**JEI Working Paper - Up in Smoke: A Study of Palm Oil Related Deforestation in Indonesia**

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**Executive Summary**

This paper provides an overview of the current state of the palm oil industry in Indonesia, and demonstrates how unsustainable business practices on the part of oil palm growers and the complicity of other actors in the palm oil supply chain pose a serious threat to the health of Indonesian rainforests and peatlands.

Palm oil is one of the most important and fastest-growing cash crops in Indonesia. This is due to its efficiency of production, versatility and increasing popularity as a bio-fuel. However, poor industry oversight, corruption and ineffective government regulations have enabled unsustainable business practices to proliferate among producers. These include slash-and-burn deforestation, land-grabbing, encroachment into protected areas, failing to perform adequate environmental impact assessments and ignoring government procedures and the instructions of regulatory bodies. Unless significant measures are introduced to reform the oil palm industry, Indonesia is likely to face a loss of biodiversity, threats to its indigenous peoples, worsening climate change, significant health problems and decreased water security.

Though palm oil producers are directly responsible for carrying out deforestation, this paper finds that other actors in the palm oil supply chain play a significant role in enabling it. Local governments are guilty of corruption and inadequate legislation of oil palm growers. Suppliers and distributors purchase the produce of illegal oil palm growers. Banks and institutional investors provide loans to and own interests in unsustainable palm oil companies. Consumers fail to commit to purchasing palm oil exclusively from traceable sources. Finally, the Roundtable on Sustainable Palm Oil (RSPO) is ineffective as a governing body as it fails to define the specific types of forest that require protection, lacks adequate mechanisms of accountability and oversight, contains conflicts of interest within its membership structure, and promotes flawed certifications for sustainable palm oil that have been exploited as a form of “greenwashing.”

On the other hand, each actor in the palm oil supply chain also has the ability to exert pressure on offending growers to cease their illegal business practices. Advocacy by NGOs has led to successes, such as institutional investors divesting from unsustainable companies and the introduction by both suppliers and growers of more stringent guidelines for environmental evaluation and protection. This paper recommends that entities within the palm oil supply chain take a firm stance against illegally produced palm oil by introducing concrete measures to ensure accountability, traceability and oversight. Such measures may include removing loopholes in legislation to prevent exploitation, stricter punishments for offenders, insistence upon purchasing traceable palm oil, lobbying and divesting from unsustainable companies, and the adoption of stricter standards and greater transparency by the RSPO.

**Section 1: Introduction**

Indonesia contains some of the world’s largest remaining stretches of continuous rainforest.[[1]](#endnote-1) These forests are a center of rich biodiversity[[2]](#endnote-2) for example, they are home to 12% of all known mammal species, including critically endangered orangutans, tigers and rhinos.[[3]](#endnote-3) Indonesia’s rainforests also play an important role in the regulation of environmental factors such as water, carbon and soil nutrient levels, and help to alleviate climate change[[4]](#endnote-4) by serving as one of the world’s largest carbon sinks.[[5]](#endnote-5) Yet, despite their importance, Indonesia’s forests are currently experiencing the fastest rate of deforestation in the world: over 15 million acres were felled between 2000 and 2012.[[6]](#endnote-6) One of the chief drivers of this deforestation is rampant clearing for oil palm plantation development.[[7]](#endnote-7) Despite the 2001 establishment of the Roundtable for Sustainable Palm Oil, a multi-stakeholder governing body establishing standards for and certifying the production of sustainable palm oil,[[8]](#endnote-8) illegal oil palm plantations continue to expand. This seriously threatens vulnerable areas such as national parks,[[9]](#endnote-9) peat swamp forests, and land inhabited by indigenous Dayak peoples.[[10]](#endnote-10)

This paper will explore the drivers behind palm oil-related deforestation in Indonesia and the environmental impact of such deforestation, and identify some of the major companies and business practices responsible. It will then argue that the Roundtable for Sustainable Palm Oil is a flawed mechanism that is inadequate for preventing deforestation, and lay out guidelines for the changes that should be made if the current trend of irresponsible deforestation is to be reversed.

