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Institutional Responses to Pressures for Sustainable Palm Oil

Cover Page Footnote

1 Stephen V. Marks is the Elden Smith Professor of Economics at Pomona College and has been on the faculty since 1982. He has consulted and published extensively on trade policy and related issues in Indonesia, the United States, and Laos. In 2010 he was selected as a Presidential Friend of Indonesia. 2 Justin Lauw is a senior engineering student from Harvey Mudd College with a focus in electrical engineering. He is from Indonesia, growing up in Riau Province, where the economy relies heavily on palm oil. Justin has an interest in pursuing an engineering career that provides environmentally sustainable solutions. 3 Shivang Mehta is a junior at Pomona College from New Delhi, India, majoring in economics and applied mathematics. His academic interests include developmental economics, econometrics, and game theory. Shivang plans to pursue a Ph.D. in economics after graduation. 4 Fernando Salud graduated from Harvey Mudd College with a degree in engineering. He was born in the Philippines, and grew up and studied in Hong Kong, Switzerland, Singapore and the United States. He is interested specifically in environmental justice and renewable energy.

Institutional Responses to Pressures for Sustainable Palm Oil

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Abstract: As the two leading palm oil producing countries, Indonesia and Malaysia have come under external pressures to limit deforestation and greenhouse gas emissions related to land use conversion for oil palm cultivation. We examine various institutional frameworks that have emerged to mediate these pressures. These frameworks can be distinguished by their geographic scope—domestic, region, and global—as well as by the nature of control—private, non-profit, and governmental. The frameworks have taken the form of sustainability certification systems from non-profit organizations or governments, corporate sustainability policies, or the setting through global or bilateral negotiations of voluntary national targets for limiting deforestation or reducing greenhouse gas emissions.

We interpret these frameworks in terms of basic theories of institutional economics, in particular the Coase theorem, which posits that the allocation of resources will be efficient if there are zero transaction costs and legal rights are well defined. Some efficiencies are certainly attainable. Certification systems can be operated by intermediary organizations with specialized capacities to monitor the sustainability practices of oil palm growers associated with various crude palm oil mills. Larger corporations similarly may be able to commit themselves more or less credibly to observance of strict sustainability standards. This does not necessarily reflect purely altruistic impulses. It will add to costs, but may also add to revenues: as consumer groups globally pressure consumer products companies to use sustainably sourced palm oil, these companies may be willing to pay more for sustainability assurance by their palm oil suppliers.

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Given transaction and information costs, and economic incentives of the relevant economic actors, there has been slippage in the monitoring and enforcement of certification systems and corporate policies. The quality and effectiveness of governance have also been major issues. Technological developments, particularly the increased use of satellites to monitor deforestation and fires, may offer enhanced transparency, and increased global awareness and concern over these issues should drive further progress, if the forests can last long enough.

1. Introduction

Recent decades have brought external pressures on the two largest palm oil producing countries, Indonesia and Malaysia, to adopt more environmentally sustainable practices. These pressures have been regional, commercial, and even global in nature.

Concern came first from within Southeast Asian—notably Singapore but also Malaysia—which regularly have been beset by haze from fires used to clear land for oil palm cultivation in Indonesia. More recently, consumer and environmental groups based in the European Union and United States have pushed for limits on deforestation and greenhouse gas (GHG) emissions associated with development of the oil palm sector.

Indonesia and Malaysia both participated in the United Nations Framework Convention on Climate Change, and were among the 175 signatory parties that made non-binding commitments to reduce their GHG emissions under the 2015 Paris Agreement.⁵ Indonesia noted in its statement of commitment to the Paris accord that 63 percent of its GHG emissions were due to land use change as well as peat and forest fires, while Malaysia attributed about 9 percent of its GHG emissions to land use, changes in land use, and forestry.⁶ Peat fires are especially problematic because accumulated organic material on the ground, sometimes many meters deep, can smolder for a long time.

The emissions figure for Indonesia is particularly consequential. As much as 18 percent of global GHG emissions in the year 2000 resulted from land-use change and forestry, and Indonesia was responsible for 34 percent of the total, followed by Brazil at 18 percent.⁷ By October of 2015, a severe fire year, cumulative GHG emissions from fires in Indonesia for the year exceeded total

⁵ A total of 174 countries were signatories. The European Union signed, in addition to its member states.

⁶ Draft statements for the Paris Agreement: “Intended Nationally Determined Contribution, Republic Of Indonesia,” and “Intended Nationally Determined Contribution, Republic of Malaysia.”

⁷ Kevin A. Baumert, Timothy Herzog, and Jonathan Pershing, *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, Washington, DC: World Resources Institute, 2005.

annual GHG emissions in Germany,⁸ and on certain days may have exceeded GHG emissions from China.⁹

This paper focuses on institutional responses to the pressures for limitation of deforestation and greenhouse gas emissions—in the form of the establishment of various certification standards for sustainable palm oil, corporate sustainability policies, and governmental negotiations to reduce GHG or limit deforestation.¹⁰

In particular we look at how economic theories may be able to explain the pattern of institutional responses that have emerged—by examining the role of the characteristics of the organizations that have engineered these diverse responses—such as non-profit, private, or public, as well as national, regional or global in scope. Section 2 examines the principal theoretical frameworks upon which our analysis draws. Section 3 surveys the array of non-profit and private institutions that have emerged, while Section 4 considers public institutions that have emerged within Indonesia and Malaysia. Section 5 turns to regional and global governmental negotiations. Section 6 offers perspectives on the current situation, and Section 7 concludes.

2. Framework for Institutional Analysis

The management of production or consumption activities that impose harmful effects on others is a problem in institutional analysis. This section lays out a conceptual framework for understanding some of the relevant issues. Later sections will expand on these points.

The Management of Externalities

Activities that entail deforestation and greenhouse gas emissions inflict negative externalities on others in the form of economic, health, and even psychic costs. The traditional economic approach to the management of emissions was developed by Arthur C. Pigou (1932), who argued that taxes could be imposed on pollution to force polluters to bear the full social cost of the externalities created.

Economist Ronald H. Coase (1960) later offered a trenchant critique of Pigou, and concluded that a centralized approach was not necessarily required to achieve this end. Coase famously posited that, in the absence of transaction costs, and if legal rights are well defined, the allocation of

⁸ Chris Mooney, “How Indonesia’s gigantic fires are making global warming worse,” *Washington Post*, October 15, 2015.

⁹ Interview with Dave Heesen, environmental consultant and former USAID official in Indonesia, Claremont, CA, November 30, 2015.

¹⁰ There have also been pressures from inside and outside Malaysia and Indonesia for the land rights of groups indigenous to the forested areas to be respected, which would slow oil palm development. We focus in this paper on the environmental concerns per se.

resources will be efficient.¹¹ In particular, under these idealized conditions, rational private actors will be able to negotiate their way to efficient solutions to externalities problems through the exchange of legal rights.

Transaction costs can be insurmountable, however, particularly if large numbers of parties would have to be involved in the negotiations. In the case of greenhouse gas emissions due to land clearing, for example, high transaction costs are present in the form of free-rider or holdout problems. Suppose that many persons in a community have the right to burn forest land, either formally or in practice. Those in the community who would benefit from a reduction of the resultant air pollution would be tempted not to contribute to solution of the problem, waiting instead for others to bear the costs of inducing the polluters to reduce their emissions (the free rider problem). Moreover, polluters would be tempted not to agree to reduce their pollution, even if others had done so, and indeed might be tempted to threaten to increase it, in order to extract greater inducements from others in the community (the holdout problem).

