the FFA now engage with more than 200 villages with some or all of the following key projects:



1

No Burn Village Rewards

Rewarding villages that have no forest fires in areas allocated to them.



2

Village Crew Leader

A program to recruit individuals from local communities as fire prevention advocates and fire suppression specialists at the village level.



3

Sustainable Agricultural Assistance

Provision of suitable agricultural alternatives to fire for land management activities.



4

Community Fire Awareness

Development of a suitable range of community awareness tools that focus on the inappropriate use of fire and the impacts of burning.



5

Air Quality Monitoring

Installation of Smoke Haze Air Quality monitors and the tracking and monitoring of associated health information.



6

Pilot Programs

New programs developed and suggested by FFA and the public.

FFA Member's 2016 Achievements & 2017 Commitments

FFA MEMBER	2016 Achievements	2017 Commitments
	<p>50 villages in the Fire Aware Communities program with 18 villages in FFVP up from 9 villages engaged last year, Riau, Sumatra.</p>	<p>Continuing with 50 villages in FAC, 18 villages in FFV and 9 villages graduating from FFV to the new Fire Resilient Community (FRC) program in Riau Sumatra.</p>
	<p>7 villages in Riau, 2 in Jambi in program evaluation since October 2016.</p>	<p>Asian Agri is committed to expanding the program in 2017 by adding 6 more villages.</p>
	<p>Supporting the CPO Fund to develop 5 villages in South Sumatra.</p>	<p>IDH will continue to support the CPO Fund to develop 5 villages and also develop 1 FFV directly in a high risk area starting in 2017. IDH's goal is to launch all 6 fire free villages in 2017 for the fire awareness stage.</p>
	<p>71 villages engaged in awareness.</p>	<p>71 villages engaged in awareness and 5 villages in a closer engagement with a comprehensive community fire free program to commence in 2017.</p>
	<p>Canal blocking project and the RSPO certified oil campaign for restaurants in Singapore with wide awareness raising success.</p>	<p>In 2017, PM.Haze plans to organise new trips to Sungai Tohor village on Tebing Tinggi Island in Indonesia to support the Hydrological Restoration programme is led by the local community in collaboration with the Peat Restoration Agency (BRG) and Riau province.</p>
	<p>Completed socialising "Fire-Free Community" programme to 61 villages and signed MOU with 42 communities in South Sumatra and Central Kalimantan.</p>	<p>Goal to halve the mean average incidence of fires from 2011-2015 in their plantations for Indonesia operations. To reduce fires in the buffer areas of 5km outside their plantation boundaries and are currently establishing their baseline on the number of fires outside their concession prior to developing a specific target for fires outside concession boundaries for 2017.</p>
<p>New Member 2017:</p> 	<p>Implemented a "Fire Prevention through Sustainable Farming Practices" programme in 4 villages, worked with University of Riau (UNRI) and was successful in significantly reducing hotspots.</p>	<p>For 2017, further programs are planned with 4 additional villages in Riau with UNRI and also a further 7 villages in South Kalimantan with University of Lambung Mangkurat (UNLAM).</p>
<p>New Member 2017:</p> 	<p>Implemented high conservation stock assessments, peatland mapping and initial peatland restoration. 50 people have been trained for Fire Awareness Training (FAT) by Manggala Agni Pontianak (10 from PT BSS, 20 from PT BNS and 20 from PT SKS), MoU with BKSDA Pontianak also to "Prevent and Patrol" in Boundary Concession and Conservation Area (2016-2020).</p>	<p>60 people will be "Continuous Training" in FAT by Manggala Agni Pontianak (20 from PT BSS, 20 from PT BNS and 20 from PT SKS). MoU with BKSDA Pontianak has been signed and the implementation will proceed in 2017 to perform patrols in the Boundary Concession and Conservation Area (2017-2020). IOI also plans to expand the no-burning farming plan with the communities in the surrounding areas. This involves 4 villages with 32 participants. Establishment of joint patrol with villagers from 4 villages to guard the boundaries of forest reserve (Cagar Alam/Hutan Lindung).</p>



- **18 Fire Free Villages (up from 9 in 2015) and 50 Fire Aware Communities in 2016.**
- **Nearly 600,000 ha under voluntary MOUs with communities in 2016.**
- **0.07% of land under MOUs with villages damaged by fire in 2016.**

In 2017 APRIL's Fire Free Village Program has evolved to include three separate programs:

- 1. Fire Aware Community (FAC):** community awareness and engagement around fire prevention and the impacts of smoke haze on human health;
- 2. Fire Free Village (FFV):** two years of direct operational engagement across 5 projects in selected communities to shift reliance from fire as a land management tool;
- 3. Fire Resilient Community (FRC):** engagement with communities to ensure ongoing commitment to a fire free landscape after two years in the FFV.

In 2016 APRIL expanded the FFVP from 9 to 18 Fire Free Villages (FFV) and engaged a further 50 villages in the Fire Aware Communities (FAC) program. FAC included a School Awareness program as well as additional initiatives like an eBook showcasing local children's cartoons and posters, a comic book for 10-12 year olds, prizes and rewards. It was clear from this experience that children understood the challenges of fire and were potentially very influential voices in their households. This program will continue to develop in 2017.

