INTEGRATED FIRE MANAGEMENT MAGZ



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APP Sinar Mas Intensifies Wildfires Prevention in Riau and South Sumatra Ahead of Peak Dry Season

Ahead of this year's peak dry season, which took place between August and September 2019, Asia Pulp & Paper (APP) Sinar Mas had intensified its wildfires prevention efforts within all of its suppliers' concession area, including in Riau and South Sumatra.

During a Fire Anticipation Drill by the South Sumatra Provincial Government on Tuesday (9/7) and the Riau Provincial Government on Wednesday (10/7), held in collaboration with the National Disaster Mitigation Agency (BNPB),

APP Sinar Mas and all of its suppliers reiterated their readiness to support the government's efforts in preventing and mitigating wildfires in the two provinces.

Sinar Mas Managing Director Saleh Husin said, APP Sinar Mas's participation in the Fire Anticipation Drill reflected the company's and all of its suppliers' commitment to support both provincial and national governments in preventing wildfires this year.



66 APP Sinar Mas's participation in the Fire Anticipation Drill reflected the company's and all of its suppliers' commitment in wildfires prevention.



"We hope that with better preparation and solid collaboration between the private sector, the government, the Police Force and the National Armed Forces, as well as the local communities. we will be able to protect Indonesia's forests from wildfire disasters," said Saleh Husin.

BNPB Head Lt. Gen. Doni Monardo further emphasized the importance of the private sector's involvement in wildfire prevention.

"The areas where we hope we can optimize private sector's role is in providing guidance, capacity building, and assistance to the communities who live in and around the companies' concessions, so that they will no longer be a part of those who practice the slash-and-burn method," said Doni Monardo.

In response, APP Sinar Mas Fire Management General Manager Sujica Lusaka said, in anticipation of 2019 dry season, the company had relied on the Integrated Fire Management (IFM) system, comprising four main strategies namely prevention, preparation, early detection and rapid response. In addition, APP Sinar Mas had been committed to help fighting fires up to a radius of 5km outside its concession.

"Under the last three pillars, the company has optimized various facilities, including water-bombing helicopters, building the firefighting team's capacity, and implementing the Incident Command System, APP Sinar Mas has also built an early fire detection capability," Sujica said.

On prevention, the company had delivered education and capacity building programs to the communities who resided around its concession area. Through the Integrated Forestry & Farming System (IFFS) program, APP Sinar Mas had been able to minimize potentials for fire by providing guidance for the community to shift from the conventional land clearing practice of burnina.

The IFFS program also aims to improve community welfare around the company's concession, so that the community will be able to achieve social and economic prosperity through sustainable practices.

As of the end of 2018, the IFFS program has provided assistance to 66 villages in South Sumatra and 141 in Riau. By the end of 2019, the company is targeting to empower another 21 villages in South Sumatra and 46 villages in Riau.

INTEGRATED FIRE MANAGEMENT INTEGRATED FIRE MANAGEMENT IFM NEWS IFM NEWS



At the Fire Anticipation Drill in South Sumatra and Riau, APP Sinar Mas showcased its firefighters, technology, and facilities, including:

- Rapid Response Team Personnel
- Situation Room (early fire detection)
- Fire Monitoring and Waterbombing Helicopters
- Airboat
- Patrol cars
- Patrol bikes
- Water pumps
- Sambunesia multifunction firefighting nozzle

"Supported by the existing technology and facilities, we hope our firefighting team can work optimally in preventing and overcoming forest fire incidents on land, water, and air," said Sujica

APP Sinar Mas will keep coordinating and working closely with all authorities and stakeholders to prevent and mitigate forest fires in all its concession areas. As of the end of 2018, the company has successfully reduced the number of fire incidents to almost meeting its zero fire target, with only 0,07% from all of APP Sinar Mas supplier concession areas still affected by fire due to illegal burning by third parties.



TNI COMMANDER AND NATIONAL POLICE CHIEF LEAD FIREFIGHTING EFFORTS IN RIAU

Commander of the Indonesian National Armed Forces (TNI) Marshall Hadi Tjahjanto said he would deploy a Hercules aircraft on a water-bombing operation to accelerate firefighting efforts that had been underway in several regions in Riau.