Given such realities, a “tragedy of the commons” (Hardin, 1968) can emerge in which common property resources like natural forests or clean air are overexploited because property rights are communal and difficult to enforce. In the case of deforestation and GHG emissions, stakeholders are spread around the globe and include future generations, so that transaction costs are high and the realization of efficient solutions is in doubt.

We should emphasize that both the Pigovian and Coasian solutions require effective governance. The Pigovian approach requires that a government with coercive powers of taxation that is dedicated to some version of the public interest be present. A Coasian solution requires that there be a coercive legal system that is able to establish and enforce legal rights in a reasonably efficient manner.¹²

Even if the establishment of a global system of governance with these capabilities is very difficult, could partial effective solutions be cobbled together through actions by the public, private, or non-profit sectors? This is the principal question that this paper seeks to address.

Governmental Institutions and Development

Douglass C. North, like Coase a Nobel Memorial Prize winner in Economics, defined institutions simply as “the rules of the game in a society” (1990, 3). Along Coasian lines, North argued that transaction costs may impede the emergence of institutions that are efficient, and that institutions instead may be directed toward serving the goals of those able to harness social, political, or economic power, and who may devise property rights schemes to serve their own interests.

¹¹ In this context, a situation would be efficient if there were no way to make anyone better off, without making at least one person worse off.

¹² Coase argued that, if transaction costs preclude parties from negotiating their way to an efficient outcome, the courts could set property rights in such a way to get us as close as possible to an efficient outcome. This more realistic setting would require that the legal system not just be coercive but also exhibit basic wisdom.

Although this point may seem obvious, social scientists from a variety of ideological perspectives have sometimes not focused enough on whether government actually furthers some measure of the broad public interest. For example, many economists have assumed that a naïve public interest model of government acting monolithically can be applied in a variety of settings.

Others have explicitly modeled the self-interested behavior of individual political or bureaucratic actors, but remain wedded to the notion that rational actors may be able to exploit win-win opportunities, despite the presence of transaction costs. For example, Becker (1983) argues that competition among interest groups may induce efficient policies to emerge. Acemoglu (2003) is more cautious. He argues that the sort of Coasian coordination required to bring about an efficient political equilibrium must rest on an enforceable contractual basis. The problem is that the state itself cannot commit in such a way, because there is no external entity that can enforce state commitments.

Indeed, in recent years, social scientists have examined how important functions of the state may be absent in many settings. Private property rights may not be respected or enforced, the legal system may function inefficiently or in an arbitrary manner, corruption may impede the efficient collection or usage of tax revenues, and so on. To echo North, institutional frameworks that promote either Coasian or Pigovian solutions to externalities problems may be absent because their presence would not serve the interests of elites who have captured the mechanisms of the state for their own interests.¹³ Thus, it is by no means certain that institutions will be effective in meeting their objectives, or indeed that their official goals will align with their implicit goals.

Despite the evident obstacles to efficient solutions, cooperation toward the achievement of common objectives may be facilitated by formal or informal institutions, given in particular the repeated nature of interactions of economic, social, or political actors. With repetition, defectors from accepted standard of behavior can be punished. The leadership of a political party may be able to deny powerful legislative committee assignments to recalcitrant legislators, for example, or consumers may be able to boycott a company deemed to have engaged in socially irresponsible conduct, if the consumers can overcome their own free rider problems. Similarly, governments or multilateral organizations may be able to deny foreign aid to governments that have broken their promises to protect forests and reduce greenhouse gas emissions. Reputational concerns of actors may shape incentives in a similar way.

Institutional Characteristics and Outcomes

We premise our analysis on the assumption that the institutions that have emerged to regulate the sustainability of the palm oil sector serve the interests of the political, social, or economic actors who founded or control those institutions. To reformulate our main question of interest, can goals

¹³ For example, Acemoglu and Robinson (2012) contrast the characteristics and performance of society that have inclusive political institutions versus those that have extractive institutions. Inclusive institutions are both centralized and accommodative of broad pluralistic interests in ways that promote general prosperity, while extractive institutions serve the interests of a narrow elite.

of broader interest to a nation or indeed the planet be promoted, even if much of the impetus for institutional development comes from self-interest?

To structure our analysis, we seek to locate the institutional frameworks erected by various organizations within a two-dimensional matrix of characteristics:

- Are the organizations national, regional, or global in scope?
- Were they founded by public, private or non-profit actors?

We will argue that each of these dimensions can contribute to an understanding of the objectives of each institutional framework, and of the effectiveness with which it pursues them.

Finally, interactions between these institutions must be considered. Some language from game theory is useful in this respect: are the institutions strategic complements or strategic substitutes? Strategic complements mutually reinforce each other, while strategic substitutes offset each other. Some of the palm oil certification standards may compete with each other for credibility on a global scale, for example, or may even have the objective of neutralizing other institutional frameworks that threaten certain special interests. On the other hand, financial assistance from foreign entities willing to pay to reduce deforestation or global climate change may incentivize change within a society—unless a government is reluctant to achieve too much progress on its own on a voluntary basis and thus holds out in order to reap the financial incentives that it hopes will be offered.

3. Institutional Developments in the Management of the Oil Palm Sector

In this section, we survey private or non-profit developments in the management of the oil palm and derivative sectors. Recurrent themes will be that competitive forces have driven institutional developments and that governments shape the environment in which private or non-profit regulatory schemes must operate.

Roundtable on Sustainable Palm Oil

The Roundtable for Sustainable Palm Oil (RSPO) was based on an idea first proposed in 2001 by the World Wildlife Fund (WWF) in the form of a non-profit industry body that would seek to promote the use of sustainable palm oil products through a globalized standard rather than a localized one. It was initially envisioned as a response to the global outcry for cleaner palm oil, but also presumably reflected producer country concerns that the cultivation of oil palm be managed so as to provide employment and income in the long run.

The initial collaboration was between the WWF, Aarhus United UK, Migros, the Malaysian Palm Oil Association, and Unilever. Since its conception, the RSPO community has grown in number

to 308 certified palm oil mills, 71 growers and 3766 facilities with supply chain certificates. The community accounts for about 17% of global palm oil production.¹⁴

Two tiers of membership exist. Ordinary membership is limited to palm oil producers, processors and traders, manufacturers of consumer goods, retailers, bankers, investors, and non-governmental organizations (NGOs). Affiliated membership is offered to others that seek to be involved in the RSPO and its activities. Members are expected to maintain a channel of communication with the RSPO to help develop and maintain plans of action in a transparent manner to further the cause of sustainable palm oil production, processing, and consumption.

The WWF is the only brand-name international environmental NGO associated with the RSPO at this point,¹⁵ and even the WWF has looked beyond the RSPO.¹⁶ Indeed, though the RSPO has been described as the world's flagship palm oil certification body, several NGOs and firms across the world have expressed their dissatisfaction with the RSPO certification standards. One area of concern is the ambiguous language used in the RSPO principles and criteria.¹⁷ Members are supposed to ensure that assessments are done so that new plantations are not established on forests that constitute high conservative value (HCV) or high carbon stock (HCS) land. A majority of the forests on the Indonesian islands of Sumatra and Kalimantan (Borneo) are classified as secondary or degraded under RSPO guidelines, however, thus allowing their clearing despite their local and global environmental importance.

