

A Production-Protection Model for Sustainable Pulp & Paper Operations in Riau, Indonesia

1 Abstract

Paper products have enabled significant progress in education, culture, and hygiene at the same time as they have contributed to deteriorating the world's forests, driving species to the brink of extinction, and worsening climate change. The need for pulp and paper companies to consider and mitigate the environmental impacts of their business practices has become increasingly clear. This case study tells the story of a major Indonesian pulp and paper company, Asia Pacific Resources International Holdings Limited (APRIL), that took several steps to balance the economic and environmental concerns of paper production while taking into account multiple stakeholders, including the Indonesian government, local communities, and consumers.

2 Introduction

In mid-2015, Craig Tribolet couldn't see anything on the other side of the road from where he was standing in Pangkalan Kerinci, Riau Province, Indonesia.

Tribolet, the strategic fire and protection manager of the paper and pulp producer Asia Pacific Resources International Holdings Ltd (APRIL) Group, was far from alone. Thick, acrid haze from illegal forest burning was blanketing Indonesia as well as other Southeast Asian countries such as Malaysia and Singapore, hampering visibility and making it difficult to breathe (Figure 1, Figure 2). Over a four-month period in the second half of 2015, half a million people in Sumatra and Kalimantan alone would suffer from acute respiratory tract infections, and some would lose their lives.¹ The air, according to a correspondent for *The Guardian*, was "a toxic sepia colour".² Estimates from the Global Fire Emissions Database revealed that daily carbon emissions from the burning for some days of that year were higher than those generated from all economic activity in the United States each day.³

The region's abysmal air quality angered many — especially since this was not the first time Southeast Asia had experienced severe haze. Forestry com-

¹Kate Lamb, "Indonesia's fires labelled a 'crime against humanity' as 500,000 suffer," *The Guardian*, October 26, 2015, <https://www.theguardian.com/world/2015/oct/26/indonesias-fires-crime-against-humanity-hundreds-of-thousands-suffer>.

²Ibid.

³Nancy Harris, Susan Minnemeyer, Fred Stolle and Octavia Payne, "Indonesia's Fire Outbreaks Producing More Daily Emissions than Entire US Economy", *World Resources Institute blog*, October 16, 2015, <http://www.wri.org/blog/2015/10/indonesia%E2%80%99s-fire-outbreaks-producing-more-daily-emissions-entire-us-economy>.

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Figure 1: Swissôtel The Stamford, a luxury hotel in Singapore’s Downtown Core, blanketed by the haze in 2015. The haze crisis affected numerous Southeast Asian countries. Image by User: Jacklee, distributed under a CC BY-SA 4.0 license.



panies suspected to be involved in the slash-and-burn land clearing that caused forest fires had received a lot of heat from the public over the years. APRIL, Indonesia’s second largest paper and pulp manufacturer, was one such company. APRIL was part of the US\$18 billion group of resource-manufacturing companies managed by Royal Golden Eagle (RGE). The company managed 1 million hectares of land concessions in Riau province, Sumatra, producing pulp that was transformed into products such as tissues, liquid and food packaging, and paper used for writing, copying, and printing. Over 70 countries sold APRIL’s products. Producing these items involved plantations of three tree species: *Eucalyptus* sp, *Acacia mangium*, and *Acacia crassicarpa*. An APRIL-sponsored analysis of APRIL’s economic impact on Riau province from 1999 to 2014 by the Institute for Economic and Social Research, University of Indonesia estimated that APRIL had contributed to 5.2% of the area’s GDP over that time period.