**Section 2: Reasons Behind the Expansion of the Oil Palm Industry**

Oil palm is one of Indonesia’s most important cash crops. Indonesia is the world’s largest producer of palm oil, producing an estimated 33.5 million tons in 2014, or 53.4% of total worldwide output.[[11]](#endnote-11) About 80% of the crop is exported, with export revenues estimated at 18.9 billion USD annually.[[12]](#endnote-12) Indonesia currently has 8 million hectares of oil palm plantations, up from 4 million hectares in 2000, and this is expected to increase to 13 million hectares by 2020.[[13]](#endnote-13) This increase is fuelled by consumers in rapidly growing economies such as China and India, who are joining those in Europe and the United States in demanding more palm oil for their food and energy consumption.[[14]](#endnote-14)

Why is there such great demand for palm oil, as compared to other vegetable oils? Firstly, palm oil is efficient to produce; it has the highest yield of all oil crops, and is the cheapest to produce and refine.[[15]](#endnote-15) Secondly, palm oil is extremely versatile, and its derivatives can be used in a wide variety of consumer goods, ranging from food products and cosmetics to detergents and candles.[[16]](#endnote-16) The NGO Rainforest Rescue estimates that up to 50% of the goods used by an average consumer each day may contain palm oil derivatives.[[17]](#endnote-17) Thirdly, the Malaysian and Indonesian governments have been stimulating interest in palm oil as a biofuel by increasing the percentage of palm oil blended into biofuels such as bio-diesel.[[18]](#endnote-18)[[19]](#endnote-19) In addition, government policies in many Western countries continue to encourage the use of palm oil-derived biofuel: from 2006 to 2012, such use grew by 365% within the European Union alone.[[20]](#endnote-20)

However, much of the current demand for palm oil can ultimately be traced to a single cause – poor oversight by the governments of palm oil-producing countries, especially Indonesia. Intensive industrial logging first began in earnest in Indonesia in the 1970s and 80s, spurred by the construction of logging roads that provided access to remote rainforests.[[21]](#endnote-21) Government corruption and nepotism played a large role in the expansion of palm oil. In particular, then-President Suharto distributed large tracts of forest to army generals in order to cement political relationships,[[22]](#endnote-22) and his relatives and business associates still control significant portions of the Indonesian palm oil industry.[[23]](#endnote-23) In addition, palm oil planting proved to be a highly lucrative business model when combined with logging for timber. Selling the timber harvested from clearing forests could generate revenue of up to $10,000 per hectare, providing seed capital to convert the cleared land into still more profitable oil palm plantations.[[24]](#endnote-24) This quickly created a problem of over-logging. For example, in the 1980s and 90s, more timber was exported from Borneo than from Latin America and Africa combined,[[25]](#endnote-25) and in Kalimantan, the Indonesian portion of Borneo, 80% of lowland forests and virtually all mangrove forests were felled.[[26]](#endnote-26)

Lack of governmental oversight is another factor that has allowed of operations and plantation acreage, often via illegal means. Palm oil producers have been accused of adding to their plantations through land-grabbing, which includes practices such as breaking profit-sharing agreements with local communities, overstaying their concessions and failing to conduct proper environmental impact assessments.[[27]](#endnote-27) The destruction of rainforests cripples the indigenous communities that rely on them for subsistence,[[28]](#endnote-28) forcing indigenous peoples to work on plantations and in oil mills for low wages.[[29]](#endnote-29) Protests by villagers are dealt with by hired mercenaries, who suppress unrest with the use of sometimes lethal force.[[30]](#endnote-30)

So far, attempts by the Indonesian government at reining in offending palm oil companies have been less effective than hoped. Though President Yudhoyono declared a moratorium in 2011 on the granting of new forest concessions, the law’s sunset clause on existing concessions had the adverse effect of encouraging companies to increase the rate at which they cleared forests already under their ownership.[[31]](#endnote-31) The government also lacks a system for accurately monitoring the rate of deforestation. A recent study in the journal *Nature Climate Change* found that government figures might have underestimated the actual rate of forest clearing by as much as 50%, or up to 1 million hectares of primary forest, over the past 12 years.[[32]](#endnote-32) Finally, many palm oil producers operate under agreements with local authorities, over whom the central government has little *de facto* control.[[33]](#endnote-33) As a result, producers are often able to flout conservation laws with few to no consequences.[[34]](#endnote-34)

**Section 3: Environmental Impacts of Oil Palm-Related Deforestation**

The environmental impacts of uncontrolled oil palm-related deforestation are varied and severe. One of the most immediately obvious effects is habitat loss. Indonesia’s rainforests are a center of incredible biodiversity. They are home to 10% of known plant species, 12% of known mammal species and 17% of known bird species,[[35]](#endnote-35) many of which exist nowhere else on Earth[[36]](#endnote-36). The Indonesian Ministry of the Environment estimates that more than half of Indonesia’s endemic species may yet be unrecorded.[[37]](#endnote-37) Unfortunately, deforestation has caused many of the animal species that call the rainforest home, such as the Sumatran tiger, the orangutan, the Javan rhinoceros and the Sumatran elephant, to become critically endangered.[[38]](#endnote-38) These large mammals have been especially affected due to their dependency on large continuous tracts of rainforest as a habitat. In addition, conservation efforts have been impeded by the increasing encroachment of loggers into protected areas. Over the past 12 years, almost 40% of forest loss has occurred within areas of restricted clearing, and 16% has occurred within conservation areas that prohibit clearing.[[39]](#endnote-39)

Animals and plants are not the only ones who stand to have their homes destroyed by deforestation. Indigenous peoples also rely on the forest for housing and subsistence through foraging and agriculture.[[40]](#endnote-40) Of these, the Dayaks constitute the largest group at two to four million. Deforestation and illicit land-grabbing gravely threatens the livelihoods of these peoples, as well as the continued preservation of their unique way of life.