Another important category of land is peatlands. The peat forests found in Indonesia are arguably among the world's most extensive and important carbon reserves, comparable in value to the Amazon forest.¹⁸ Satellite analysis conducted by the Center for International Forestry Research (CIFOR) on an area in Riau province on the island of Sumatra in June 2013 showed that at least 140,000 hectares were hot spots, with a majority of it being from industrial estates on peat.¹⁹ The burning of peat lands accounts for about half of the greenhouse gas (GHG) emissions from land use activities within Indonesia.

The RSPO sets no explicit limits on GHG emissions from forest conversions and cultivation of oil palm or production of palm oil, though it asks for voluntary reports on such emissions. Although the RSPO does not ban the clearing of peat lands for oil palm cultivation, it does ban the use of fire for forest conversion. Nevertheless, the RSPO has been ineffective in controlling the use of

¹⁴ "Impacts," RSPO, last updated December 31, 2016, www.rspo.org/about/impacts.

¹⁵ Based on the online RSPO membership directory, June 10, 2017.

¹⁶ We note below that the WWF has been involved in a more recent organization, the Palm Oil Innovation Group.

¹⁷ Oliver Balch, "Sustainable palm oil: how successful is RSPO certification?," *The Guardian*, July 4, 2013.

¹⁸ National Council on Climate Change, "Setting a course for Indonesia's green growth," Press conference presentation, September 6, 2010.

¹⁹ D. Gaveau and M. A. Salim, "Nearly a quarter of June fires in Indonesia occurred in industrial plantations," Centre for International Forestry Research, Bogor, Indonesia, July 30, 2013.

fire. A Greenpeace mapping initiative in Riau for the first half of 2013 showed that 720 fires, 39 percent of the total, were in areas held by RSPO members.²⁰ Even after being confronted with the evidence, the RSPO only decided to investigate and expel one company out of the several listed for violations.²¹

RSPO rules limit supply chain traceability and allows clean palm oil to be mixed with oil coming from destructive deforestation operations (Gaveau and Salim, note 19 above). There are also no restrictions on local trade in palm fresh fruit bunches (FFB). Thus, RSPO members are allowed to acquire FFB from third parties who do not adhere to the RSPO regulations. This means that in practice much of the supply chain is beyond the purview of the RSPO.

In addition to weak regulations, the RSPO suffers from slow decision making²² and lacks enforcement power due to its structural setup. In 2012, the WWF only received reports from 69% of RSPO members and lacked enforcement power to discipline the offenders. Moreover, only 38% of the crude palm oil (CPO) produced by members was certified, only half of the members disclosed how much land they owned and submitted for land certification, and only one-third had disclosed plans to be sustainable by 2015.

The RSPO admits that, given the voluntary nature of its rules, the only course of action it can take is to suspend members, which is not much of a deterrent. The lack of faith in the RSPO process is evident in the fact that an RSPO founding member, the Dutch conglomerate Unilever, the world's largest purchaser of palm oil, opted to open its own audit in 2009 to investigate another RSPO member, Sinar Mar, a large Indonesian conglomerate that has been one of Unilever's palm oil suppliers and that was implicated in slash and burn agriculture as well violations of HCV forestry regulations.

Apart from some obvious enhancements in RSPO regulations as implied by the deficiencies noted above, we would point to a few other possible areas of reform:

- Independent and prospective GHG emissions estimates could be required before clearing any land by fire could be undertaken, which would provide a metric for some of the environmental costs of utilization of various plots of land.
- There have been calls for the RSPO to only allow RSPO members to use fresh fruit bunches from their own plantations for the sake of greater accountability.
- The RSPO could increase its enforcement capabilities beyond name-and-shame and suspension of membership to include boycotts of exiled companies.

²⁰ Greenpeace International, "Certifying Destruction: Why consumer companies need to go beyond the RSPO to stop forest destruction," September 2016.

²¹ "Letter from RSPO to Duta Palma Nusantara," *RSPO*, May 9, 2013.

²² Rajesh Chhabara, "Asia column: Sustainable palm oil - Palmed off with voluntary guidelines?," *Ethical Corporation*, June 4, 2015.

Efforts toward stricter self-regulation along the second and third lines above would run into two sets of problems. One is the obvious difficulties of monitoring and enforcement, given that the stakes are so high. Although positive steps in traceability have been achieved, as will be discussed later, it is difficult and costly to identify the source of FFB. Moreover, individual companies would have strong incentives to acquire fresh fruit bunches from low-cost, independent suppliers not complying with RSPO standards in order to gain a cost advantage over rival firms.

The other is that efforts to restrict trade in FFB could run afoul of anti-monopoly authorities in the host countries, which as we will see is a particularly salient issue if officials within the host government do not favor restrictions on development of the sector anyway. Limitations on trade in fresh fruit bunches have been deemed to exclude smallholder farmers, for example, and private boycotts could be portrayed as nefarious, even if done for environmentally legitimate reasons.

GreenPalm Certificates

In a step that appeared ingenious in economic terms, the RSPO undertook the creation of a market in “GreenPalm Certificates” in response to a proposal from RSPO member Unilever in 2014. Under this arrangement, RSPO-certified CPO mills are allocated one certificate per metric ton of CPO production certified to be sustainable. Industrial companies or product distributors or retailers can then offset their usage of palm oil products through the purchase of the certificates. Users that purchase an amount of certificates equal to the full CPO-equivalent of their usage of palm-oil products can use the GreenPalm logo and claim on their labels, “Supports the production of RSPO-certified sustainable palm oil.”²³ The cash flow from the sale of these certificates is then sent back to the RSPO-certified mill identified on the certificate “to help tackle the environmental and social issues created by the production of palm oil.”²⁴

For the industry, an advantage of the approach is that users of palm oil products do not have to disrupt their own supply chains, which may or may not derive from sustainable oil palm sources. Thus, the certificates are supposed to act much like carbon offsets—in which those who engage in activities that result in carbon emissions can purchase and retire tradable carbon emissions permits. The retirement of the permits in principle reduces carbon emissions in total and puts upward pressure on the prices of the permits, adding to the opportunity costs of carbon emissions for all. In the case of GreenPalm, companies for which RSPO certification of their supply chains would be particularly costly could simply purchase certificates, while others for which RSPO certification is less costly could seek certification and perhaps even sell certificates to others.

Despite the parallels to carbon offsets, the GreenPalm certificates program has been controversial. A major problem is that the certificates have been very cheap compared to the value of palm oil. The price hovered around \$5.50 as of March 2016, while the government of Indonesia utilized an export directive price of \$650.54 per metric ton of CPO for purposes of setting export tax rates at

²³ Niamh Michail, “GreenPalm palm oil goes greener—or does it?,” *FoodNavigator.com*, March 11, 2016.

²⁴ “GreenPalm Sustainability,” *Pathway International*, Web, N.D.

that time,²⁵ putting the effective subsidy to certified palm oil producers below one percent.²⁶ As such, the GreenPalm certificate price offers a negligible incentive for companies to begin the often complex and expensive process of getting their mills certified. The low price in turn presumably reflects a low demand for the certificates relative to the amount of RSPO-certified CPO.