APRIL was not exempt from the media attention that connected large companies with forest fires and other environmental threats. For example, David Fogarty’s September 21, 2015 article in *The Straits Times* reported that some of that year’s fire alerts had come from the concession areas of APRIL’s timber suppliers. Other reports described allegations that the company was clearing forest on valuable peatland.⁴

Also part of the media conversation was APRIL’s efforts with regards to sustainability. Since the company began operating in 1994, APRIL had taken steps such as taking a zero deforestation stance on development, establishing a multimillion dollar peatland ecosystem restoration programme, and setting up an incentive scheme to prevent fires, among other things. APRIL asserted that

⁴Jessica Cheam, “Singapore-based APRIL under scrutiny as haze season gets underway,” *Eco-Business*, July 8, 2014, <http://www.eco-business.com/news/singapore-based-april-under-scrutiny-haze-season-gets-underway/>.

Figure 2: A mosque in Pekanbaru, the capital of Riau province, during the 2015 haze. Image by Rina, released into the public domain.



Figure 3: Riau province, Indonesia. Image by Ben Walker, distributed under a CC BY-SA 3.0 license.



sustainability was at the core of its values and aspirations. “APRIL Group’s business vision is centred on the belief that responsible development can build a better future for Indonesia, helping local people to break the poverty cycle and improve their lives,” the company’s website stated. “Operating sustainably is essential to achieving this vision, where sustainability is defined as using resources to meet human needs while ensuring the sustainability of natural systems and environments today and into the future.” RGE’s founder, Sukanto Tanoto, took a fairly long view in his approach to business, according to APRIL chairman Bey Soo Khiang. Tanoto’s “5C” approach to his work posited that a business had to do what was good for the community, the country, the climate, and the customer. Only then would the business’ endeavours be good for the company.

“We take a holistic, long term view of development,” Bey said. “Lots of people’s lives are depending on it.” He added that destroying the forest and worsening climate change would also impact the company’s yield.

“From a business perspective, we want to make sure all our practices are sustainable over time,” APRIL sustainability manager Tim Fenton said. “That means managing our resources to the best known science to ensure business going forward in the future.” Global population growth made increased future demand for certain cash crops likely. For example, a 2013 analysis in the journal *Forest Science* suggested that global paper consumption was growing, particularly in Asia.⁵

3 Making Pulp and Paper Sustainable

At the time of writing, the Indonesian government had taken several steps to address the various environmental challenges associated with Indonesian agriculture. In 2011, then-President Susilo Bambang Yudhoyono signed a moratorium on issuing new logging permits for undisturbed forest and peatland, with the exception of concessions that had already been awarded. After the 2015 haze crisis, the government put further rules in place, including threats of demotion to army, police, or local government leaders who did not prevent forest fires in their designated areas and a requirement for companies to establish fire prevention programmes that involved collaboration with local communities. The administration also banned companies from new peatland development and the construction of canals. Reactions to such regulations were mixed, ranging from praise for increasingly tough legislation to allegations of loopholes.

APRIL faced the challenge of balancing official regulations with its own business and sustainability plans. Like many land-dependent companies tackling the interplay between development goals and environmental considerations, the company was working towards a “landscape approach” to sustainable development: a multifaceted take on forestry management that integrated factors such as biodiversity conservation, climate change mitigation, and community empowerment into APRIL’s plans for how to run the company’s plantation forests. The approach aimed to achieve balance between considerations of development, human livelihoods, and the environment.

“First of all, you’re looking at the larger area, not just individual licenses of land,” APRIL Deputy Head of Conservation Bradford Sanders said of the

⁵Maija Hujalaa et al., “Explaining the Shifts of International Trade in Pulp and Paper Industry,” *Forest Science* 59 (2013): 211-222.

landscape approach's broad scope. "Second, you're looking at not just managing one aspect of the land, such as the productivity to grow trees like oil palm or *Acacia*, but you're looking at the whole package of natural capital — the wildlife, the forest, the soil, the ecosystem services." Such an approach was "necessary to address the issue of continuing degradation of unmanaged land in Indonesia," according to APRIL.⁶