Hadi, along with National Police Commander Gen. Tito Karnavian, National Disaster Mitigation Agency (BNPB) Head Lt. Gen. Doni Munardo, and Minister of Environment and Forestry Siti Nurbaya had visited Riau to assess its wildfire mitigation efforts.

Source: https://www.cnnindonesia.com/ nasional/20190812203203-20-420704/ panglima-tni-kirim-hercules-pengebom-airatasi-karhutla-riau



INTEGRATED FIRE MANAGEMENT

APP Sinar Mas Forest Protection System



various regions and districts



"No Burn Policy since 2001 and burning is strictly prohibited in all of our forestry perating procedures



We assist local authorities and villages

where possible to prevent and fight fires in the region



Rapid

Response

Protecting our valuable plantation assets,

which are crucial to the long term sustainability of our business is of utmost importance

Aircraft

IFM's 4 key pillars

Perimeter Canal

Blocking

been built as buffers

forest area

to protect conservation



are the primary tool to

fight a peatland fire

Early Detection

Incident command comprising of (1) Operations

(2) Planning

(3) Logistics

Initial Attack & Tightline Strategy

- In case of fire, the initial attack involves teams of 15 individuals and equipment as the fire line to response

- Excavators lead suppressing

- efforts, accompanied by helicopters
- per day

Hotspot detected fires are mapped onto a geo-referenced image

detection capability

Rapid Response Team: The Firefighting Heroes

Located in South Sumatra, the Ogan Komering Ilir (OKI) regency is home to APP Sinar Mas as one of the region's pulp and paper businesses. With the regency's vulnerability to forest and land fires, effective fire prevention and mitigation is therefore a key concern and responsibility of APP Sinar Mas.

To prevent and anticipate forest and land fires in the regency, APP Sinar Mas has dedicated a Rapid Response Team under the Fire Management division. Always ready to fight fire, the team has continuously improved their capability to effectively put out forest and land fires.

Each Rapid Response Team comprises seven highly talented squads with advanced ability to prevent and anticipate fires, namely the Alpha, Bravo, and Charlie team. These squads are always on standby for dispatch as soon as a hotspot or a fire is detected.

APP Sinar Mas Fire Preparation Section Head Nicodemus said, in 2015-2016, the company relied on three squads of Rapid Response Team as the front-line troops against forest and land fires. In 2017-2018, they grew into five squads.

In 2019, hundreds of prospective members of the APP Sinar Mas Rapid Response Team went through a selection process. Fourteen new members were chosen for their ability to work swiftly and deftly in handling forest and land fires, and later on joined two new squads of APP Sinar Mas Rapid Response Team. All of the new recruits are of South Sumatran origin.

"This year we saw 600 candidates applying to join the APP Sinar Mas Rapid Response Team. After going through a rigorous selection process, we were happy to select 14 new members," said APP Sinar Mas Fire Management General Manager Sujica Lusaka. The selection process consisted of several stages, including one derived from a semi-military approach, as well as physical monitoring, health, and personality tests, and was aimed at identifying the best recruits with high readiness to be dispatched.

To prepare them as reliable APP Sinar Mas Rapid Response Team members, new recruits are equipped with one year of training. The trainings are delivered by mentors from Spain, Manggala Agni, as well as the Indonesian National Armed Forces (TNI), and also include a training in helicopter operations.

Bravo Squad Commander Suryono, having been with the team for five years, has experienced all the ups and downs of firefighting in OKI. He said training is indeed essential to prepare the team for the field.

"Not all terrains are suitable to land a helicopter. This means sometimes we have to jump off the helicopter before rushing to the burning area. Our bodies sink in the mud, our way impeded by tall bushes and shrubs, and we have to face high lapping fires. This doesn't stop us from marching on and fight the fires with all that we have," he said.

Thanks to intensive training, Suryono and his team are well equipped to put out fires effectively. Teamwork and training are key to their readiness for any possibilities on the ground. For instance, when faced with a high column of fires, the team will douse it with water from the left and the right sides. "We have even extinguished a 20 meter tall fire," he said.

From marching through difficult paths riddled with fires, landing on challenging terrain, to walking miles carrying heavy equipment — the team has seen it all.