Others have criticized the GreenPalm system because its “Book and Claim” traceability standard provides virtual rather than physical traceability to the mill. The problem relates back to the idea that palm oil users do not need to assure that their own supply chains are sustainably sourced, but rather are simply supporting *some* identifiable RSPO-certified mill. Indeed, this standard is the weakest of the four traceability standards utilized by the RSPO.²⁷ The RSPO could perhaps counter that the flexibility of the GreenPalm program is the whole point, but even so the impression is that participants in the program are buying the appearance of social-mindedness at a token price.

The RSPO and GreenPalm in the Broader Institutional Context

The ultimate defects in GreenPalm mirror the basic defects in the RSPO itself: critics have argued in particular that there is extensive collusion between RSPO auditors and CPO mills and that the certificates have been used as vehicles for “greenwashing.”²⁸

Beyond these institutional issues, many manufacturers and retailers choose palm oil precisely because it is the cheapest vegetable oil available. Certification is not a viable way to reach these companies because cost is the sole consideration. In a seminar convened by EnviroLab Asia and our Sarawak province hosts in the Malaysian city of Miri, January 8, 2016, the former president of the Network of Indigenous Persons of all Malaysia (Jaringan Orang Asal SeMalaysia, JOAS), Thomas Jalong, put his finger on a major problem: most oil palm companies that operate in Sarawak were not willing to participate in the RSPO because they have markets in China, Korea, and India that are not concerned with environmental sustainability. This problem applies throughout the palm oil sectors of Indonesia and Malaysia.

²⁵ Regulation of the Minister of Trade Number 11 of 2016, February 26, 2016.

²⁶ The price of CPO ex-mill is less than the export price, implying a higher subsidy in percentage terms relative to the ex-mill price. However, only a fraction of CPO production is under the GreenPalm program, so the average subsidy rate would be lower.

²⁷ The strongest and most costly is the “Identity Preserved” supply chain model, which “assures that the RSPO certified oil palm product delivered to the end user is uniquely identifiable to a single RSPO certified mill and its certified supply base. All supply chain participants must ensure that the RSPO certified oil palm product is kept physically isolated from all other oil palm sources throughout the supply chain.” Users can display the RSPO logo and claim, “This product contains certified sustainable palm oil.” See “RSPO Supply Chain Certification: A Primer,” Roundtable on Sustainable Palm Oil, August 2013.

²⁸ Chris Lang (REDD Monitor), “Sustainable palm oil? RSPO's greenwashing and fraudulent audits exposed,” *Ecologist*, November 19, 2015.

For a limited number of firms that produce branded consumer products, RSPO or GreenPalm may make sense: the reputational gains may exceed the additional expenses. A 2014 global consumer survey by the Nielsen Corporation found widespread interest in corporate social responsibility. Nielsen noted in particular, “Sustainable purchase considerations are most influenced by the packaging in Asia-Pacific (63%), Latin America (62%) and Middle East/Africa (62%) and to a lesser extent in Europe (36%) and North America (32%).”²⁹ Thus, the GreenPalm or RSPO label could indeed be attractive to some companies, though such companies could be selling unbranded or non-certified products to other markets as well.

It may be counterintuitive that North American consumers lagged behind those in other regions with lower per-capita incomes—not only in the influence of packaging but also in terms of broader concerns with sustainability. This is consistent, however, with recent reports that major U.S. multinational corporations like Procter & Gamble and McDonald's obtained only 13 percent of their palm oil from certified sources, and PepsiCo only 17 percent,³⁰ although more recently PepsiCo, Walmart, and Starbucks have called on the RSPO to enforce stricter standards.³¹

The RSPO and GreenPalm may offer a certain veneer of credibility, then, and that may be enough for many of the companies that participate. As we will see, however, market pressures remained for stronger standards to emerge among a certain set of firms.

The Wilmar Framework

Singapore-based Wilmar International is Asia’s leading agribusiness group, and the world’s largest processor and merchandiser of palm oil. It is also one of the world’s largest plantation companies, with planted area in oil palm of over 230,000 hectares. It holds a market share of more than 40 percent in the market for edible oils in China.³² Its reach also extends into oleochemicals and biodiesel production.

As the industry leader in palm oil, and prodded by prominent environmentalists, Wilmar

²⁹ These figures mirror the regional concerns that the survey found with corporate social responsibility in general. It is counterintuitive the Western countries lagged other regions of the world in attraction to corporate responsibility, including sustainability, but it should be noted that the survey only included consumers with Internet access, who we would expect to be among the more highly educated and higher income members of their respective societies. See “Global Consumers are Willing to Put Their Money Where Their Heart is When it Comes to Goods and Services from Companies Committed to Social Responsibility,” Nielsen.com, June 17, 2014.

³⁰ Oliver Balch, “Palm oil: WWF name and shame top global buyers; with certified palm oil so easy to source, why are many large companies still failing to hit their own targets for sustainability?,” *The Guardian*, January 28, 2014.

³¹ Alison Moodie, “Companies call for tougher sustainability standards for palm oil,” *The Guardian*, June 1, 2015.

³² “Slides for SIAS Corporate Profile Seminar,” *Wilmar International, Limited*, September 2010. Web. April 3, 2016.

established an industry-leading sustainability policy on December 5, 2013,³³ and subsequently pushed for its restrictive set of guidelines to become the industry standard. The three tenets of the Wilmar policy are no deforestation, no development on peat, and no exploitation of people and local communities. On deforestation, the policy is for there to be no development of land classified as HCS or HCV. Also, there is to be no burning at all in land development, and progressive reductions of GHG emissions on existing plantations. Peat is not to be developed, regardless of its depth.³⁴

All provisions of the policy were to be effective immediately for refineries, mills, plantations and subsidiaries owned, managed or invested in by Wilmar. In addition, all provisions were to apply by December 31, 2015, to third-party suppliers with which Wilmar had a trading relationship. This private policy is global in scope, applying to Wilmar operations in Indonesia, Malaysia, China, Africa and elsewhere.

At Wilmar-managed plantations, mills, and refineries, there seems to be a strong commitment to the policy, but most of Wilmar's palm oil supply comes from third-parties: Wilmar owns 46 mills and sources CPO from an additional 981 mills. Even though Wilmar intends for its policy to apply to all third-party suppliers it trades with, these suppliers are not bound to Wilmar and are still able to trade with other firms with less restrictive standards.

For suppliers that are not compliant, Wilmar's policy states: "Wilmar will cease to do business with any suppliers who our independent advisors or other stakeholders find are in serious violation of this policy, and who do not take immediate remedial action to correct those violations. However, regardless of remedial action, we will not do business with serious repeat violators of the policy."³⁵

In practice, Wilmar does not immediately cut off one-time offenders. It instead elects to work with the suppliers and establish time-bound plans to align with Wilmar's policy. Wilmar only terminates trading relationships as a last resort, after repeat offenses and a demonstrated inability to correct the violations.³⁶

Wilmar has also implemented a grievance procedure that allows any external parties, including individuals, government organizations and non-governmental organizations (NGOs) to convey their concerns about the implementation of the policy.

Importantly, holding a prominent role on the Grievance Committee, as well as in the overall

³³ See, for example, Nathaniel Johnson, "48 Hours that Changed the Future of Rainforests," *grist.org*, April 2, 2015, or Glenn Hurowitz, "No Deforestation, No Peat, No Exploitation," *Center for International Policy*, *ciponline.org*, January 21, 2016.

³⁴ "No Deforestation, No Peat, No Exploitation Policy," Wilmar International, December 5, 2013.