Ideally, the landscape approach would ensure that all land would be managed such that there were no doubts as to who was responsible for any given piece of land. Many of the environmental issues associated with agricultural activities in Indonesia involved some form of conflict over land ownership. Indonesia lacked a central land registry, and different levels of government granted land concessions for different land uses. For example, the country's Ministry of Environment and Forestry granted pulpwood concessions, while local authorities handled palm oil land rights.⁷ Further, conflicting land use maps were sometimes used to determine management rights. As such, concessions sometimes overlapped and land ownership was often disputed and difficult to enforce. Indonesia's transmigration scheme, a resettlement program that moved Indonesians from densely populated parts of the country to less crowded areas, had created further conflicts over land ownership. Disputes over land could turn violent.⁸

"Unmanaged land is vulnerable to degradation, poor agricultural practices and illegal logging driven by economic pressures in a country where 30 million people live below the poverty line," RGE stated on its website. "The goal is to ensure land is managed so that it can be protected and conserved or developed responsibly as part of a holistic, sustainable development framework."

The roadmap for APRIL's sustainable development strategy was its Sustainable Forest Management Policy (SFMP), a series of commitments the company had made in the service of sustainable development. APRIL launched the first version of the policy in 2014, and an updated version, SFMP 2.0, in 2015. The SFMP aimed to accomplish several broad goals, with APRIL stating in writing:

"We commit to eliminating deforestation from our supply chain and to protecting the forest and peatland landscapes in which we operate and to supporting best practice forest management in all countries where we source wood. We commit to respecting human rights and environmental aspects throughout our wood supply chains. Our goal is to be a good and responsible neighbor in the local, national and global community."

A Stakeholder Advisory Committee (SAC) comprised of independent forestry and social development professionals monitored and provided feedback for the SFMP 2.0's implementation. Members included former Indonesian Minister of

⁶"Policy White Paper: APRIL's Landscape Approach to Conserving Forested Areas," Royal Golden Eagle, accessed June 27, 2017, <http://www.inside-rge.com/APRIL-Landscape-Approach-Conserving>.

⁷Karl Mathiesen, "Greenpeace reveals Indonesia's forests at risk as multiple companies claim rights to same land", *The Guardian*, April 2, 2016, <https://www.theguardian.com/sustainable-business/2016/apr/02/greenpeace-palm-oil-logging-indonesia-overlapping-land-claims-greenpeace-forest-firessomething>.

⁸John Vidal, "Indonesia is seeing a new corporate colonialism", *The Guardian*, May 25, 2013, <https://www.theguardian.com/world/2013/may/25/indonesia-new-corporate-colonialism>.

Human Settlement and Regional Development Erna Witoelar and James Cook University Professor of Conservation and Development Practice Jeffrey Sayer, among others. The SAC held meetings with APRIL several times a year, during which the SAC provided critiques of and suggestions on how to improve APRIL’s sustainability efforts. Meeting minutes and reports were available on APRIL’s website.⁹ APRIL also established an Independent Peat Expert Working Group (IPEWG) to provide the company with advice and peer review in its peatland management efforts.

A key development from SFMP 2.0, as compared to the original SFMP, was that APRIL was now enforcing a complete moratorium on deforestation. The company and its suppliers would avoid clearing any forest until they learned the results of independent assessments to determine which forest areas had significant conservation value (officially defined as High Conservation Value, or HCV) or contained large stores of carbon (High Carbon Stock, or HCS). They would then avoid any subsequent clearing of such high-value forest areas. Assessors identified forest areas as being of HCV based on criteria such as the presence of rare or threatened species, the provision of “ecosystem services” such as a supply of clean drinking water, and cultural or historical significance, among others.¹⁰ Meanwhile, assessments of HCS forests took into account a forest’s vegetative cover and thus the carbon and biodiversity such a forest could store.