For six months, the two new squads have participated in three months of competence training and three months of guided on-the-job training, which includes being dispatched to the field under the supervision of a senior Rapid Response Team member. "We patrol the concession every day, and we know no holiday especially when we anticipate the dry season. The team gets dispatched half an hour after sunrise and half an hour before sunset," Sujica continued.

Two squads patrol the entire concession area and up to five kilometers from the borders, encompassing the Baung River in OKI, South Sumatra all the way to Mesuji in Lampung.

Three other squads continue to drill their skills and are on standby for dispatch when a fire occurs. The remaining two are deployed in two districts that span the central and southern parts of the concession, namely Lebong Hitam and Ketupa River.

From the outset, one may not expect much action of Doctor Priselia. Her petite figure non-imposing, covered in t-shirt and a purple floral hijab that matched the color of the blood pressure gauge that she always carries with her. Yet, a day in her life includes patrolling from post to post to check on the health of the firefighters on duty during wildfires.

We met Priselia in Londerang Village, which is situated at the border between East Tanjung Jabung and Muaro Jambi. "Seeing a lot of patients today?" I asked. She answered, "I have just traveled from one post to another, where the firefighters are on duty. I see about 10 members every day."

Priselia, who joined the team only six months ago and was deployed to Jambi, was a doctor at Eka Hospital Pekanbaru. Her workplace now is a green tent, where 20-30 firefighters can be seen taking turns to rest. They sleep on a tarp, with backpacks as their pillows. Around them, a few smaller tents stand tall.

"We are requesting for additional medicines and portable oxygen tanks. In this situation, it is more effective to equip firefighters with portable oxygen tanks. As thick haze cuts the brain's oxygen supply, firefighters can easily feel dizzy," said Priselia after checking one of the firefighters and giving him vitamin to prevent sore throat.

Having to examine the firefighters in the middle of the forest together with a driver, Priselia has to deftly get in and out of the ambulance in an instance. She looks tiny compared to the huge ambulance. There is no telling how long she will continue to be on duty in the field.

"I was actually not the only doctor around here, there were others, but I was closest to the area at the time. That's why they assigned me on this mission," she said. The doctor, having completed her study in 2017, had actually been enjoying work in the capital city of Jakarta before. She, however, wanted to take on a new challenge by returning to an outer city she knew very well: Jambi.

After a day of checking on firefighters, she takes a short break. Just before 9 or 10 PM, she then returns to her post. At the same time, the firefighters will return to the tent to rest. Priselia needs to check on their health before they go back to work the next day.

As a doctor, Priselia has her own hygiene standards. A mask is always flung around her neck, and will move to cover her nose when she comes in contact with haze. A self-proclaimed nerd, she was surprised to find herself enjoying the challenges of being on the ground.







When battling fires in the thickness of forest, the Rapid Response Team is often faced with rapidly changing winds, causing the fire to spread even further. Fires that are difficult to control also often forces them to spend the night in the middle of the jungle during the dry season. "Never go home before the fire is out!" exclaimed 25-year-old Ardi Tarigan, one of the TRC personnel.

Having to stay overnight in the forest is no longer unusual for Ardi and his colleagues. In early July 2019, the TRC had to sleep under the sky. "At the time, we were on an air patrol on board a Bell 412 helicopter around Duri, near the Giam Siak Kecil conservation area in Riau." he said.

Ardi, along with six other TRC members, were on an air patrol and the pilot and copilot maneuvered the helicopter toward the location identified as the site of a fire. A technician was also involved in the patrol, bringing the total number of people on patrol to 10.

It was already past 5 PM when the helicopter finally landed among the bushes, some 300 meters from the fire spot. Finding a landing spot was not easy because the area is adjacent to an APP industrial timber estate concession and oil palm plantations of local growers. The helicopter could not land near the fire spot and thus the TRC had to move through the thick bushes to reach the fire and put it out.

"Helicopters cannot fly at night and therefore we had to spend the night at the location of the fire," said Ardi.

Fortunately, the fire had not gutted the entire area. The fire only burned down about 0.3 hectares. But area that big was enough to overwhelm Ardi and the other TRC personnel. They used the equipment that they had taken with them as well as whatever other resources they could find in nature. The fire was finally put down at seven in the evening.