As part of the FFV program, APRIL signs MOUs with individual village communities. The area under these voluntary MOUs has increased each year, from 352,146 ha in 2014 when "No Burn Rewards" were first offered, to 427,876 ha in 2015 and 592,080 ha in 2016. Unfortunately this increased area has also seen an increase in burnt area in 2016, from 53.6 ha in 2015 to 390.6 ha in.

Analysis has shown that 88.3% (344.9 ha) of this burnt area in 2016 was attributed to a single fire event in one community (Pulau Muda). The fire is known to have been started accidentally in a remote area with very limited access and, given the prevailing weather conditions, proved to be very difficult to suppress. This meant that all the other fires contributed only 45.7 ha (11.7%) of the total burnt area, across the remaining 17 villages.

Fire Free Village Program (FFVP) 2017

Fire Aware Community (FAC)

A range of community awareness programs to introduce concepts around fire prevention, smoke haze & health.

50 Villages across Riau Province:

1. Fire Free Goes to School,
2. Fire Free Goes to the Movie,
3. Fire Free imam program,
4. Haze and Health Monitoring.

Fire Free Village (FFV)

A comprehensive engagement across five programs to provide direct operational outcomes shifting communities from reliance on fire as a land management tool.

18 Villages across Riau Province:

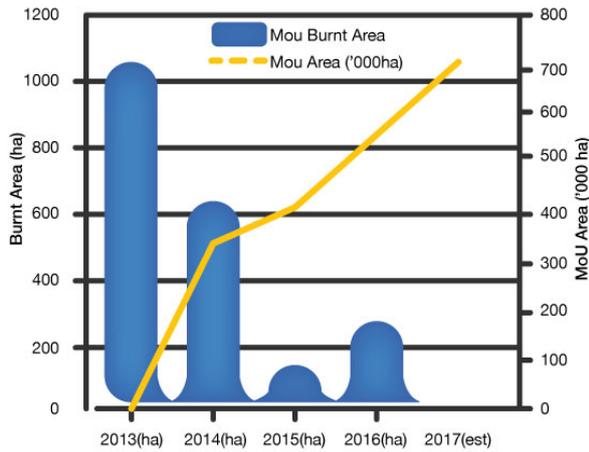
1. No Burn Rewards,
2. Crew Leader,
3. Alternative Agricultural,
4. Community Awareness,
5. Haze and Health Monitoring.

Fire Resilient Community (FRC)

Ongoing engagement with communities who have worked in the FFV project for two years.

9 Villages across Riau Province:

1. Crew Leader,
2. Joint Fire Patrols,
3. Community Awareness,
4. Haze and Health Monitoring.



Of the 18 FFV, 9 villages (50%) received full “No Burn Rewards” indicating no fires in their MOU areas during 2016, a significant improvement from 2015 where only 3 of 9 villages (33%) received full rewards. 4 of 18 villages (22%) received half rewards and 5 of 18 villages (27.7%) of villages failed to receive any reward, which was an improvement from 2015 when 33% of villages (3 of 9) failed to receive any reward. Overall a much higher proportion of villages received full rewards and a lower proportion receiving no reward.

In the cohort of 2nd year villages, 5 villages won full rewards, which was up from 3 villages in 2015, only 2 failed to get any reward down from 3 villages in 2015 and 2 villages received half rewards, down from 3 in 2015.

For new villages in their first year of FFVP, 4 villages received the full rewards, 3 received no reward and 2 were on half rewards. For a first year, this was a good result for villages in the 2016 cohort.



- Total of 9 villages with 7 in Riau and 2 in Jambi in 2016.
- 3 of the 9 villages experienced fire in 2016.
- With 306,664 ha under MOU, 6.78 ha burnt in 2016 with burnt area was reduced by over 50% from the 13.75 ha burnt in 2015.

Riau Province



Asian Agri's FFVP in Riau Province:

1. Lubuk Ogong Village.
2. Rantau Baru Village.
3. Delik Village.
4. Lalang Kabung Village.
5. Segati Village.
6. Sotol Village.
7. Tambak Village.

Jambi Province



Asian Agri's FFVP in Jambi Province:

1. Lubuk Bernai Village.
2. Lubuk Luas Village.

Asian Agri has a 5 stage process:

- Stage 1: Village feasibility identification.
- Stage 2: FFVP socialization working with village authorities and provincial leadership.
- Stage 3: MoU signing to commit to the FFVP.
- Stage 4: Village crew leader is selected and appointed.
- Stage 5: Engaging partners to implement FFVP.