Both the HCV and HCS approaches served as tools to evaluate which areas were appropriate for development, and which should be conserved. Degraded lands with low HCV and HCS values were better candidates for industrial use than forests full of endangered species and dense foliage whose carbon-storing capacities could help mitigate climate change. As such, APRIL developed its plantations on degraded land. “Our perspective is that we cannot save all of the forest, but we can save the high value forest,” Bey said. Some challenged the validity of HCV as a conservation tool, however, suggesting that the criteria for classifying forest as HCV were insufficient for maintaining desirable levels of biodiversity.¹¹

Also part of the SFMP 2.0 were commitments to actions such as forest protection and conservation, peatland management, and the support of local communities.¹² The sections below, which are not exhaustive descriptions of APRIL’s sustainability actions, detail some of these commitments and the measures APRIL undertook to stick to them.

3.1 Forest Protection and Conservation

Besides the company’s moratorium on deforestation, another focus of APRIL’s forest protection and conservation efforts was its “1-for-1” pledge: a commitment to conserving one hectare of forest for every hectare the company used for commercial plantations. At the time of writing, APRIL had reached 83 percent

⁹Meeting minutes are available at <http://www.aprilasia.com/en/sustainability/stakeholder-advisory-committee/meeting-updates>.

¹⁰For other HCV criteria, see <https://www.hcvnetwork.org/about-hcvf/the-six-high-conservation-values>.

¹¹See David P. Edwards, Brendan Fisher and David S. Wilcove, “High Conservation Value or high confusion value? Sustainable agriculture and biodiversity conservation in the tropics,” *Conservation Letters* 5 (2012): 20-27.

¹²For the full SFMP 2.0, see <http://www.aprilasia.com/en/sustainability/sustainability-policy>.

of its goal. The company had conserved or set aside for restoration 400,000 hectares of forest, and was using 480,000 hectares for its plantations. Each area of conservation forest had a border of *Acacia* trees around its perimeter to prevent activities such as illegal encroachment and burning from affecting the company's conservation goals.

APRIL had made ecosystem restoration a cornerstone of its sustainability efforts. To this end, the company established an ecosystem restoration initiative called Restorasi Ekosistem Riau (RER). As its name suggested, the RER project aimed to restore forest areas in Riau that had been degraded by illegal logging, forest fires, and other threats. The Indonesian Ministry of Environment and Forestry had granted the company 60-year eco-restoration licenses, and APRIL had committed to investing US\$100 million in the restoration and management of 150,000 hectares of peatland in Indonesia's Kampar Peninsula and Padang Island as well as the protection and management of an additional 250,000 hectares of HCV forest within its fibre production concessions. The RER project counted among its collaborators the not-for-profit organisations Fauna & Flora International (FFI), Bidara, and The Nature Conservancy (TNC).

"APRIL has been granted the responsibility to try to protect and restore these concession lands," Sanders said. This meant preventing any further decline of the area as well as bringing native wildlife back to the ecosystem.

APRIL had three main objectives for restoring peat forest in the Kampar Peninsula, according to Sanders. First, the company wanted to protect fragile peat domes from drainage and burning. Peatland, which was made entirely of organic material, was a carbon sink that helped store carbon from the atmosphere, reducing greenhouse gas levels. Second, the project helped provide employment for the community, as it prioritized hiring locals. "Everybody is Indonesian except me," Sanders said of his 170-strong team. Third, the restoration goals of the project helped APRIL meet its 1-for-1 commitment to match the company's plantation areas with conservation areas of equal size.

At the time of writing, RER was four years old. APRIL was still in the early stages of the project, working to meet legal obligations such as the perimeter boundaries of the restoration area and establishing land use plans to present to the Indonesian government. "It's a whole bureaucratic process as well as a physical process," Sanders said. Other steps included preventing further degradation of the forest through canal drainage, animal poaching, burning, and other activities as well as collecting baseline data about the forest's biodiversity, carbon, and community values.

Sanders said he felt that the scale of the project was unusual for a corporate initiative. The size of the land APRIL was managing in the Kampar Peninsula, for example, was on par with that of some national parks. "Most large-scale landscape conservation projects are led by foreign donors and local partners, like conservation groups, that seek partnerships with the private sector," he said. "RER comes from the private sector, which makes it unique...and we're paying from it from our own business, not using other people's money."