A second major threat of oil palm-related deforestation is its contribution to climate change. Rainforests play a significant role in ameliorating climate change by regulating the absorption and release of heat, moisture and carbon.[[41]](#endnote-41) As one of the world’s largest carbon sinks, Indonesia’s rainforests are particularly important, holding at least 57 billion tons of carbon that would otherwise be released into the atmosphere. Conversely, the large-scale burning of forests for plantation use releases vast amounts of greenhouse gases, such as carbon dioxide and methane. The most severe example occurred in 1997–1998, when it is estimated that burning forests in Indonesia alone contributed 13 to 40 percent of global fossil fuel emissions in that year.[[42]](#endnote-42)[[43]](#endnote-43)

The burning of rainforests also creates pollution that affects human health. Smoke from burning forests in Indonesia may travel as far as Singapore, Malaysia, Thailand and Sri Lanka, bringing pollutants such as sulfides, nitrous oxides and ash that decrease visibility and cause respiratory problems.[[44]](#endnote-44) Smog produced by fires may produce long-term health effects, including disorders of the heart, lung, brain, eye and skin.[[45]](#endnote-45) In 1997–98, forest fires created respiratory problems for 20 million people and caused 20,000 to 48,000 premature mortalities in Indonesia alone.[[46]](#endnote-46)

Finally, deforestation could have significant implications for watersheds and water supply. Rainforests serve as water catchment areas, and many of Indonesia’s major rivers originate within rainforests, especially in Borneo.[[47]](#endnote-47) Maintaining healthy rainforests is essential in order to safeguard water supply to downstream populations, as well as to prevent large-scale soil erosion and flooding.[[48]](#endnote-48)

Overall, there is an increasing body of evidence to show that despite the lucrativeness of the oil palm industry, oil palm-related deforestation may create large net economic losses when damage to health and the environment are taken into account. In a 2003 study, Anshuman Varma found that the net loss experienced by the Indonesian economy in 1997–98 as a result of forest fires amounted to 20.1 billion USD.[[49]](#endnote-49) Economic losses in heavily-affected rural villages might have constituted up to 50% of total township income.[[50]](#endnote-50)

One of the most worrying aspects of palm oil-related deforestation is the ongoing shift towards the clearing of more vulnerable types of forest, as lowland “production” forests set aside for agriculture become depleted. One of these types of forest is the peat swamp forest, which accounted for 70% of newly developed plantations in 2008.[[51]](#endnote-51) Peat swamp forests, found especially in Borneo, are unusual ecosystems consisting of diverse tropical trees growing on a layer of peat that may be up to 20 meters deep.[[52]](#endnote-52) The saturated soil in a peat swamp forest prevents organic material from decomposing, creating a dense carbon sink that stores an average of 2000 tons of carbon per acre.[[53]](#endnote-53) As a result, peat forests release much more smoke and greenhouse gases than other types of forest when burned. In addition, drained or dried-out peat forests are prone to massive fires that may continue to smolder for months or years, especially during the dry season.[[54]](#endnote-54) The United Nations Environment Program estimates that due to increased peatland clearing, palm oil production may result in 20 times more greenhouse gas emissions than the burning of diesel.[[55]](#endnote-55)

Another area that is particularly at risk is the section of rainforest known as the “Heart of Borneo.” This refers to the large swath of original primary rainforest within central Borneo that covers over 17 million hectares.[[56]](#endnote-56) Though most of the Heart of Borneo is unsuitable for growing oil palm due to slope and soil conditions,[[57]](#endnote-57) this may not be enough to deter speculators as suitable lowland forests become increasingly scarce. Deforestation in the Heart of Borneo will lead to increased risk of erosion, flooding and fire, as well as the range of problems already described above.

**Section 4: Companies and Business Practices Responsible for Oil Palm-Related Deforestation**

 In its 2013 report, *Commodity Crimes,* the NGO Friends of the Earth described palm oil as an industry that “virtually depends on lack of transparency.”[[58]](#endnote-58) This opacity is most evident in the complicated supply chain that palm oil takes from producer to consumer, involving various groups of secondary actors who each contribute to the continuation of unsustainable palm oil growing practices.