Beginning with education on fires from 2014, Asian Agri has now:

- Conducted program socialization.
- Appointed crew leaders.
- Banners, signage, leaflets on fire/haze awareness and impact of fire disaster.
- Pilot project on "zero burning" land development at Tambak Village.
- Collaborated with Advocacy Agency of Riau province to increase social awareness by involving provincial advocacy team.
- Assisted in canal clearing, mechanised land clearing.
- Assisted with alternative livelihoods such as fishing areas, tourism infrastructure. Segati Village was also supported to help them breed honey bees as a lucrative new fire free industry and we would encourage Segati and Asian Agri to produce the first fire free labelling for this honey product and see if it can increase price and demand especially in Singapore.





Asian Agri follows 5 principles while working closely with the local communities: enhancement, empowerment, assistance, reward and development.

In 2016 Asian Agri engaged with 7 villages in Riau and 2 in Jambi so a total of 9 villages. Of the 9 villages participating in FFVP, 3 villages experienced fire. With 306,664 ha under MOU, 6.78 ha burnt in 2016 with burnt area reduced by over 50% from the 13.75 ha burnt in 2015. Of the 3 villages which experienced fire, 2 of these villages were recurring fires for the second year in a row, however in both cases the areas of fire were reduced by over 50% from last year.

Villages	Districts	Socialization	Total MoU Area (Ha)	Burn Area	
				2015	2016
Delik	Pelalawan	Complete	15.750	-	
Lalang Kabung	Pelalawan	Complete	20.000	1	
Rantau Baru	Pangkalan Kerinci	Complete	10.000	-	1,70
Lubuk Ogong	Sei Kijang	Complete	16.330	-	
Tambak	Langgam	Complete	9.400	9,50	4,08
Segati	Langgam	Complete	59.476	-	
Sotol	Langgam	Complete	88.700	3,25	1
Lubuk Lawas	Batang Asam	Complete	72.000	-	
Lubuk Bernai	Batang Asam	Complete	15.008	-	
Total			306,664	13,75	6,78

Asian Agri is committed to expanding the program in 2017 by adding 6 more villages.

IDH's Tony Wood: "I'm very pleased that the FFA is sharing so much important information by bringing so many fire focused teams from different agricultural companies to collaborate. It really saves reinventing the wheel and helps us experiment and find strategies to stop fires. So we are actively involved to support this and IDH is working to spread this wider by producing a FFVP Toolkit in Bahasa and being translated by IDH."

Through discussions with related local government offices at the provincial and district governments concerned, APhi and GAPKI, IDH has evaluated 242 villages, of which 102 villages are very vulnerable to fire.

After the identification of villages that are very vulnerable to fire, IDH has worked to create an association with the plantation companies closest to the village. Nearby plantation companies can then assist with each individual village in their fire free efforts. Of the 102 villages:

- 20 villages in the district of the OIC are guided MPA HTI PT Sinar Mas Group and 7 villages are developed into Desa Makmur Care API (DMPA);
- 16 villages in the district HTI PT Muba MPA target working with Sinar Mas Group,
- 24 villages fostered by UNDP in the form of training of firefighters and firefighting equipment assistance in the form of pumps and hand tools;
- 40 villages are planned as outposts to monitor and patrol via the KLHK and the community.

IDH is rolling out FFVP for the Indonesian CPO fund, initially focused on 5 villages in South Sumatra with strong cooperation from the Governor. In South Sumatra, they don't want rewards but prefer revolving funds for loans where individuals from those village communities can borrow. It was decided by a committee that the initial fund is IDR 100M with goal to launch fund in 2017.

The Provincial Government's program in South Sumatra has identified 109 villages for possible inclusion in a Fire Free Program. IDH is trying to help guide the process through technical advice and providing structures for the management, as well as narrowing down the villages into manageable groups for more detailed analysis.

IDH is also working with the Indonesian Foundation or Yayasan for conservation and environmental services, and with smallholders who can't afford mechanical land clearing. They are working with a Japanese company to take away the trunks for biofuel with funding from the Japanese Government.

The Cultivation Citrus project is located in the village Kuala, 12th district. Tulung Selapan commenced in 2015 over an area of 60 ha where assistance was provided with canalization, herbicides, orange seeds, Jabon, and inputs.





- **Total of 71 villages engaged in awareness raising representing 500,000 ha.**
- **5 have been engaged for deeper programs.**

In 2016, Musim Mas has initially focused on 71 villages to introduce awareness about the fire free community program and found that of the high-risk fire villages, 5 were identified for deeper engagement this burning season to spread the “No Burning” message to the entire village. These 71 villages cover a total area of 500,000 ha, more than triple the Group’s total planted area of 130,000 ha. Upon signing the MOU outlining the responsibility of the Company, Government and people of the village to keep their area free from fires, as well as the support and assistance provided by the company, a reward became available for villages who achieve “zero burning” over the period of 1 year.

Rewards of 25 juta rupiah (25 million rupiah or nearly USD 2,000) were offered if they succeed and that reward can be used for community infrastructure such as soccer fields or religious structures.

Musim Mas started in May 2016 and although the villages are not accurately mapped, they were able to enforce an honour system. The Crew leaders conducted interviews and reviewed the village parameters. Musim Mas conducted monitoring via satellite hotspots (methods of hot spot monitoring GFW, NOAA and MODIS), field conditions, and coordination with the village government.