3.2 Fire Prevention

APRIL decided to adopt a no-burn policy in 1994, the year it began operating, for both itself and its suppliers. Other large paper and pulp companies such as Asia Pulp & Paper (APP) had implemented similar policies.

“We don’t like fires,” Tribolet said. “Fire is a key threat to our core business.”

Forest fires were a massive expense for APRIL, and at the time of writing had cost the company US\$140 million worth of damage to its forestry assets between 2009 and 2015. Clearing and replanting areas of burnt forest was very expensive, and burning removed the leaves and fine branches that were previously considered waste but were actually important nutrient sources for future generations of trees. Damaged trees were also useless in the paper making process. “Burnt trees cannot make white paper,” Tribolet said. Further, fire detection and suppression were risky and costly — the company had invested over US\$6 million in fire extinguishing equipment at the time of writing, and spent between US\$2 million to \$4 million a year operating its firefighting team.

Risk maps suggested that fires were not occurring in the middle of APRIL’s plantations, but rather at the fringes, according to Tribolet. These were the parts of the forest that were the hardest for companies to control. The sites of these fires strongly correlated with the locations of villages whose residents were expanding their oil palm or other plantations, likely using slash-and-burn methods — that is, setting forests on fire to clear the land for agriculture. Such residents — also known as smallholders or small-scale farmers — relied on family labour, derived most of their income from the farm, and typically earned low incomes.¹³ Independent palm oil smallholders earned about 2.17 million Indonesian rupiah (US\$163 at the time of writing) a month, for example. Slash and burn methods, which cost one tenth of the price of using machinery, helped keep land clearing costs down.

That large forestry companies in Indonesia were a key source of fires, and therefore the haze, was one of the most common misconceptions the public had about the paper and pulp industry, Tribolet said. Half of the respondents to a 2015 *The Straits Times* poll said that they would not buy products from companies that were contributing to the haze. “It’s easy to name one or two large companies rather than to have the complicated discussions about smallholders who are just trying to make a life for their families,” Tribolet said. “You’re an easy target.”

Others had also suggested that companies were not necessarily responsible for the fires.

“Andika Putraditama, research analyst at the World Resources Institute, a Washington D.C.-based think-tank which created the Global Forest Watch platform, feels the media has tended toward an oversimplified narrative of blame.

For example, he said, in mining a series of graphics the WRI recently posted to its website, one newspaper focused on a list of the concessions with the most hotspots but didn’t mention an accompanying chart showing that most fires are burning outside company land.

“They just took a graphic that blamed an [Asia Pulp and Paper supplier], but it lacked context,” Andika said.”¹⁴

¹³“RSPO Smallholders Definition,” Roundtable on Sustainable Palm Oil, June 27, 2017, <https://www.rspo.org/smallholders/rspo-smallholders-definition>.

¹⁴Philip Jacobson and Jogi Sirait, “Who’s responsible for Indonesia’s fires?”, *Mongabay*, September 22, 2015, <https://news.mongabay.com/2015/09/whos-responsible-for-indonesias-fires/>.

Meanwhile, some accused the Indonesian government of taking insufficient action to prevent burning.

“It’s a blame game, with everyone pointing the finger at someone else,” journalist Oliver Balch wrote in a November 11, 2015 article in *The Guardian*.

Another common misconception was that hotspots — satellite-based indicators of forest fire locations — were a reliable means for identifying the locations of fires, according to APRIL sustainability manager Tim Fenton. Though the media often referenced hotspot information in coverage of the haze and fires, hotspots were not absolutely accurate indicators of the presence of fires. “Our ground verification experience has shown that there’s limited correlation between hotspots and where the fires are,” Fenton said. “The terms are not interchangeable.”