This section will discuss the case study of Bumitama Agri, a palm oil producing company established in 1996.[[59]](#endnote-59) Bumitama Agri is among the largest and fastest-growing producers of palm oil in Indonesia, with revenues of USD 392.2 million, a net profit margin of 24.2%,[[60]](#endnote-60) a compounded annual growth rate of 35.8% and almost 150,000 hectares of plantations planted as of 2013.[[61]](#endnote-61) Bumitama is listed on the Singapore Stock Exchange, and currently has a market capitalization of about 1.4 billion USD.[[62]](#endnote-62) Bumitama’s business practices provide a good microcosm of the flaws of the oil palm industry as a whole; despite being repeatedly criticized for a strategy based explicitly on aggressive illegal expansion, it has continued its operations with an open disregard for both government orders and its own previous promises to cease its unsustainable practices.

 Bumitama and its fellow plantation owners and millers constitute the most major and perhaps most obvious group of offenders within the palm oil supply chain. As mentioned in Section 2, many such growers employ methods of questionable legality to produce their crop. Firstly, some plantation owners are guilty of developing land without receiving the necessary permits. Indonesian law mandates that before developing a plot of land, growers must first obtain a Location Permit describing the plot’s location, an Environmental Permit including environmental impact assessments and consultations with local communities and civil society organizations, and finally a Plantation Business Permit to begin operations. However, Bumitama’s subsidiary company Ladang Sawit Mas obtained a Plantation Business Permit in May 2006, before it had obtained either of the two prerequisites, and without consulting with key stakeholders or complying with safeguards for environmental protection.[[63]](#endnote-63) Ladang Sawit Mas underreported the size of its land holdings on its Plantation Business Permit, allowing it to develop 1,300 hectares more land than it had legally acquired.[[64]](#endnote-64) In addition, not submitting to an environmental impact assessment allowed Ladang Sawit Mas to encroach on the buffer zone of the Gunung Tarak Forest Reserve, forcing NGOs to conduct multiple relocations of endangered orangutans from cleared areas.[[65]](#endnote-65) This is not the only example of palm oil growers encroaching on protected areas. For instance, a 2011 World Wildlife Fund survey of the Tesso Nilo forest complex in Sumatra found that over 20% of the complex had been converted to illegal oil palm plantations.[[66]](#endnote-66) Many oil palm plantations never receive permits at all. Bumitama alone has planted at least 7,000 hectares of such “ghost estates,”[[67]](#endnote-67) and 41% of its total land bank – 83,000 hectares – is potentially or de facto contested.[[68]](#endnote-68)

Secondly, producers are guilty of ignoring complaints and breaking their promises to authorities. In April 2013, the NGO International Animal Rescue filed a formal complaint against Ladang Sawit Mas to the Roundtable on Sustainable Palm Oil (RSPO), the chief international governing body for palm oil production. In response, Ladang Sawit Mas agreed to enter negotiations with RSPO for better monitoring and compliance, but satellite images showed that it continued to clear land illegally while negotiations were taking place.[[69]](#endnote-69)

Thirdly, producers are guilty of using ownership changes and complicated subsidiary networks to escape punishment for illegal activities. In 2007, Indonesia passed a law holding government officials personally responsible for illegal land use within their jurisdictions. Following this, VS Industry, a grower that had been preparing to illegally develop peat swampland, decided to cancel these plans, citing “regulatory issues with the local authority.”[[70]](#endnote-70) However, instead of returning the land to the Ministry of Forestry in accordance with correct legal procedure, VS Industry sold the management rights to two companies, PT Karya Manunggal Sawitindo and Westbrook International. These companies are in turn owned by members of the Hariyanto family, the largest shareholders of Bumitama.[[71]](#endnote-71) Though Bumitama’s investor reports clearly show that it is actively developing the illegal land in question, this complex chain of ownership means that it has so far been able to do so without censure. Other practices taken by companies to evade the law include applying for grants under different names in order to diffuse community efforts at compensation and to reduce the apparent scale of violations,[[72]](#endnote-72) and announcing forest protection policies that do not apply to all their subsidiaries, allowing them to portray a sustainable image while continuing to carry out deforestation.[[73]](#endnote-73)

Finally, the use of slash-and-burn techniques to clear forest is widespread among oil palm producers. It is estimated that 34–60% of the larger Indonesian fires in 1997–98 occurred within oil palm plantation concessions.[[74]](#endnote-74) Slash-and-burn continues to be the most widespread method of forest clearing in Indonesia, despite being banned by law in 1997, partly because alternative techniques may cost $50 to $150 more per hectare.[[75]](#endnote-75) The speed at which forests can be cleared through burning also helps companies evade detection and punishment, as legal and bureaucratic processes may sometimes take years to reach a decision, long after the profits have already been collected.[[76]](#endnote-76)