³⁵ "Grievance Procedure for the Implementation of Wilmar's No Deforestation, No Peat, No Exploitation Policy," *Monitoring Dashboard, Wilmar International, Limited*, N.D. Web., April 3, 2016.

³⁶ Presentation by Sharon Chong, Senior Manager in Wilmar's Sustainability Department, to EnviroLab Asia clinic group on January 12, 2016.

implementation Wilmar's policy, is The Forest Trust (TFT), a Swiss-based global environmental NGO that helps companies—predominantly in the palm oil, pulp, and paper sectors—run responsible supply chains. The bulk of TFT's role involves fieldwork with plantation and mill owners.

Finally, to improve transparency in its supply chain, Wilmar has assembled and made public a comprehensive database that traces its product flows from ports and refineries back to upstream sources of supply. To this point, Wilmar has only made public its supply-chain data back to CPO mills, not plantations, with the exception of Malaysia, for which plantations are also mapped. Certainly, traceability to the plantation is costly, particularly if a mill draws from numerous smallholders, and could prove to be sensitive in public relations terms to Wilmar, its suppliers, or government officials whose job it is to prevent deforestation.

The incompleteness of the data raises concerns about the value of this endeavor, as the problems the policy addresses mostly occur on plantations, and mills can be supplied by scores or even hundreds of plantation estates. However, Wilmar argues that the immediate priority is engagement with mill owners, who can then reach their own suppliers of fresh fruit bunches.

In any case, the strict policy established by Wilmar—coupled with its transparency (limited though it may be, it is far in excess of that provided by most other firms) and the grievance procedure—constitutes a signal along the lines of Spence (1973) of Wilmar's commitment to a sustainable supply chain. With the grievance procedure in particular, independent NGOs and other third parties could conduct their own research on the raw materials sources for mills in the Wilmar supply chain, through investigations of fires or deforestation by satellite, on the ground, or in combination, setting up Wilmar for reputational damage if major violations of its policy are found and not corrected.

Indeed, a 2017 report by the Rainforest Action Network (RAN) revealed that an Indonesian company, PT Agra Bumi Niaga, had illegally cleared land in the ecologically sensitive and officially protected Leuser ecosystem, which straddles the border between Aceh and North Sumatra provinces, then used the land to supply fresh fruit bunches to a mill that supplied CPO to Wilmar.³⁷ The consumer products company Nestlé, which purchases palm oil from Wilmar, stated that it was “very concerned” that its supply chain had been implicated in the destruction of the Leuser rainforest,³⁸ reflecting the pressure on Wilmar to handle the situation efficaciously. Wilmar temporarily suspended purchases from PT Agra Bumi Niaga, but the RAN concluded: “Over the past two years a number of Wilmar's suppliers have been connected to the destruction of the Leuser ecosystem... Wilmar has previously taken action to exclude a number of these controversial suppliers from its supply chain but to this day continues to source conflict palm oil grown at the expense of the Leuser ecosystem.”

³⁷ “PT. Agra Bumi Niaga: Destroying elephant habitat while breaching the Indonesian government moratorium on forest clearance for palm oil,” LeuserWatch.org, Rainforest Action Network, January 31, 2017.

³⁸ Louis Gore-Langton, “Nestlé “very concerned” over deforestation links to Wilmar palm oil,” *FoodNavigator.com*, March 27, 2017.

Further issues remain. First, the text of the Wilmar policy does not appear to protect land from being cleared by third parties and then sold in degraded condition to Wilmar or its suppliers. Indeed, there is a general practice in the industry in Indonesia known as *terima abu* (receive ashes) in which burned land is sold to oil palm growers by smallholders or others.³⁹

Also, during our January 2016 trip to Sarawak province on Borneo, our EnviroLab Asia group saw a very lush area of secondary forest. This was re-growth from logged land. It is clear that, given enough time, such land has the potential to regain its HCS or HCV status through reforestation efforts or just by being left undisturbed, unless significant erosion or desertification have occurred. Consequently, will land degraded before December 5, 2013, ever be reforested, or is it permanently degraded in Wilmar's eyes and fair game for any future development? The answer to this question has far-reaching consequences for reforestation and regrowth efforts.

The Indonesia Palm Oil Pledge

The Indonesia Palm Oil Pledge (IPOP) was a private agreement signed at the UN Climate Summit in 2014. Facilitated by the Indonesian Chamber of Commerce (KADIN), the original signatories were the major palm oil suppliers and processors Wilmar, Golden Agri-Resources, Cargill, and Asian Agri. They were later joined by Musim Mas and Astra Agro Lestari in 2015 and 2016, respectively.⁴⁰

The signatory companies diverged in the level of detail of their sustainability policies, but all were modeled on the Wilmar approach: no deforestation on HCS or HCV land, no development of peat, no burning, progressive reductions of GHG emissions on existing plantations, and no exploitation of people or communities. The other companies did not seem to invite outside scrutiny to the extent that Wilmar did. The Cargill policy, for example, did not mention grievance procedures, but stated that relevant stakeholders would provide input into implementation of the policy.

The IPOP was less detailed than the individual company policies, as one might expect of a consensus document. It did not mention HCV land at all, but did commit the parties to agree on a scientifically-based common definition of HCS land, and not to develop such land, nor to develop peat land, regardless of depth. It did not prohibit burning, but each of the signatories had committed individually to that. The agreement also stated that its provisions would apply to the worldwide operations of the companies, and that it would apply to all of their third-party suppliers. It pledged transparency and accountability.

The IPOP also committed the signatories to play nice with others. It endorsed “internationally recognized certification systems and principles and criteria” (clearly the RSPO) and included pledges to work together with relevant stakeholders—NGOs, local communities, local and national governments, and others. It committed the signatories to engage with and assist smallholders and to respect basic human rights.

³⁹ Robin Hicks, “How a palm oil company is fighting slash and burn culture,” *Eco-Business*, April 11, 2017.

⁴⁰ “Indonesia Palm Oil Pledge,” *Indonesia Palm Oil Pledge*, February 15, 2016.

Lastly, it committed to improve the competitiveness of Indonesian palm oil, and, in particular, “Enhance the image of Indonesian palm oil by delinking it from deforestation and social conflict, and complying with prevailing international certification systems and accepted principles and criteria.”

Despite all these efforts to assure comity, the Indonesia Palm Oil Pledge was disbanded involuntarily in 2016. That story is integral to the central analytical questions of this paper, and we pick it up in Section 6 below.

Other Non-Profit Initiatives

Two other non-profit palm-oil certification initiatives are noteworthy: the Palm Oil Innovation Group (POIG) and RSPO Next.⁴¹ Neither of these have caught on much so far.

The POIG sought to build on RSPO standards. Dated November 13, 2013, its charter predated the promulgation of the Wilmar policy by several weeks. Greenpeace was a founding POIG member. It now includes the WWF and other NGOs in the area of environmental conservation and worker rights, but only a handful of companies that source crude palm oil have joined; Singapore-based Musim Mas is evidently the only one with operations in Indonesia and Malaysia.⁴²

The POIG charter appears to reflect the goals primarily of its member environmental NGOs. It includes a time-bound commitment not to develop HCS forest areas identified for conservation.⁴³ Peat lands are not to be developed or drained. There is no prohibition on burning, but member companies are to report annually on their GHG emissions from all sources. There are additional stipulations on pesticides, genetically modified organisms, worker rights, transparency and corruption, and other matters.