As dusk slowly turned into night, darkness fell and in the dark, it was not possible for the TRC to seek local habitations to spend the night. They had to spend it in the jungle where Ardi's cellphone could not operate because of the absence of telephone signals there.

The nearest repeater station was unable to continue and amplify the telephone waves to reach them. Ardi had to climb a tree to get a signal. He reported back to the headquarters that they had to spend the night in the forest and hoped for a team to pick them up the following morning. "We turned off all communication devices to save the batteries." said Ardi.

TRCs are always equipped with emergency equipment when on duty. That night, they slept in sleeping bags. They had not brought a tent and also did not bother to build a simple bivouac. Should it have rained, the ground they were sleeping on would of course, turn wet. The only available food that they could consume were snacks that are always stashed in the backpack of each of the personnel. Beginning at 10 in the evening, they took turn to rest in preparation for the next day. And to discourage wild beast from approaching, the lit a fire. They took turn to keep the fire. "I once encountered a bear. I was really scared," said Ardi.

A week later, a similar incident happened to Angga Suprianto (30). The TRC coordinator had to spend the night in the forest of Bara Induk bordering on the Kerumutan conservation area. "We found the feces of an animal, most likely that of a tiger," Angga said.

This near encounter did not discourage the TRC. Despite of his encounter with a bear in the forest, Ardi never lost his enthusiasm. For him, TRC members must remain vigilant. In the coming month, the Sumatra region will enter the dry season and that meant that, Ardi and his friends would have to always stay alert.

THE 'SRIKANDI' TRIO in The Heat of Fires



Simpang Tiga – For dr. Irma Mariany Sitohang's this was her first journey in exploring what remained of a burned-out swamp tea-tree forest.

The journey that dr. Irma and her team had to undertake to visit a number of firefighter outposts was far from easy and was time consuming. Each outpost is separated by a distance of about four kilometers. The track they have to follow is also far from smooth. They have to go through tracks that had been newly opened by field personnel to facilitate the movement of firefighting equipment through the forest. Sometimes tracks are being opened to act as firebreaks but were later also used for the supply of logistics and the movement of firefighters.

Accompanied by Dwi Indah Lestari (25) and Putri (22), dr. Irma did not have much time to spend at the main firefighting post. She and her team had to hurry towards a smaller secondary outpost where an APP Sinar Mas's Rapid Response Team (TRC) has been trying for days to extinguish a fire nearby and prevent the reoccurrence of such fires in that swamp tea-tree forest.

Once at the secondary outpost, dr. Irma immediately busied herself providing health examination to a number of firefighters there and also provide oxygen access if needed. The elite firefighting team had already been on alert for weeks there and have been busy trying to douse the fires in the area.

"The firefighter team are usually susceptible to Acute Respiratory Infection (ARI) ailments. The scarcity of clean water has also made them unable to wash themselves for days. Wearing cloth that are wet, partly also because of sweat, also can cause itchiness. Therefore, we not only provide them with medicine for burns but also those for the itchiness," explained dr. Irma who always leave various other medicines that the firefighting team may need, when she visits for her health examination rounds.

The visits to the firefighting locations are something that dr. Irma and her team must conduct to make sure that the firefighting personnel are healthy, as they could not leave the location of the fires until they had managed to extinguish them.



IFM STORIES IFM STORIES





On that day, on the way to the secondary outpost they had to pass through hundreds of meters of charred forest remnants from the fires. But the happy faces of the firefighting personnel greeted them as the medical team arrived on site. They appeared very happy to be able to have a brief respite, while their health conditions were being checked.

One of the firefighting personnel, Febrianto (23) and three others, had their blood pressure checked and they also sough access to oxygen from the medical team. "Doc, please also leave the ointment with us," pleaded Febrianto who had been unable to wash for days. "There is water, but it is not clean and only makes my body itch if I force myself to take a shower," he continued.

Putri had a different story to tell. Two days earlier, she had to go to an outpost much farther inland, but there was yet no land route opened and thus, they had to go by long canoe that is locally known as Ketingting. The distance that they had to cover was quite far.