The second group of actors that is culpable for the continuation of unsustainable oil palm growing is the local government. Inadequate oversight and legal protection for vulnerable communities have greatly enabled the illegal activities of oil palm producers. Firstly, poor land use planning, mapping and coordination between departments prevent the government from overseeing forests effectively.[[77]](#endnote-77) Secondly, corruption and nepotism are rampant; in a notable example, in 2011, the head of Ketapang district was discovered to own a controlling interest in a palm oil producing company that was found guilty of illegal land grabbing.[[78]](#endnote-78) Furthermore, the need to pay off local government officials creates a perverse incentive to develop larger areas of forest to cover the cost of bribes.[[79]](#endnote-79) Thirdly, many local communities, such as indigenous Dayaks, do not have formal land rights, making it hard for them to fight the claims of encroaching corporations.[[80]](#endnote-80) Fourthly, taxes payable are based on a producer’s declared acreage, creating an incentive for companies to underreport.[[81]](#endnote-81) Finally, much of the legislation that has been passed to govern forests contains loopholes that provide avenues for exploitation, as shown in the shortcomings of President Yudhoyono’s 2011 moratorium on deforestation. Another example of a major legislative loophole is the decree issued in 1998 that limits plantation areas to 20,000 hectares per province. However, as publicly listed companies are not bound by this regulation, this in fact encourages companies such as Bumitama to expand unsustainably with the goal of ultimately escaping legal repercussions through a successful IPO.[[82]](#endnote-82)

The third group of culpable actors is the suppliers that buy palm oil and distribute them to the global market. These companies are often large, publicly-listed multinationals, such as Wilmar and IOI International. Despite ostensible commitments to the environment, such as Wilmar’s policy of “zero deforestation,” there is evidence that such companies have used their size and financial resources to support the illegal activities of palm oil producers. Firstly and most directly, suppliers buy palm fruit from illegal producers; for example, 90% of Bumitama’s output is bought by two large suppliers, Wilmar and Golden Agri-Resources.[[83]](#endnote-83) Secondly, suppliers may own equity in plantations and palm oil producing companies, creating a conflict of interest; for example, IOI bought 31.2% of the shares at Bumitama’s IPO,[[84]](#endnote-84) and Wilmar between 0.9–4.3%.[[85]](#endnote-85) Thirdly, suppliers constitute part of the complex network of subsidiaries that act to diffuse responsibility from producers. For example, Wilmar owns subsidiaries that have been accused of abetting deforestation in Borneo. Upon the highlighting of this issue by Friends of the Earth, Wilmar moved to sell the controversial firms; however, some of the buyers are known to be holding companies with strong links to Wilmar.[[86]](#endnote-86) Following violent protests by local communities in March 2014, Wilmar allegedly painted over transport trucks with Wilmar logos and continued refining palm oil from controversial plantations through a different company.[[87]](#endnote-87) Finally, suppliers may even enter into extensive, mutually supportive partnerships with illegal palm oil producers. For example, IOI buys crude palm oil from Bumitama at a discounted price and extends it interest-free loans. In return, Bumitama has set aside up to 27.9 million USD from its IPO proceeds to finance the capital expenditure of IOI subsidiaries.[[88]](#endnote-88)

Banks and other financiers of oil palm companies constitute the fourth link in the chain of culpability. Firstly, major international banks have extended loans and provided other financial services to illegal producers, bankrolling deforestation and unsustainable production. Rabobank and HSBC are two major banks that have provided financial services to Bumitama. Rabobank has provided a total of 47 million euros in loans to Bumitama.[[89]](#endnote-89) HSBC’s services include a 135 million USD loan to finance plantation expansion in 2010, underwriting Bumitama’s IPO in April 2012, and acting as Joint Mandated Lead Arranger and bookrunner for a further 170 million USD loan in October 2012.[[90]](#endnote-90) Though both HSBC and Rabobank have official policies that prevents working with companies that engage in illegal deforestation,[[91]](#endnote-91)[[92]](#endnote-92) both banks rely solely on membership in the Roundtable on Sustainable Palm Oil to guarantee the sustainability of a client’s business practices, an approach that is highly flawed and possibly inaccurate, as will be discussed in the next section. Besides failing to carry out due diligence in ensuring its clients do not violate its stated environmental policies, these banks have also been criticized for not using their leverage to persuade Bumitama to adopt more sustainable practices, nor providing stakeholders and NGOs with transparent information on how they intended to deal with the breaches once they had been brought to their attention.[[93]](#endnote-93)

The income from its IPO has allowed Bumitama to grow rapidly, with an estimated 114 million USD of the proceeds being earmarked for further plantation expansion.[[94]](#endnote-94) As such, shareholders and investors in Bumitama must also shoulder the blame for the company’s illegal deforestation. These investors include familiar names such as Crédit Agricole, MassMutual, BlackRock and Fidelity Investments.[[95]](#endnote-95) Individual shareholders also share some degree of responsibility. Prior to Bumitama’s IPO in 2012, prospective investors were informed through Bumitama’s prospectus that its expansion strategy included preferential operating rights to a plantation operating without mandatory licenses. Despite this explicit admission of illegality, all the shares offered were sold.[[96]](#endnote-96)