RSPO Next was a voluntary initiative by the RSPO that was in the works in 2015 and finalized in 2016. The goal appears to have been to maintain the relevance of the RSPO to member companies that aspired to stricter sustainability certification standards, while maintaining the broad base of membership that the RSPO had achieved.

The major environmental themes were familiar: development only on mineral soils (and thus not peat) and in low carbon stock areas, no burning, and consideration for HCV concerns. An innovation was that all mills should provide traceability to the location of production of all FFB—including from mill-owned, smallholder, or other independent estates—and within one year of initial RSPO Next verification should source their FFB only from identified plantations.

⁴¹ A third alternative, the Sustainable Palm Oil Manifesto, seems not to have attracted much interest, and was greeted with considerable skepticism because member commitments were much in line with the Wilmar model but were not strictly time bound.

⁴² Musim Mas joined the IPOP in March 2015, and joined the POIG in November of that year. The company states that it attained 100 percent RSPO certification in 2012.

⁴³ “Palm Oil Innovation Group Verification Indicators,” Palm Oil Innovation Group, March 2016.

It was not until April 2017 that the RSPO was able to issue its first RSPO Next certification—to a firm operating in Colombia, though the Malaysia-based multinational IOI Group has expressed some interest.⁴⁴

One interpretation of the slow growth of RSPO Next is that RSPO members that had interests in more committed sustainability policies had already ventured off on their own, and that the rest for the most part were content with the minimal level of certification that the RSPO could provide.

Further Perspectives on Non-Profit and Private Institutions

In theoretical terms the certification of a CPO mill by an organization like the RSPO can be viewed as a Coasian approach to the externalities problems inherent in deforestation and greenhouse gas emissions. The standardization of the criteria being applied reduces transaction costs; the certifying organization stakes its credibility as an agent for consumer or environmental groups, and thus presumably some of its ability to extract revenue from member companies, on the accuracy of its certifications.

We can also think of the RSPO as a club in the sense of Buchanan (1965). Clubs provide goods that are neither fully private nor fully public; exclusion from the club is possible, unlike for a pure public good. In the case of the RSPO, certification is mostly a private good whose payoff is mostly realized by individual CPO mills, but the legitimacy of the RSPO certification process is also a public good on which individual firms have incentives to free ride, by finding ways to circumvent RSPO rules through collusive arrangements with RSPO auditors, for example, thus lowering the value of that certification to all.

One implication of the theory of public goods is that the incentives to free ride are stronger, the smaller is the share of the individual in the collective. Thus, the incentives to free ride are stronger, the larger is the club. The IPOP was a more exclusive club, and we should have expected, had it been allowed to continue, that the endorsement that it provided would have been more credible relative to that of the RSPO—not only because it had fewer members, but also because of the nature of the firms that selected themselves to join the IPOP.

In particular, the sustainability policies adopted by individual firms like Wilmar and the other IPOP firms preceded IPOP and can be viewed as alternative means of sustainability assurance on their own—strategic complements with IPOP. These firms are large, and thus it can be cost effective for them to have their own dedicated approaches rather than being subject to the rigidities and shortfalls of a standardized approach. Companies that purchase palm oil from such firms are buying into their policies, whose valuations by the market depend not only on their terms but also on the extent to which the firms are perceived to have adhered to the policies.

The competitive advantage of such firms is rooted in part in the informational imperfections of the oil palm market—such as those related to the risks of collusion between auditors and CPO mills.

⁴⁴ Niamh Michail, “RSPO issues first ever RSPO Next palm oil certification,” *FoodNavigator.com*, April 25, 2017.

Thus, being in relatively close proximity to the supply chain is important. It would be difficult for a multinational consumer products company like Nestlé to perform that function itself. Instead, companies like Wilmar that can serve as intermediaries are better suited to play that role.

As Akerlof (1970) observed in the context of loan sharks in India, such parties will earn rents on their proximity to the market and other special capabilities. Thus, while companies like Wilmar will incur costs in assuring the transparency and sustainability of their supply chains, their ability to do so will be rewarded in terms of willingness to pay of major downstream CPO buyers. Indeed, there is at least anecdotal evidence along these lines.⁴⁵

There are other reasons for companies that have gone beyond the RSPO standard to be large: large companies tend to enjoy certain advantages in terms of sustainability assurance. Part of it is simply that large companies have much greater reputational stakes in play, often in multiple product markets. Large firms also have an ability to pull on board credible environmental NGOs that are international in reach and that will put their own credibility on the line to some extent in their decisions about which private-sector alliances to form.

Behavioral economists point out that consumers have limited mental shelf space—and thus have a capacity to focus on only a few varieties of a differentiated product. Large companies that sell their own branded consumer products thus could enjoy inherent advantages over small firms for this reason—particularly if substantial portions of their customer bases value sustainability. We would not expect large downstream consumer products companies that specialize in procurement of palm oil to be subject to limited mental shelf space themselves, but like environmental NGOs they may not wish to deal with numerous small suppliers on transaction cost grounds.

Smaller players could find niches for their products in markets for bulk consumer products—such as cooking oil sold in Southeast Asian countries from large drums and dispensed in plastic bags, and perhaps could free ride off the conservation efforts of others. As traditional markets continue to wane in such countries, a more widespread presence of branded products and the spread of sustainability concerns may lead to the spread of sustainability assurance as well.

Large companies could enjoy some economies of scale in the investigation and verification of sustainability practices—such as through the development of database management systems to oversee their supply chains. On the other hand, very large palm oil companies may have difficulties in applying the limited resources of their sustainability departments to all of the mills and supplier plantations in their supply chains. Thus, it may make sense in cost terms for Wilmar to develop a grievance procedure in which environmental NGOs or others can bring attention to issues to which the company needs to respond.

A disadvantage for a large company like Wilmar is that not all of its customers will value sustainability assurance, and thus costs will be incurred that may not be rewarded by enhanced willingness to pay—though there may also be forward-looking or even altruistic aspects to the policy, such as the transformation of cultural norms to favor environmental protection.

⁴⁵ See “MSPO a game-changer,” *TheStar.com*, December 5, 2016.

4. Governmental Certification Schemes

In addition to the private certification schemes and policies for sustainable palm oil, the governments of Indonesia and Malaysia have also established schemes of their own. How do these fit into the institutional ecosystem that has arisen around the oil palm sector?

Indonesian Sustainable Palm Oil

Indonesian Sustainable Palm Oil (ISPO) is a certification policy adopted by the Ministry of Agriculture in 2011. Its official objectives are to enhance the competitiveness of Indonesian palm oil in the international market, partly by supporting the national commitment to reduction of GHG emissions and to conservation of natural resources and the environment, as well as by supporting responsible treatment of workers and communities.

Defenders of ISPO within Indonesia argue that it is more oriented to producer interests rather than consumers or NGOs as in the case of the RSPO, and that the RSPO has slowed development of the palm oil sector.⁴⁶ ISPO is the only one of the certification standards or corporate policies that is available on the Internet in the Indonesian language; all the rest are in English. This gives a sense of the perceived constituencies or target groups for the respective organizations.

In one way, ISPO is more ambitious than the various other schemes: the certification applies directly to plantation estates of all sizes and not to CPO mills. Even though ISPO certification became mandatory for oil palm estates in 2015, only 264 oil palm plantation firms out of an estimated 1,600 have been certified, with more than 300 applications still being processed. One reason for the slow processing has been the rampant issuance by local governments of illegal land cultivation permits within protected forest areas,⁴⁷ which has no easy resolution. A presidential regulation is to be issued in July 2017 with the goal of improving the ISPO certification process.