But while on the way, the walky-talky belonging to one of the firefighters who accompanied her on that trip suddenly rang. Someone reported that there was a fire that had suddenly grown bigger rapidly, and they needed the help of the nearest personnel available. The firefighters who had come with her, suddenly all left for the area where the fire was supposed to be. "Putri, here is a machete. Just use it if necessary. We have to go help fighting the fire," Putri quoted one of the personnel as having said. Even though going to burning locations was nothing new to her, she was still worried, thinking about herself

being left alone on the Ketingting in the middle of the river.

Around her, there were only the charred remains of fires and it was also eerily quiet. "I couldn't help but cry. I was worried and didn't know what to do because I had to wait for them for almost two hours," explained Putri who was now able to occasionally laugh when telling the story.

This experience made her no longer hesitate whenever she has to go to difficultly accessible areas to provide health examinations and assistance.

That day, we retraced about half of the path that Putri had taken on that eventful day. Although dusk was fast approaching, there were still some personnel to have their health checked. "Even though we were only examined briefly and left with one or two medicines, but we feel happy that someone is giving us attention. These medical checks are an extraordinary form of attention for us who sleep every night under the sky and befriend large forest mosquitoes. We have also not seen our family for weeks," said Nurdin, one of the firefighters that the team met.

Irma, Intan, and Putri were not kind of girls who previously liked outdoor. But having gone in and out of forests, has given them a shot of adrenaline and made them challenged to do more activities outdoor. "I may not have had not many friends previously, but now, I like this kind of activity, rather than staying at the hospital or clinic," said Irma, who has joined Eka Hospital Pekanbaru since 2017.

The Bekuyu District in Baung, South Sumatra, is now where she currently works. The two other paramedics, Intan and Putri are serving in Simpang Tiga District, in an area not far from the main firefighting post of PT Bumi Mekar Hijau, which manages one of APP Sinar Mas's concessions.

The three heroines, who are more often found in the midst of remnants of fires, have become an encouragement for the firefighters who cannot return home before the fires had been put down. "I learned about solidity, teamwork, and to have an extraordinary passion. That's what I was able to learn from them," said Irma. She always praying for rain to fall soon, so that it would alleviate the work of the firefighters in putting down fires.



IFM TECHNOLOGY IFM TECHNOLOGY



WILDFIRE MONITORING AND PREVENTION FACILITIES

APP Sinar Mas's Rapid Response Team (TRC) is always ready to monitor the company's concession area and an area of up to five kilometers from its concession borders. They are also ready to move swiftly to extinguish any fire, even if it is located outside of the said area.

"We are always monitoring different regions to determine fire-prone areas, especially since the OKI region in South Sumatra is vulnerable to forest and ground fires. APP Sinar Mas's TRC strives to safeguard the OKI region and its surroundings from the threat of forest and ground fires," said Mares Prabadi, Fire Operation Management Head of Sinar Mas's Palembang Forestry Region.

Mares said that the TRC conducts

patrols and water-bombing operations with a helicopter capable of carrying 1,500 liters of water. This helicopter is always on standby near fire-affected regions. For emergency support, specifically for the South Sumatra region, additional helicopters will be secured, namely one Mi-8 with a 5,000-liter water-bombing capacity, one Superpuma with a capacity of 1,000 liters, one EC B.4 as well as one Bell 412 for patrols and water bombing with a capacity of 1,000 liters.

"There are 4 airboat units, 89 water transportation units, 415 water pump units, 40 fire trucks, 40 patrol cars units, and 114 motorcycle patrol units and monitoring posts. To monitor hotspots, the APP Sinar Mas TRC can detect fire spots with two thermal camera units that

are installed at a number of fire-prone points and monitored from the situation room. This equipment can detect hotspots in fire-prone areas as far as 10 kilometers away," he explained.

Other supporting facilities to monitor forest and ground fires are 23 fire towers, 77 detection & reaction posts, 28 detection posts, 18 situation rooms and 19 patrol units. This monitoring allows the APP Sinar Mas TRC to find hotspots earlier and be more rapid in preventing forest and ground fires.

The APP Sinar Mas TRC is also assisted by APP Sinar Mas's Firefighting Personnel (RPK), with its 799 personnel. The RPK personnel are on standby across the APP Sinar Mas concession and beyond it. This team is included in the Fire Prevention and Mitigation strategy for the prevention and management of forest and ground fires in South Sumatra.