Musim Mas focused on awareness via its “Local Corporate Affairs Officer” or “Hubungan Masyarakat (Humas)”, charged with handling social and legal issues in each village. Socialization is mostly through events in each village with food and music, supported by local government and the police and covered by local media. It is quite a long and big affair and as much participation as possible is encouraged. The heads of villages were highly encouraged to attend these socialization events. As it is a rural population, these events generate awareness and goodwill through word of mouth. For Musim Mas, it is focused on raising awareness with events every 3 months for risky areas. For less risky areas, socialization events were held every 6 months.

Musim Mas has engaged with the village governments including fire prevention trainings, how to report a fire, how to put out a fire and educational courses. Under the topic of “Land Fire Prevention” Musim Mas’s socialization made a call for fire impact analysis to the surrounding community land concessions. They then

focused on increasing public awareness of the methods of open land without burning and the promotion of a “Fire Free Society Program.”

Musim Mas provided public awareness notice boards with messaging such as “Burning is Prohibited” in plantations and fire danger warning signs in areas prone to fires. For the “Land Fire Control” program, Musim Mas included training for fire suppression to the public, aiding communities with portable extinguishing devices and increased public awareness and information dissemination to explain the negative impacts of clearing land by burning by involving Muspika, Muspida (Village Government/Regency, BPBD, Army, Police, and Department related).

Musim Mas recognises its need to change the mindset of the local communities from traditional burning techniques to zero burning techniques. Training included lessons on how to open up land without burning and systemizing “Zero Burn” policies. Participants were from the rural community from areas adjacent to concession lands and the implementation team was assisted by Government Agencies (Disbun, BLH, and BPBDs) and the Village head and the Village Administration, Muspika/Muspida.

Musim Mas also partners with NGOs and groups to raise health awareness to instil public awareness of the dangers of burning the land. Agricultural assistance is provided to extend practices of fire free clearing and agricultural practices especially in areas of verified incidences of fires.



A member of the local community undergoing medical examination during the haze period.



Fire suppression training involving the local community, Musim Mas fire fighting brigade and government authority bodies such as the Manggala Agni (Local government fire fighting team), Badan Penanggulangan Bencana Daerah (District Natural Disaster Handling Agency), police and army.



Participants of the fire-free socialization event held at a Musim Mas subsidiary, PT Globalindo Alam Perkasa (PT GAP) in Central Kalimantan. (In attendance: Village head, local community members, BPBD, Army and Police Personnel, and Musim Mas Employees).



PM.Haze (People’s Movement to Stop Haze) was founded in February 2014 by a group of ordinary individuals in Singapore with the belief that everyone can play a part in ending transboundary haze in Southeast Asia. PM.Haze aims to empower people in Singapore with the values, knowledge, and means to drive a movement to stop the haze and ultimately attain clean air for present and future generations.

PM.Haze conducts campaigns to gather the voice of the people, while engaging with key stakeholders such as governments, businesses and other organisations in order to drive change.

In 2015, PM.Haze co-organised the “We Breathe What We Buy/ #XtheHaze” campaign which successfully collected more than 13,000 pledges to “switch to brands that produce sustainable palm oil”. In 2016, they launched their first campaign to call for local restaurants, to use haze-free cooking oil: #GoHazeFree! On top of those campaigns, PM.Haze reached out to the people both online and face-to-face. In 2014 and 2015, they helped to run “Haze: Know it! Stop it!” exhibitions in various locations including VivoCity, City Square Mall, Singapore Science Centre and NEX. They also conducted talks, workshops and roadshows, at events and for organisations and schools. Those outreach activities aim to change consumer behaviour and increase demand for haze-free palm oil and paper products.

The haze is a complex problem, and thus PM.Haze’s research team aims to help people understand the issues and recognise how we can effectively solve the problem. In order to get answers, they made field investigations (eg. Hotspot Investigation Project), analysed satellite data (eg. Investigative Report on APP), and gathered information from experts. They also conduct social research to understand the people’s awareness and attitude to the haze (eg. Singapore Haze Awareness Survey). This research is the basis for PM.Haze campaigns and recommendations (eg. Haze-free Palm Oil report).

PM.Haze is organising trips called “The People’s Expedition to Experience Peat.” The goal is to bring Singaporean people to experience the ground situation in Indonesia and Malaysia as well as to support local projects that contribute to fire prevention. In 2016, the first trip brought 20 volunteers to the Raja Musa Forest Reserve (RMFR), Selangor, Malaysia. In 2017, there will be two trips to RMFR and two more trips to Sungai Tohor village, Tebing Tinggi Island, Indonesia.