If the chain of culpability is extended a further step to include the financiers and investors of palm oil suppliers, the list of actors involved becomes even more extensive. Major foreign investors and financiers of Wilmar include the Vanguard Group, JP Morgan Chase, CalPERS, MassMutual, Barclays, Citigroup, ABN Amro and BNP Paribas.[[97]](#endnote-97) Major foreign investors in IOI include Prudential, ING Group, Schroders, Pinnacle Fund Management and the First Swedish National Pension Fund.[[98]](#endnote-98) Several of these companies score highly in sustainable governance and ESG (Environmental, Social and Governance) indexes, which raises questions about the methodology used to construct these indexes and the amount of investigation behind them.

The fifth group responsible for the continuation of unsustainable oil palm cultivation is the purchasers and consumers of palm oil. It is perhaps the most difficult for this group to escape culpability, as the complexity of supply chains and greenwashing of current certification standards make it difficult to separate illegal from sustainably grown palm oil (see next section).[[99]](#endnote-99) However, some companies have made a credible commitment to fully trace all the palm oil they use to individual plantations (see Section 6), setting the standard of accountability for other large purchasers.

One final organization that deserves particular attention is the Roundtable on Sustainable Palm Oil (RSPO), the largest international governing body for palm oil production. Though the RSPO and its GreenPalm Certification for sustainably grown palm oil are widely accepted as legitimate, in practice they have proven to be an ineffective and structurally inadequate mechanism for preventing unsustainable business practices. I will elaborate further on the RSPO in the following section.

**Section 5: The Roundtable on Sustainable Palm Oil (RSPO) and Its Inadequacies**

 The Roundtable on Sustainable Palm Oil (RSPO) is the chief international governing body for palm oil. Established in 2004, its stated mission is to “develop and implement global standards of sustainable palm oil,”[[100]](#endnote-100) including the GreenPalm certification, which is the most popular certification for sustainably-grown palm oil.[[101]](#endnote-101) The RSPO’s members include many of the major suppliers of palm oil worldwide; Bumitama Agri became a member in 2007.[[102]](#endnote-102) However, the RSPO has been routinely criticized by many NGOs active in forest protection, due to systemic problems that render it unable to carry out its mandate effectively. The RSPO and its certification systems have been accused by Greenpeace of being “little more than greenwash,”[[103]](#endnote-103) and even the World Wildlife Fund, a primary founder and stakeholder in the RSPO, stated in 2013 that RSPO certification could no longer be considered a guarantee of sustainable palm oil production.[[104]](#endnote-104)