APRIL’s fire management strategy prioritized community collaboration and education. In 2014, APRIL launched its Fire-Free Village Program (FFVP), an initiative whose aim was to provide incentives to villages not to burn forest. Under the FFVP, APRIL provided rewards of infrastructure and equipment such as basketball courts, mosques, roads, and bridges to villages that prevented fires for three consecutive months. An independent group of officials and non-governmental organizations evaluated a village’s fire free record to determine whether the village would receive a full reward of IDR 100 million (US\$7,614), a half reward of IDR 50 million (US\$3,807), or no reward. At the time of writing, APRIL had established FFVP collaborations with 18 villages in Riau, and 14 of those villages received rewards in 2016. Burnt areas comprised 0.07 percent of FFVP land in 2016, compared to 0.3 percent in 2013.

“Of course, it is clear that the possibility of rewards helped a lot to get support for FFVP at the beginning,” Fire Prevention Manager Sailal Arimi said.¹⁵ “Looking ahead, I think that seeing and using the rewards infrastructure every day will be a very important reminder to people of the importance of fire prevention.” An APRIL-commissioned review of the FFVP conducted by Carbon Conservation, a private company focused on conservation, sustainability and environmental finance, suggested that the “excitement” that the rewards initially brought to the villages diminished in the second year after the implementation of the programme, and that villages that had participated in the programme for two years reported about 10 percent less awareness of FFVP than those that had just joined the programme. The review noted that it was unclear whether the “no burn” message would continue to resonate with villages when the rewards were removed, and in the long term.

In the same interview, Sailal said he felt that it was important to drive home the message that burning was undesirable. But creating such a cultural shift posed a considerable challenge to the company in the early stages of establishing the FFVP program. “We had a lot of cups of tea with community members trying to discuss this problem [of burning],” Tribolet said. “We wanted to ensure some alignment in terms of the recognition of the problem and community expectations...what *they* think they need to resolve the issue. At it’s core, it’s really working inside the villages to understand their motivations and getting them to understand that we share the problem.”

¹⁵“Riau Villages Reap the Rewards of a Fire-free Landscape,” APRIL, accessed June 27, 2017, <http://www.aprildialog.com/en/2017/04/04/riau-villages-reap-rewards-fire-free-landscape/>.

Figure 4: FFVP crew leader Helmi (left) and village elder of Kuala Tolam village (right). Kuala Tolam received a half reward of IDR 50 million (US\$3,807). The village reduced its burnt area to less than a hectare in 2016 from a high of 100 hectares in 2013. Image courtesy of APRIL.



As part of the FFVP, APRIL selected community members in each village as “crew leaders”: individuals trained in basic fire suppression who spread the message of fire prevention to their villages (Figure 4). Crew leaders, who wore distinctive red shirts, collaborated with the police, army, and village leaders to patrol villages, post flyers, and make speeches about the harms of burning as well as the punishments for fire starters. Tribolet stressed the importance of working closely with local communities to successfully bring about lasting shifts in attitudes towards fires. “There are very long-term political frameworks in these communities,” Tribolet said. “You have to engage with those frameworks.”

3.3 Peatland Management

Fires on peatland contributed considerably to the Southeast Asian haze. Peatland, a type of soil made of plant debris that could store massive amounts of carbon, was typically waterlogged and therefore not susceptible to burning when it was in pristine condition — particularly in the tropics, which experienced abundant rainfall and high humidity. But human activities such as plantation development often led to the construction of canals to drain the water-rich peatland and convert it into farmland, residential land, or land more appropriate for transporting resources such as timber. Such drained peatland was extremely flammable and could burn for months. In 2015, President Joko Widodo called for the damming of existing canals to block water from running off peatland.

APRIL put in place a water management infrastructure that kept water in peatland plantations at levels too high for the soil to sustain a fire, and also pledged to halt development on forested peatland entirely. APRIL continued to develop non-HCS or non-HCV peatland, including constructing canals, if they were awarded approval to do so from the government, the IPEWG, and the SAC.

Bey argued that some degree of development in the area had to take place on peatland. The land of Sumatra, the island on which Riau province was located, was 15 percent peatland, while nearly 50 percent of the land of Riau province

was peatland.¹⁶ “So the issue is not whether you should keep it as pristine peatland...the issue is, how do you manage the production with as little impact on the environment as possible?” Bey said.