ISPO has been greeted with great skepticism by environmental NGOs and activists. Critics argue that the certification processes is not credible internationally, and that stakeholders are unable to provide input. That is not quite correct, as among the stakeholders are the various surveyor companies assigned with implementation of the policy, some of which have proved themselves to be routinely corruptible in other contexts—such as the mostly state-owned surveyor company Sucofindo.⁴⁸

⁴⁶ Down to Earth, “Indonesian Sustainable Palm Oil scheme to speed up palm oil development,” *DTE* 88, www.downtoearth-indonesia.org, April 2011.

⁴⁷ Stefani Ribka, “RI to strengthen ISPO, aims for global recognition,” *Jakarta Post*, April 18, 2017.

⁴⁸ See, for example, Nurul Julaikah, “Dahlan pecat dirut Sucofindo dan direktur produksi PT DI” (“Dahlan [Minster of State Enterprises Dahlan Iksan] fires the general director of Sucofindo and the director of production at PT DI [PT Dirgantara Indonesia, a state-owned aerospace company],” *Merdeka*, February 7, 2014.

Malaysian Sustainable Palm Oil

The Malaysian Sustainable Palm Oil (MSPO) standard received government approval in 2013 and began to be implemented in January 2015. Most of the requirements are covered under national legislation and other control mechanisms. Matters that are assessed are related to land and wildlife protection, employee matters, crop protection matters, environmental matters, and safety and health matters. MSPO compliance will not be mandatory until 2019.

MSPO is similar to ISPO in that MSPO aims to rival the RSPO and is more concerned with the sustainability of the national industry than the natural environment. This is apparent from views on MSPO expressed by Malaysian palm oil industry stakeholders.⁴⁹ For example, when asked if it was a good idea for Malaysia to have its own sustainability framework when there was already the RSPO, the head of one plantation company stated that the RSPO had “swerved away from the philosophy of its establishment” and is now seen “as an instrument of protectionism and trade barrier.” Thus, he argued that Malaysia should have its own sustainable palm oil standard.

There was also a sense that the RSPO had impeded the development of the palm oil industry in Malaysia, such as through the time-bound requirements for compliance with its principles and criteria, as well as some resentment that other oil seeds industries around the world were not subject to similar scrutiny.

Further Observations on ISPO and MSPO

We can start with the obvious point that global environmental concerns do not matter as much to individual countries like Indonesia and Malaysia, which have their own imperatives in terms of development. This is particularly true of the palm oil sector itself: there is some support in both countries for ISPO and MSPO as institutions that might supplant the RSPO.⁵⁰ Interviews with business leaders in Malaysia, for example, reveal that those in the industry who have had trouble meeting RSPO standards tend to view MSPO as a strategic substitute for the RSPO, and see it in more nationalistic terms, while others who have been able to meet RSPO standards tend to be more amenable to the RSPO (see note 41 above).

Some business interests within Malaysia recognize the importance of environmental certifications being done by a body perceived to be independent of national or business interests. This question of independence highlights the observation by Acemoglu (2003) that governments may be unable to bind themselves credibly to otherwise constructive courses of action because of the absence of an external contractual enforcement mechanism. For Indonesia, the ISPO suffers from many of the

⁴⁹ Reported at “*The Star* Roundtable on Palm Oil” held at Menara Star in Petaling Jaya, Selangor, November 16, 2013.

⁵⁰ Useful sources comparing the RSPO and ISPO include Gary Paoli, “A comparison of leading palm oil certification standards applied in Indonesia,” daemeter.org, November 13, 2013; and “Certification schemes,” *Sustainable Palm Oil Transparency Toolkit (SPOTT)*, www.sustainablepalmoil.org, N.D.

credibility problems of the government in general, as discussed further below, and enhancement of the marketability of Indonesian palm oil through ISPO is not a realistic goal at this point.

Industry and bureaucratic interests are intertwined in both Indonesia and Malaysia, as in any society to some degree, but there is evidence that ISPO particularly represents bureaucratic interests, while MSPO has had more buy-in from national business interests. A recent comparison of ISPO and MSPO, for example, noted that the ISPO standard emphasizes existing national legal and regulatory requirements, to the point that it has been called the “legality standard” for palm oil in Indonesia, while the MSPO standard was developed by the Malaysian government with input from stakeholders in the palm oil industry.⁵¹

This assessment of ISPO echoes a study of patronage networks in Indonesia by Blunt, Turner, and Lindroth (2012, 76), who note that the technocratic work carried out by government agencies exhibits a “preoccupation with the formal,” such as legislative and process stipulations that must be satisfied, even as positions within the bureaucracy are for sale and “nearly all services have an informal market price.”

Consistent with these assessments, we would emphasize that, although ISPO is nominally an institution through which the Indonesian government aims to improve the international competitiveness of Indonesian palm oil, at the moment it is mostly a vehicle to extend Ministry of Agriculture control of land use. Greater control along these lines could be appropriate, particularly given the recent misbehavior of local governments, although the broader context is that a number of Indonesian ministries in general have tried to expand their own sometimes lucrative domains of control in recent years. With much of the heavily-forested province of West Papua not yet developed, the stakes are high.

The differences between Indonesia and Malaysia in terms of natural resource management are to some extent historic. Article 33 of the Indonesian Constitution of 1945 emphasizes state control: “The land, the waters and the natural resources within shall be under the powers of the State and shall be used to the greatest benefit of the people.” The problem for Indonesia is that the constitutional declaration of communal rights over forest lands tends to build in a tragedy of the commons in practical terms. Indigenous forest peoples have been denied traditional land rights, which would give them incentives to be better caretakers of the land, and the broader interests of the public tend to be subservient to those of powerful elites.

Governance within Malaysia, which was consolidated on a federal basis in 1963, is more decentralized, as peninsular Malaysia as well as the states of Sabah and Sarawak have their own land codes. The Sabah and Sarawak codes contain provisions on the creation of native customary rights for aboriginal groups (*orang asli*). The National Land Code of Peninsular Malaysia does not provide for customary land rights, but customary land tenure is recognized under the common

⁵¹ “Comparison of the ISPO, MSPO and RSPO Standards,” www.sustainablepalmoil.org, prepared by efeca, Dorchester, UK, 2015.

law.⁵² Though struggles over land rights go on in that country, the basic premise in Malaysia is that state control of natural resources is limited.

These differences also reflect broader differences between the countries: governance is to some extent better in Malaysia than in Indonesia. For example, Transparency International reported a 2016 Corruption Perception Index score for Indonesia of 37 out of 100 (ranked number 90 out of 176 countries) versus 49 for Malaysia (ranked number 55). Greater transparency in Malaysia may also be reflected in the fact that Wilmar is able to show its supply chains down to the plantation level for Malaysia, while in Indonesia the identities of the operators of land concessions tend to be well-guarded secrets. These patterns will be at best slow to change; economists such as Bardhan (2006) have argued that corruption equilibria tend to be highly persistent.

5. Other Regional and International Agreements

We now examine several regional or international agreements that are relevant to oil palm development and related greenhouse gas emissions, even though they do not directly or exclusively target the oil palm sector.