* + The first common criticism of the RSPO is that its guidelines are not strong or specific enough to stop the spread of deforestation. The RSPO does not disallow its members from the clearing of all rainforest, but only primary and “High Conservation Value” forests.[[105]](#endnote-105) However, an internationally recognized definition of what constitutes a High Conservation Value forest does not exist, and in practice, it is hard to distinguish between primary and secondary forest.[[106]](#endnote-106) This makes it easy for producers to encroach into protected and vulnerable forest areas without legal reprisal.
	+ Secondly, the RSPO lacks adequate mechanisms to oversee its members’ conduct, hold its members accountable to its guidelines and punish offending members. Though the process of being fully RSPO-certified requires an assessment of the environmental and conservation value of a producer’s holdings, in reality this assessment is provided by the producers themselves, with little of the information being fact-checked by RSPO.[[107]](#endnote-107) This is because the RSPO lacks a dedicated monitoring arm of its own. As a result, in multiple cases, RSPO was unaware of flagrant violations of environmental policy by its members until complaints were lodged by concerned NGOs.[[108]](#endnote-108) Even after complaints are lodged, direct orders from the RSPO’s Complaints Panel have proven ineffective in convincing companies to stop clearing forest or allow site access to NGOs for further investigation.[[109]](#endnote-109) Complaints generally take months or years to resolve, by which time the bulk of the damage to the forest has been done.[[110]](#endnote-110) Furthermore, the RSPO requires its members to submit an annual report towards compliance with its principles, including a specific timeline for doing so. However, some members such as Triputra Agro Persada have consistently failed to submit this report, while other members such as Bumitama have consistently failed to meet their certification targets.[[111]](#endnote-111) In neither case did these companies face any repercussions for their behavior.[[112]](#endnote-112)
	+ Thirdly, the membership and power structure within the RSPO makes it susceptible to conflicts of interest. 75% of the executive board, which votes on resolutions and receives audited accounts, is made up of entities with interests in the palm oil industry, such as growers, processors, consumer goods manufacturers and investors. Only 25% is made up of NGOs.[[113]](#endnote-113) Executive board members of the RSPO include HSBC and Rabobank, two banks that hold financial interests in illegal palm oil growers.[[114]](#endnote-114) Furthermore, only large growers producing more than 500 tons of oil yearly have voting rights.[[115]](#endnote-115) As such, there appears to be little internal incentive for RSPO members to act in accordance with the organization’s stated objectives.
	+ Fourthly, membership in the RSPO implies that all the subsidiaries of an RSPO-certified producer are also subject to the RSPO’s guidelines, when in fact this is not the case. These subsidiaries are often responsible for directly executing some of the most extreme environmental violations perpetrated by the parent company. For example, it is highly likely that PT ASMR, a non RSPO-certified subsidiary of Bumitama, has been guilty of clearing high-conservation value forests and creating “graveyards” of orangutan skeletons, for which the company is currently being investigated by the Central Kalimantan Natural Resources Conservation Agency.[[116]](#endnote-116) Nevertheless, the Bumitama Group continues to claim in its official materials that it applies RSPO standards in all its operations.
	+ Fifthly, the standards through which the vast majority of “sustainable” palm oil is traded are misleading and flawed. There currently exist four schemes for trading RSPO certified palm oil. The first is the “book and claim” scheme, where RSPO-certified producers receive a GreenPalm certificate for each ton of certified palm oil produced. These can then be sold to palm oil consumers and manufacturers, which can then claim to be “supporting sustainable palm oil.”[[117]](#endnote-117) These certificates trade for only about $3 each, much less than the price of palm oil, which is about $700 per metric ton.[[118]](#endnote-118) As a result, it is much easier and cheaper to buy non-certified palm oil, then purchase certificates of “sustainability,” than to actually source palm oil from sustainable sources. The second scheme, the “mass balance” supply chain system, allows exact amounts of certified palm oil to be tracked as it passes through a particular supply chain. However, this scheme possesses its own flaws, as a trader may mix certified oil with any amount of uncertified oil yet be able to label their oil as “certified.”[[119]](#endnote-119) Actual sales through the “segregated” and “identity protected” supply chains, which are completely traceable to individual mills or groups of mills, are extremely small in comparison to the “book and claim” and “mass balance” schemes.[[120]](#endnote-120)

 Given the above shortcomings, it is clear that major structural changes need to be made to the RSPO if it is to adequately fulfil its stated mission. In fact, a Greenpeace report found that in 2009, despite holding only 14% of forested oil palm concessions, RSPO members accounted for 21% of deforestation.[[121]](#endnote-121) This suggests that far from reducing deforestation, the ostensible legitimacy provided by the RSPO could actually be aiding its members in maintaining their unsustainable business practices.

**Section 6: Possible Actions to Prevent Further Deforestation**

 The complex supply chain of global palm oil today is a double-edged sword. In earlier sections, we have seen how the large number of actors may stymie attempts to effectively oversee and legislate the palm oil industry. However, this also means that there are a large number of ways for individual actors or groups to push for change. The ultimate goal of these actions must be to convince producers to cease their unsustainable actions. Since producers are motivated primarily by profit, it appears unlikely that they would independently adopt environmentally-sustainable practices that would negatively affect their profit margins. On the other hand, they may be persuaded to do so if other actors in the supply chain threaten to withdraw financial and other means of support to these producers unless real change is seen.

 The first group of actors with the power to instigate change is the government. Many deficiencies in oil palm legislation are due to endemic corruption problems within the local government that are beyond the scope of this paper to solve. Nevertheless, the central government can take steps to remove loopholes in legislation that have enabled exploitation and rendered laws ineffective at preventing deforestation. These include removing the sunset clause on the existing moratorium against deforestation and the exception on acreage restrictions for publicly-listed producers. The moratorium may also be made more effective by incorporating specific performance indicators, such as explicitly banning the clearing of peatland, preventing overlapping forest use in spatial planning, and clearly defining the boundaries of High Conservation Value forests. In addition, commissioning independent reviews of suspicious companies through a third party, such as one of the many NGOs lobbying for forest protection, is a good way to sidestep the inefficiencies of local authorities. Indonesian courts have recently begun taking a stricter stance on offending companies. In January 2014, producer PT Kallista Alam was fined 9 million USD for illegally burning forests within a protected peat swamp ecosystem and was ordered to pay 21 million USD for restoration costs.[[122]](#endnote-122) Members of PT Kallista Alam’s senior management were also fined and jailed.[[123]](#endnote-123) These convictions are an important precedent and send a clear message of non-tolerance to companies tempted to engage in illegal deforestation.