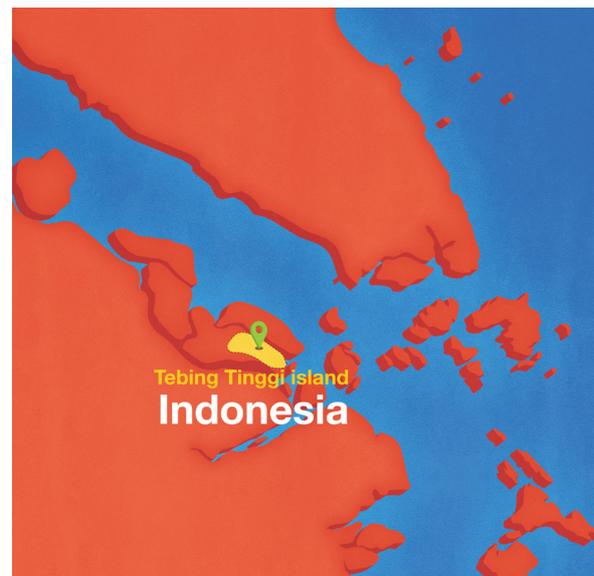
Raja Musa Forest Reserve (RMFR): 35,656 hectares.

The RMFR is a peat swamp forest surrounded by agriculture land mainly consisting of rice paddy and oil palm plantations. PM.Haze's local partner, Global Environment Center (GEC), has been supporting the Government of Selangor and the Selangor State Forestry Department to manage the reserve since 1998. One of the key challenges is the decrease in water level in the peat swamp caused by drainage of water by the oil palm plantations outside the reserve. During dry season, the dried peat catches fire easily. To reduce the impact of the drainage, canals blocks are built to dam up the stream and maintain a desirable water level within the forest reserve, meanwhile supplying the excess water to the surrounding plantations. These canal blocks will keep the peat swamp wet and are the most cost-effective measures to prevent fire.



The participants learned about peat through the visit to the conservation area and a trek in a peat swamp. An agriculture tour and a visit to a palm oil plantation allowed participants to deepen their understanding of how the Reserve and neighbouring farmers work hand-in-hand to protect the peat hydrogeological system. As a direct contribution to local projects, the volunteers planted trees in the conservation area and built a canal block to maintain a high water level in the peat swamp, and thus mitigate fire-prone conditions. The canal-blocking project was crowd-funded. \$1750 was raised in two days, which went entirely to pay for the cost of canal-blocking and planting 30 native Tenggek Burung trees.

In 2017, PM.Haze plans to organise new trips to Sungai Tohor village on Tebing Tinggi Island in Indonesia. Since 2007, the peat has been drained by two companies (which have created 12m wide and 5m deep canals). In 2014, massive fires ravaged the island. Last year, the government revoked the license of one of the two concessions. The Hydrological Restoration programme is led by the local community in collaboration with the Peat Restoration Agency (BRG) and Riau province. PM.Haze's local partner, Walhi, is the facilitator.



Tebing Tinggi Island project: 10,390 hectares.

- Total of 42 communities with signed MOUs and 68 villages socialized in South Sumatra and Central Kalimantan.
- With 1.39 hectares of planted area burnt in 2016 and 67.15 hectares of unplanted area burnt in 2016 there were 22 incidences of fire in company's concessions.
- 2016 results showed an improvement of approximately 90% because of the wetter climate in 2016 as compared to 2015.

Plantation Statistics in Indonesia at a Glance

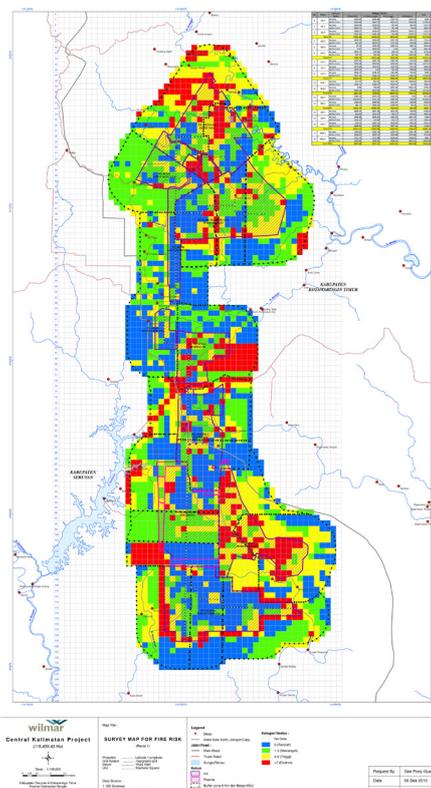
Indicator	2016
Total planted area burnt (ha)	1.39
Total unplanted area burnt (ha)	67.15
Number of fire incidences (in company's concessions)	22
Fire-fighting crew	2016
Number of fire-fighting crew member	1,880
Number of training conducted on fire management	72
Equipment	2016
Number of Watch Towers	49
Number of Water Truck/Damkar	103
Number of fire-extinguishers	4,980
Number of Fire-fighting sets for the crew member	298
Number of Bore-holes/tubewells (where applicable)	454
Number of No-burning signboards put up in plantations	254

FFVP Indicators at Local Community Level in South Sumatra and Central Kalimantan

	2016
Number of villages socialised	61
Number of MoUs signed with communities	42
Number of signboards put up at villages	24

Wilmar International Limited ("Wilmar") committed to implementing the FFVP programme in three estates each in South Sumatra and Central Kalimantan when it joined the FFA in March 2016. The first step Wilmar undertook was to map out the fire-risk areas in and up to 5 km outside of their concession boundaries. Extending the fire risk assessment to areas outside the boundary of the concession enables companies to mitigate the risk of fires from land clearing activities by small farmers. Once the villages with the highest risk of fire incidences were identified, a reward programme to encourage the reduction of fire incidences to zero was instituted.