4 Twists and Turns

“The biggest challenge,” Sanders said, “is getting people to understand why APRIL is doing this.”

The rationale for using company money to pay for something like forest restoration, especially when parties other than the company may have contributed to a forest’s degradation, was not always clear. But Sanders noted that such initiatives did, in fact, make sense for APRIL. First, APRIL was a successful paper and pulp company that generated robust revenues and were thus well-equipped to pay for the cost of activities like forest restoration. Second, the Indonesian government had established certain mechanisms, such as issuing licenses for ecosystem restoration from 2007 onwards, that made certain activities possible. Third, the RGE shareholders were personally motivated to ensure that the Sumatran forests and ecosystems would endure, having benefited from building a business around them. “There’s a degree of passion there,” Sanders said. The various sustainability initiatives did mean a few tradeoffs for APRIL’s bottom line, according to Bey. For example, using some of the land near the paper mills for forest conservation meant higher transportation costs because plantations would have to be further away than they would be if they replaced the conservation areas.

Another challenge for APRIL was earning the local communities’ trust. Being in possession of the management rights to their own land concessions, APRIL had to enforce laws and regulations that prevented the local communities from clearing those land concessions to make way for their own plantations. “Sometimes this is in conflict with what the locals want to do,” Sanders said. Some reports suggested that the locals were very unhappy with the situation.

“Communities complain that they are not warned, consulted or compensated when concessions are handed out and that they are left with no option but to give up their independence and work for minimal wages for the companies.

At fault are badly drafted laws, unclear regulations, corruption and heavy-handed security and paramilitary forces — all of which favour large business over the poor.”¹⁷

APRIL tried to slowly build trust by working with the local communities to develop programs that were beneficial to them so that they would see the perks of having APRIL present in the area. For example, as part of the RER initiative, APRIL had established a project that gave local farmers seedlings, tools, and training to enable them to grow various food crops such as chillies and ginger so that they would not need to derive income from clearing land for

¹⁶Jukka Miettinen, Chenghua Shi, and Soo Chin Liew, “Land cover distribution in the peatlands of Peninsular Malaysia, Sumatra and Borneo in 2015 with changes since 1990”, *Global Ecology and Conservation* 6 (2016): 67-78.

¹⁷Vidal, “Indonesia is seeing a new corporate colonialism”, *The Guardian*.

plantations. The project had seen some success, but was still a work in progress in terms of gaining locals' trust. "They receive us cautiously," Sanders said.

Other parties also received APRIL's sustainability commitments cautiously — or, in some cases, skeptically. "There are some views that APRIL is trying to greenwash its company with the RER program," Fenton said. Indeed, some quarters suggested that APRIL was misrepresenting its commitment to its sustainability policies. In 2016, the non-governmental organizations Greenpeace International and the World Wide Fund for Nature (WWF) suspended their membership in APRIL's SAC because the company had dug a new canal in peatland.

"In doing so, April not only flouted its own sustainability standards but went against government regulations and a letter of instruction issued by the Ministry of Environment and Forestry last year asking companies to block existing canals," Jeremy Hance wrote in *The Guardian* on December 16, 2016.

There were several reports from different sources about the canal incident. APRIL subsidiary PT Riau Andalan Pulp and Paper's then-President Director Tony Wenas said that the canal served as a fire break to help prevent forest fires.¹⁸ APRIL provided an official statement on the incident:

"APRIL apologises unreservedly to its Stakeholder Advisory Committee (SAC) and other stakeholders for incorrectly referencing specific clauses of the Forest and Land Fire Control regulation (Per-MenLHK No.32 year 2016) in relation to a canal constructed in its forestry concession at Pulau Padang."¹⁹

The Guardian provided a different take:

"April [sic] insists the construction of the canal this year was due to a misunderstanding of government regulations. In minutes of a Stakeholder Advisory Committee (SAC) meeting posted for about half an hour on the April website, the company said it misinterpreted a government decree and "mistakenly concluded this canal was mandated by government regulations".