 Suppliers may be the group that is able to exert perhaps the greatest amount of direct pressure on illegal growers, as direct purchasers of fresh fruit bunches as well as the crude and refined palm oil produced by plantation owners. For example, just two suppliers, Wilmar and Golden Agri-Resources, purchase 90% of Bumitama’s output.[[124]](#endnote-124) In December 2013, Wilmar announced a plan to apply its “No Deforestation, No Peatland, No Exploitation” policy to all suppliers, and in February 2014 Golden Agri-Resources announced similar plans to make its suppliers adhere to its “Forest Conservation” Policy.[[125]](#endnote-125) In response, Bumitama has stopped clearing in certain contested and environmentally sensitive sites and stepped up its efforts to achieve full compliance with RSPO’s guidelines[[126]](#endnote-126). However, besides the announcement of such plans, suppliers must also divest themselves completely from interests in producing companies, as well as cooperate with NGOs in a more transparent manner, in order to dispel any suspicion that they may simply be using such plans as a form of “greenwash.”

 As the providers of seed capital in the form of loans and equity, financiers and investors are also capable of exerting great influence on the behavior of illegal producers. Banks and shareholders may be able to leverage their creditor status to push for demonstrable change in producer operations. If lobbying fails, investors can demonstrate their refusal to continue supporting deforestation through divestment. In May 2014, following a petition of 87,900 signatures from concerned German citizens, Deutsche Bank led the way for other shareholders by selling its entire stake in Bumitama.[[127]](#endnote-127) An alternative and perhaps preferable approach is to conduct more stringent due diligence in order to avoid entering into partnerships with producers of questionable legality in the first place, rather than simply relying on the guarantees of flawed certifying bodies such as the RSPO.

 As the ultimate source of demand for palm oil, customers and consumer companies are able to exert a ripple effect through the entire supply chain by making their sustainability policies more stringent. Several major consumer companies, including Kellogg, Mars, and Johnson & Johnson, have announced plans to improve their sourcing of sustainable palm oil.[[128]](#endnote-128) Unilever has developed perhaps the most extensive and credible commitment of any consumer company towards this goal. The company has laid out a comprehensive roadmap for sourcing all its palm oil from fully-traceable and certified sources by 2020. It plans to do this via charting an incremental shift towards “segregated” and “identity protected” supply chains by geographical region of operations. So far, Unilever has already its achieved its first target of covering all its palm oil purchases with GreenPalm certificates, and appears to be on track to achieve the rest of its declared milestones.[[129]](#endnote-129)

The RSPO, despite its shortcomings and history of inefficiency, remains the largest inter-sectoral governing organization with a critical membership mass in the oil palm industry and an existing code of standards, albeit poorly enforced.[[130]](#endnote-130) The onus is on the RSPO to demand timely reporting and adherence to proposed timelines for adopting sustainable practices from its members, work with third party investigators to ensure the accuracy of reporting, and help its members achieve fully-traceable supply chains. If producers repeatedly flout regulations, penalties such as fines or expulsion from the RSPO must be enforced to restore the organization’s credibility.

Finally, NGOs have traditionally been the initiators of informational campaigns highlighting the extent of the violations perpetrated by the oil palm industry. These NGOs have adopted a targeted strategy of focusing on intensive investigations of a single company. In 2013, Bumitama became the target of one such investigation,[[131]](#endnote-131) led by Friends of the Earth and Greenpeace. This led directly to pressure from Bumitama’s main customers, Wilmar and Golden-Agri Resources, as well as the filing of complaints by several stakeholders.[[132]](#endnote-132) As a result of this increased scrutiny, Bumitama has ended contracts with third party companies managing contested land plots, begun directly engaging with NGOs and announced the exclusion of at least 8,500 hectares of forest and peatland in its landbank from development.[[133]](#endnote-133) Though Bumitama’s actual level of dedication to these efforts beyond repairing its investor relations may be called into question, there is no doubt that NGO investigations have compelled a rethinking of company policy, and is likely to do so for similar offending producers as well.

**Section 7: Conclusion**

Palm oil-related deforestation is undoubtedly one of the most major environmental threats we face today. It is clear that unless vigorous measures are taken to arrest the alarming rate at which Indonesian forests are being cleared for palm oil, we will pay a heavy price in terms of damage to ecosystems, loss of natural resources, damage to health, and contribution to accelerating climate change. Illegal profit-driven business practices have provided much of the impetus for such deforestation. However, business can also be harnessed as a powerful means to instigate change. By threatening the mechanisms through which producers obtain financial support, stakeholders and actors along each link of the global oil palm supply chain possess the most realistic possibility of convincing offending companies to alter their behavior. The greater the number of actors actively lobbying and applying pressure on producers, the greater the effect is likely to be. If all the sectors involved in the oil palm industry collaborate to take concrete action as soon as possible, it may yet be possible to fully reverse the damage that has been done to Indonesia’s forests.

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