The programme was immediately initiated in those estates and their surrounding vicinity in the two regions with a fire-risk mapping and assessment, followed by a series of socialisation with the villages, in collaboration with local governments, on the perils of fire and haze to the health of the local people and economy, and how Wilmar intends to prevent these predicaments through the FFVP.



An example of fire-risk map produced for one of Wilmar's plantations in Indonesia.

Wilmar's FFA efforts have dovetailed into the implementation of their No Deforestation, No Peat, and No Exploitation integrated policy. This policy applies to all Wilmar operations worldwide, including their subsidiaries and third party suppliers. Wilmar supplements these efforts with community education and awareness campaigns, as well as multi-stakeholder partnerships to entrench sustainable practices throughout the industry.

No Deforestation – No Burning

One of the key tenets of the No Deforestation pillar is a strict No Burning policy. Wilmar does not tolerate the use of fire in land preparation or development. Mechanical methods are employed in land development, and wood debris is left to decompose. This returns nutrients back into the land and reduces the need for inorganic fertilisers, thereby also reducing the greenhouse gas footprint. Wilmar has a 24/7 fire monitoring system in place to alert of fires in and around their concessions, and a well-established fire prevention and suppression programme to minimise the incidence and impact of fire and haze. Their concessions are equipped with fire-fighting infrastructure and equipment, and staffed with an on-site fire brigade. On-the-ground personnel are also trained to be vigilant and prepared to respond to fire incidences quickly and decisively.

No Development on Peat

Peatland development is a major source of fire and haze. 63% of Indonesia's current fire hotspots are on peatland, which have the tendency of becoming highly flammable once drained for development. Peatland fires are particularly problematic as it has the ability to smoulder for months, producing large quantities of smog/haze.

Wilmar committed to putting an end to the development of plantations on peatlands, regardless of depth, in October 2012, possibly the first company in the industry to do so. Where plantations have been established on peat in the past, they work with expert stakeholders to ensure that best management practices are implemented, greatly reducing the risk of fires. This commitment was further extended to their entire supply chain, including third-party suppliers, through their integrated sustainability policy in December 2013.

No Exploitation – Support for Smallholder Farmers

Research has found that majority of fires occur outside large concessions (those operated by large plantation companies). Over 40% of plantation areas in Indonesia are managed by smallholders, who often use fire as the most cost-effective way of clearing land.

Wilmar recognises that smallholders face unique challenges in conforming to enhanced sustainability requirements, and in attaining Roundtable for Sustainable Palm Oil (RSPO) certification, both of which stipulated strict no use of fire in land-clearing. In addition to conducting ongoing consultations with and providing smallholders with support to enable their compliance with Wilmar's integrated policy, they have a time-bound plan in place to assist their associated

smallholders achieve RSPO certification by 2018. In June 2016, they helped a group of about 2,700 independent smallholders (who collectively cover about 5,500 ha of land), achieve RSPO certification, the world's single largest group of independent smallholders to be certified. Wilmar is also working with reputable NGOs, such as Wild Asia and IDH, to help independent smallholders achieve RSPO certification. By the end of 2016, Wilmar has:

1. Set up fire-fighting organisation structure and committee;
2. Completed a fire-risk mapping exercise for all estates in South Sumatra and Central Kalimantan respectively, and socialised the programme to 43 and 22 villages surrounding those estates, which are more than the six estates Wilmar originally committed to.
3. Furnished the villages in South Sumatra and Central Kalimantan with new fire-fighting equipment and training to enhance their fire suppression capacity.

Their intervention in South Sumatra has been to provide the 43 villages surrounding the nine estates with firefighting equipment and training on fire preparedness and suppressions.



Wilmar socialising the "Fire-Free Community" campaign to the villages in Central Kalimantan.

A plan is also underway to work with four villages and the local government of the Kotawaringin Timur District in Central Kalimantan on an alternative livelihood project to develop a 287 ha land into paddy fields, a size equivalent to 287 football fields. Support from the company includes the provision of seedlings, fertiliser, machinery for land development (using mechanical means to clear land instead of fires), as well as helping to market the produce to the local cooperatives. Such support enables local communities to utilise land for a living without the use of fire.



Tubewell construction as part of fire suppression efforts in Central Kalimantan.

Furthermore, as part of Wilmar's ongoing fire management efforts, they are using drones to monitor fire incidence in their High Conservation Value (HCV) areas and social media such as WhatsApp for alerts and communications of fire incidence on the ground to activate deployment of rapid response teams for fire suppression.