Indeed, a report [pdf] published in August by April's Independent Peat Expert Working Group (IPEWG) suggests canals could be used to combat fires, which is in fact the exact opposite of the government's regulations.

"April wanted to create the impression that canal construction was seen as part of these regulations, whereas the regulations actually refer to canal blocking," says Andy Tait, senior campaign adviser at Greenpeace."²⁰

¹⁸Arlina Arshad, Indonesian pulp firm halts work in Riau over building of 'illegal canals', *The Straits Times*, September 10, 2016, <http://www.straitstimes.com/asia/se-asia/pulp-firm-halts-work-in-riau-over-building-of-illegal-canals>.

¹⁹"APRIL Statement on NGOs Suspension from Stakeholder Advisory Committee over Pulau Padang Canal," APRIL, accessed September 11, 2017, <http://www.aprildialog.com/en/2016/12/21/april-statement-ngos-suspension-stakeholder-advisory-committee-pulau-padang-canal/>.

²⁰Jeremy Hance, "WWF and Greenpeace break with Indonesia's pulp and paper giant," *The Guardian*, December 16, 2016, <https://www.theguardian.com/sustainable-business/2016/dec/16/wwf-greenpeace-april-indonesia-peat-forest-canal-pulp-paper-industry>.

Bey added that the company had constructed the canal based on a government-approved long term annual work plan.

“If it was illegal, the government would have suspended our license to operate,” he said. *The Guardian* noted that the approval “was given before the fires, the government’s new decrees, and April’s tougher sustainability commitment.”²¹ Meanwhile, Tribolet said that it was sometimes tricky to keep up with the fast-moving environment of Indonesian environmental legislation because of difficulties in making operational changes over a million hectares of land concessions.

Bey said he felt that the public should not have reason to distrust APRIL. “We are totally transparent to the world — anyone who wants to have a look [at our plantations], we welcome them,” Bey said. “We are very prepared to discuss openly with the NGOs and table their demands through the SAC.”

Fenton said he felt that inviting the public to see APRIL’s operations for themselves as well as the company’s various successes with its environmental initiatives had been effective at changing viewpoints about the company’s intentions.

“At the end of the day, everyone wants the same result,” Tribolet said. “People don’t want to have another haze crisis.”

²¹Ibid.

5 Teaching Note

This case study tells the story of one company's attempt to balance the demands of growth and sustainability in Sumatra, Indonesia amid government regulation, public scrutiny, and socioeconomic pressures. The case study could be useful in modules or courses about development economics and environmental economics, among others. Below are some questions that could be useful starting points for a lively discussion of the case.

1. APRIL's Sustainable Forest Management Policy makes sustainability commitments from a variety of angles. Why is a multi-pronged approach necessary to address environmentally destructive agricultural activity in Sumatra?
2. What are some of the negative externalities that arise from APRIL's business? Is APRIL addressing these externalities effectively and/or ethically? How might they do better?
3. Are APRIL's incentives aligned with those of the local communities, the public, and the Indonesian government?
4. Has APRIL set up a sound no-burn incentive scheme for local communities? How might they improve incentives?
5. Are there any risks or downsides to incentive-based "carrot" schemes such as the Fire Free Village Programme? What are they? Are there any situations in which a "stick" approach is more appropriate?
6. Does this case study demonstrate a principal-agent problem? If so, who is the principal and who is the agent, and what is the nature of the principal-agent problem?
7. To whom is APRIL primarily accountable?
8. What, if any, are some of the public goods involved in this case study?
9. What collective action problems and principles does this case study demonstrate?
10. Does this case study demonstrate "rational irrationality"? Why or why not?
11. Would transparent and strictly enforced property rights laws solve the collective action problems? Why or why not?
12. Should the public trust APRIL? Why or why not?