Panji Bintoro, a Fire Planning officer on duty at APP Sinar Mas's SOS Karhutla Command Post said that the RPK team always monitor weather forecasts, fire-prone areas, concession areas and areas beyond, and hotspots, using a variety of sophisticated equipment.

Equipment used includes include Automatic Weather Stations (AWS) and the Fire Weather Index (FWI), to monitor hotspots marked by red spots at 25 monitored points.

There are also three CCTV units that can record up to a distance of 10 kilometers, and which are installed in areas prone to forest and ground fires, including one in Padang Sugihan and another in

Kuala Lumpur in the OKI District of South Sumatra. The monitoring uses 9 monitor units which remain on standby round the clock. There is also the Fire Command Post which monitors the area through 140 district posts, 23 fire towers, and a mini tower.

"To get actual data from the field, such as on humidity, wind and temperature, we used AWS installed at 20 different points on the field. We also monitor data from the BMKG weather information website, the Windy satellite and the LAPAN satellite at lapan.go.id as recommended by the Ministry of Environment and Forestry, the NOAA Satellite, the Moderate-resolution Imaging Spectroradiometer (MODIS) Satellite, the Tera Satellite and many others," he said.

Weather monitoring are also carried using a variety of references. They will even monitor the weather forecasts for the week ahead, to map fire-prone areas.

Data Tracking from the Rapid Response Team and the APP Sinar Mas Firefighting personnel are also important in monitoring fires in the OKI District, South Sumatra. One of the ways to monitor is by using the Fire Report Online System (FROS) application that can be used online by members to report hotspots in the field.

Members are also equipped with Spot Gen equipment, which can connect to a satellite if they want to report events when the communication network in the field does not function.

IFM EVENT





15 Oktober 2019.

Members of the TNI along with hundreds of students from the Aulia Cendikia Islamic Boarding School (Pesantren) in Talang Jambe, Palembang, held a special mass prayer together with employees of APP Sinar Mas, the BPBD, the South Sumatra Forestry Office, the APHI, armed forces and police personnel, as well as members of the surrounding communities, to ask for rain that can help in mitigating forest and ground fires.

APP Sinar Mas has also dispatched five water-bombing helicopters and more than 50 units of heavy equipment and work with members of the Fire Task Force, the armed forces, the police, the South Sumatra BPBD chapter, and the local community to help quell the forest and ground fires.

25 - 27 September 2019.

APP Sinar Mas (PT Indah Kiat Pulp & Paper and PT Arara Abadi) continues to strive to help forest and ground fire-affected areas, not only with the firefighting personnel, but also by working closely with Eka Hospital and the local Health Office to open free health examination post and provide free medical treatment for local residents.

These posts are located in Pekanbaru (Simpang Baru Village, Tampan Sub-District in Kampar District) and in Perawang (Perawang Lurah Office Hall), operating on September 25-27, 2019, from 09:00 - 16:00 WIB and examining 500 people.



9-10 Juli 2019.

Roll call to prepare for the Peak Dry Season - for South Sumatra and Riau

Approaching the dry season, APP Sinar Mas is collaborating with the private sector, government, TNI-Polri and surrounding communities to support the government program to help prevent forest and ground fires in South Sumatra and Riau as conveyed by Sinar Mas Managing Director Saleh Husin.

At the morning roll call ahead of the dry season on July 9-10, APP Sinar Mas General Manager of Fire Management Sujica Lusaka, said that the company will use an Integrated Fire Management (IFM) system in carrying out various forest fire prevention efforts. In addition, APP Sinar Mas is also committed to helping put out fires within a radius of up to 5 KM outside of the concession.

This effort is also supported by technology, firefighters and other facilities, such as Rapid Reaction Team personnel, situation rooms, airboats, water-bombing helicopters, and much more. Based on the 2019 Forest Conservation Report, by end of 2018, APP Sinar Mas had succeeded in reducing the number of forest fires to almost reach the zero-fire target. Therefore, APP Sinar Mas will continue these efforts to prevent forest and ground fires in its operational areas and those of its suppliers