Screenshot of Whatsapp used for communicating fire alerts and activating rapid response.

Wilmar intends to roll out this programme to all their operations in Indonesia by 2017, with the following targets:

1. To halve the mean average incidence of fires from 2011-2015 in our plantations for Indonesia operations.
2. To reduce fires in the buffer areas of 5km outside their plantation boundaries. They are currently establishing their baseline on the number of fires outside their concession prior to developing a specific target for fires outside concession boundaries for 2017.



2017 NEW MEMBER INTRODUCTION: SIME DARBY

Sime Darby Plantation (SDP), a subsidiary of the Sime Darby Group, is the world's largest producer of certified sustainable palm oil. SDP's plantation operations span Malaysia, Indonesia, Liberia, Papua New Guinea and the Solomon Islands. Currently, the company has a total land bank of approximately one million hectares, of which more than 600,000 ha are planted with oil palm, 11,000 ha with rubber, 5,000 ha with sugar cane and 9,000 ha of grazing pasture for cattle.

Since 1985, SDP strictly practises a zero-burning policy throughout its operations. It was the first company to commercialise replanting practices without the use of fire and was recognised by the United Nations for Environmental Achievement in 1992 (Environment Programme's Global 500 Roll of Honour). SDP also employs a range of fire mitigation measures in its operations, such as actively managing water tables to reduce the risk of fires and maintaining trained fire response teams.

However, fire risks still remain in areas where neighbouring communities and smallholders use slash and burn techniques to plant cash crops, such as corn and coconut. These risks are exacerbated in peatland areas, which are particularly flammable.

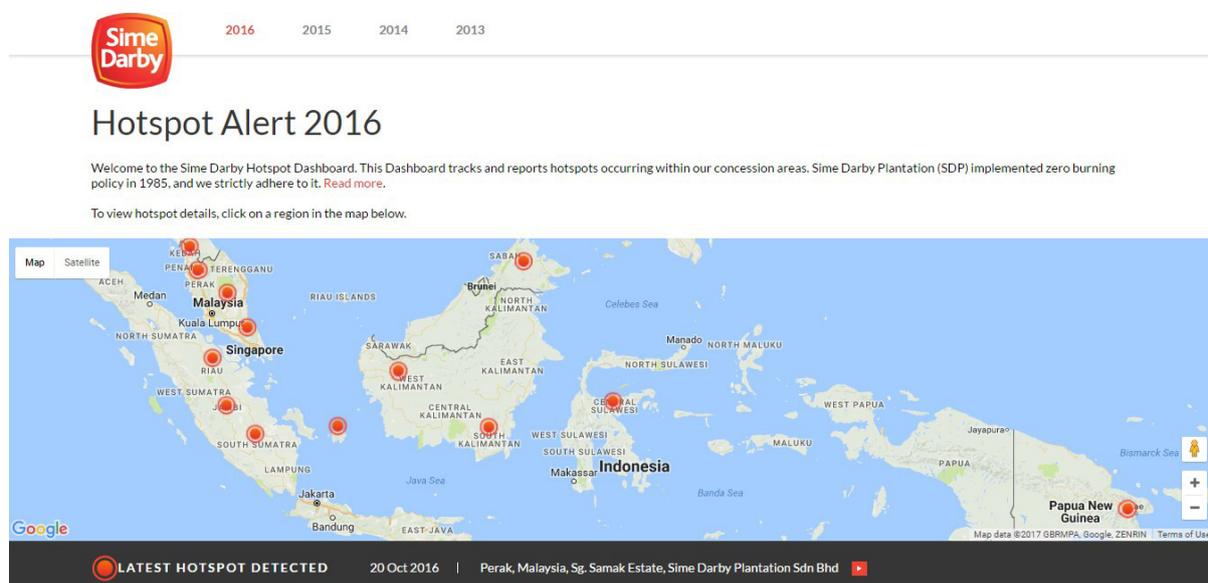
SDP has employed the following measures to prevent forest fires and haze:

1. Direct intervention programmes

This includes establishing the "Masyarakat Peduli Api" (Community Fire Fighting Teams) to train local community members to combat fire. SDP also provides fire-fighting support, builds canals and fire towers to detect and monitor fires. At the same time, we increase the amount of fire-fighting equipment, patrols at the borders of our operations and implement water zoning to maintain water table levels and reduce the risk of fires. It is their standard practise to notify local authorities of any fire incidences.

2. Monitoring and Haze Dashboard

In addition to these measures, SDP has initiated the Daily Fire Hotspot Monitoring System in September 2013. It is a round-the-clock monitoring system that utilizes NASA satellite data for accurate hotspot detection within SDP's operational areas. This serves as an early warning system to notify operational teams of potential fires within plantation estates. In the interest of transparency, in October 2015, SDP launched a Hotspot Alert Dashboard, to provide stakeholders with information on hotspots detected via the monitoring system. The dashboard is available on Sime Darby's website to provide stakeholders with information on the number of hotspots recorded in SDP's operational areas. A summary of actions taken to address these hotspots is also provided.



In November 2015, SDP went a step further with a commitment to help support fire-free zones of up to 5km, beyond SDP's operational areas.

3. Strategic alliances

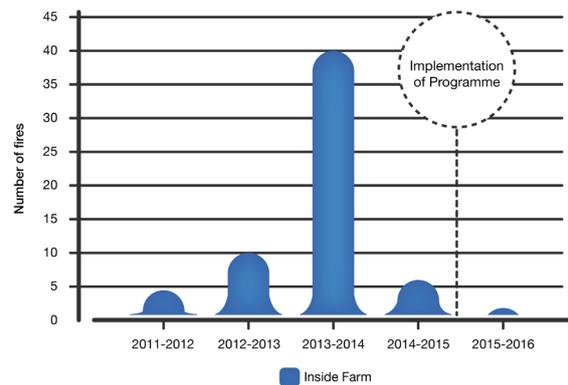
Programmes to engage and work with local communities to reduce the risk of forest fires, have been central to SDP's fire prevention efforts. Through a collaboration between its subsidiary, PT Bhumireksa Nusa Sejati (PT-BNS) and the University of Riau (UNRI), a 10-month 'Fire Prevention through Sustainable Farming Practices' pilot programme was completed in January 2016.

The programme was conducted in four villages surrounding PT-BNS, Riau covering an area of 17,158 Ha. It was designed to understand the drivers of slash and burn practices in traditional farming as well as provide alternative sustainable farming practices, to the use of fire. An initial survey conducted amongst 280 local farmers showed that 76.63% of respondents engaged in slash and burn to clear land for agriculture purposes and waste management, primarily for their coconut plantations. These farmers were taught sustainable farming practices, which include:

- Composting of agricultural waste for fertilizer.
- Conversion of wood waste to liquid smoke through the process of pyrolysis.
- Manufacture of furniture and handicrafts from waste wood and coconut leaf stalks.

After the implementation of the programme, fire occurrences were reduced from the peak of 40 hotspots in 2013-2014 to just 1 hotspot in 2015-2016.

Fire Hotspot Occurrences Surrounding PT-BNS



The success of the pilot has encouraged SDP to scale-up community fire programmes in 2016. The collaboration with UNRI was extended to four new villages neighbouring its subsidiary, PT Tunggal Mitra Plantation (PT-TMP) in Riau, and a new partnership with the University of Lambung Mangkurat (UNLAM) was also initiated, which targeted seven villages in South Kalimantan.

By partnering with FFA, SDP seeks to amplify its fire prevention projects by leveraging on the potential for a more coordinated and landscape level approach.



IOI GROUP

2017 NEW MEMBER INTRODUCTION: IOI GROUP

IOI Group has total planted area of 180,322 ha with 99% of the planted area planted with oil palm. The group has 90 estates and approximately 64% of the group's oil palm plantation holdings are in east Malaysia, 24% in peninsular Malaysia and the remaining 12% in Indonesia. The group's plantation produce is principally processed by its 15 palm oil mills with annual milling capacity of approximately 4,750,000 tonnes of fresh fruit bunch ("FFB"). Over the years, the group has been able to sustain as one of the most cost efficient producers in the industry due to management emphasis on continuous improvement in efficiency and productivity of its operations. Achievement in productivity is the result of years of concerted effort and commitment to good plantation management practices.

A number of areas where implementation is already underway:

1. On the mapping of peat land in the Indonesian concessions, they have signed an agreement for the commencement of LIDAR mapping of peatland areas within and around their Ketapang concessions.
2. Finalised a peatland rehabilitation plan for areas of damaged peatland in our palm oil concessions, PT BSS in Ketapang. This is the first step in a larger programme of peatland rehabilitation being planned in other concessions.
3. Undertaken high carbon stock (HCS) assessment, utilising the latest high carbon stock approach converged methodology, by an approved HCSA practitioner which will contribute to the programme of field trials for HCSA.
4. Developed an enhanced fire prevention and mitigation programme within (including conservation areas) and around their concessions areas and signed a MOU with Balai Konservasi Sumber Daya Alam as a partner to work on an action plan on fire prevention.
5. Taking active responsibility for the sustainability of third party suppliers since 2014, through our three-step process which comprises traceability, risk assessment and mill level verification. They are now enhancing that programme with suppliers workshops, and greater scrutiny of suppliers at group level.

IOI will bring to the FFA its experience in best management practices that has been the back bone of the organisation. IOI recognises the importance of biodiversity conservation, and strictly adheres to all relevant law, RSPO and ISCC certification principles and criteria to protect, conserve and rehabilitate the environment by adopting beneficial practices and

incorporating the protection of HCV, HCS and peat areas in their developments.

For this to be effective, they need multi-stakeholder discussions and FFA provides the best platform to address fire issues as members will share knowledge and report best practices within FFA and explore potential areas for collaboration.



Ground Survey Rehabilitation Area.



Rehabilitation in Indonesia Concessions.



Fire Training Drill.