ASEAN Trans-Boundary Haze Pollution Agreement

The ASEAN Trans-Boundary Haze Pollution Agreement, signed by the ten member states of the Association of Southeast Asian Nations in 2002, addressed the environmental externalities caused by wildfires, particularly those used to clear land for uses such as oil palm development. ASEAN proclaimed, “The Agreement is the first regional arrangement in the world that binds a group of contiguous states to tackle transboundary haze pollution resulting from land and forest fires. It has also been considered as a global role model for the tackling of transboundary issues.”⁵³

The agreement was intended to address principally the haze pollution problems experienced by Singapore and Malaysia from fires on the Indonesian islands of Sumatra and Kalimantan. It provided for the prevention and monitoring of transboundary haze pollution resulting from fires, and for possible regional and international cooperation to mitigate the fires, if the relevant national authorities had undertaken such efforts but then requested assistance.

It acknowledged that the signatories “had the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies,” but also stated that the parties had “the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment and harm to human health of other States or of areas beyond the limits of national jurisdiction.” Thus, the agreement called upon the signatories to prevent and control

⁵² *The Indigenous World 2016*, Yearbook of the International Work Group for Indigenous Affairs (IWGIA).

⁵³ “ASEAN Agreement on Transboundary Haze Pollution,” Association of Southeast Asian Nations (ASEAN), haze.asean.org, Web, N.D.

activities that contributed to the problem, such as through regulations or other initiatives to promote zero burning.

The agreement entered into force in 2003. Indonesia was the last ASEAN country to ratify it, in 2014, in the last days of the second five-year presidential administration of Susilo Bambang Yudhoyono. The long delay for ratification by Indonesia reflected the basic problem—that ASEAN as a multistate regional organization had limited political influence on members that would not otherwise have been inclined to take steps that it advocated. Indonesia has even been loath to accept assistance to fight fires; perhaps the acceptance of such assistance would be viewed as a domestic political liability. In any case, the government turned down repeated offers of help from Singapore in September 2015, but then requested assistance for fire-fighting aircraft from Singapore, Malaysia, and other countries as the situation became even more dire in early October of that year.⁵⁴

UN Framework Convention on Climate Change (UNFCCC)

The UNFCCC was established in 1992 in an effort to elicit commitments from participating countries toward the reduction of greenhouse gas emissions. Such emissions are a much broader problem than emissions from deforestation associated with oil palm development, but for Indonesia in particular these emissions constitute the majority of the problem, as noted earlier.

The Kyoto Protocol of 1997 was an initial landmark agreement within the UNFCCC framework under which some developed countries agreed to bind themselves to reduce greenhouse gas emissions. It was undercut by withdrawal by Canada following ratification and by failure of the United States to ratify it at all.

The UNFCCC continued to move forward, though, and the Climate Change Conference in Paris in November and December 2015 led to the vast majority of countries around the world making non-binding commitments to reduce their greenhouse gas emissions associated with global climate change. The Paris accord went into effect in November 2016, following ratification by a sufficient number of signatories.

Under the Paris agreement, Indonesia committed to unconditional greenhouse gas emissions reductions of 29 percent relative to a business-as-usual scenario by 2030, and 41 percent conditional on international support. Its net emissions under business as usual are projected to be more than 60 percent higher in 2030 than in 2005.⁵⁵ Malaysia by contrast committed to

⁵⁴ In other regional negotiations, Indonesia has felt compelled to abide by ASEAN agreements once ratified. In particular, the ASEAN-China trade agreement, signed and in effect in 2005, had become unpopular in Indonesia by 2010, but the government concluded that there was no way for it to back out of its obligations for import tariff cuts under the pact, despite intense pressure to do so.

⁵⁵ Calculations by authors, based on “Intended Nationally Determined Contribution, Republic of Indonesia,” N.D., Web, May 23, 2016; and Ministry of Environment, Republic of Indonesia,

unconditional reduction of 35 percent relative to 2005 emissions levels by 2030, and 45 percent conditional on receiving foreign assistance for its efforts. Thus, Indonesia gave itself far more leeway relative to Malaysia in terms of growth of emissions, though Indonesia also has by far more extensive forests that have not been developed and is starting from a lower base of GDP per capita.

The Paris accord represented a major global effort to overcome the vast coordination problems inherent in trying to reduce GHG emissions. In Coasian terms, in addition to the high transaction costs of the negotiations, the absence of a coercive global authority that could set and enforce rights was a severe limitation, consistent with the observation by Acemoglu (2003) noted earlier. Given the withdrawal of the United States from the Paris agreement in June 2017, there are even greater uncertainties than would otherwise exist about how much progress the participating nations will make toward meeting their commitments.

REDD+

The Reducing Emissions from Deforestation and Forest Degradation (REDD) program was established in 2008 as a product of negotiations within the UNFCCC. The idea was to provide financial incentives to developing countries with significant and threatened forest areas to advance the goals implied by the name of the program.

In 2010 REDD became REDD+, a more action-oriented and comprehensive initiative to reduce emissions from deforestation and forest degradation, sustainable management of forests, conservation and enhancement of forest carbon stocks.⁵⁶ In that year, Norway and Indonesia agreed to a REDD+ partnership. To employ a phrase used by many observers of global efforts to reduce greenhouse gas emissions, the currency was carbon. Norway pledged one billion dollars in return for a commitment from Indonesia to protect land from deforestation. For a country like Indonesia, the point was to set aside forest land to obtain the cash flow. For Norway, a major producer of oil and gas, the partnership offered an opportunity to further the goal of national carbon neutrality.

The most acerbic critics of the Norway-Indonesia partnership argue that, were it working as hoped for, it would have simply transferred carbon emissions from Indonesia to Norway. A more positive view is that some offset is better than no offset at all; zero emissions of greenhouse gases is not a practical alternative at the moment. Indeed, the REDD+ partnership can be viewed in theory as a constructive Coasian bargain.

Even in its own terms, however, the partnership has not been working effectively. As of early 2016 only \$60 million had been disbursed. The problem at the Indonesian end could be broadly

“Indonesia Second National Communication under the United Nations Framework Convention on Climate Change,” Jakarta, November 2010.

⁵⁶ See, for example, “What is REDD+?” *The REDD Desk*, April 6, 2016, Web.

described as corruption.⁵⁷ The more specific circumstances that aggravated the problem included the unclear division of authority between central and regional governments; poor quality of governance, particularly in the regions; and unclear land rights in the forests as noted above as well as a cultural tradition in which might makes right.⁵⁸

Critics also point out that the amounts provided per hectare by the REDD+ program have been small relative to the immense profitability of oil palm.⁵⁹ Finally, from the standpoint of incentives, the REDD+ program could undermine voluntary deforestation efforts, as Indonesian government officials could hold out for compensation rather than moving forward for the right reasons, though that may be attributing more strategic capabilities to senior leaders in Jakarta than can realistically be assumed.

6. Some Assessments

We have argued that some basic perspectives from institutional economics offer insights about the functions of different sustainability certification schemes and policies in the palm oil sector, in terms of the interests of the involved organizations or players within them. We have also portrayed these schemes as to some extent being in competition with each other.

It is obviously difficult to render any sort of definitive assessment of the current situation and future prospects for limiting deforestation and GHG emissions. Nevertheless, how should we feel about the current situation, particularly in Indonesia, in which much forest land hangs in the balance? We will see that most of the issues revolve around the quality of governance.

Goals and Realities

Even if the senior leadership of the Indonesian government were firmly committed to compliance with international agreements to reduce greenhouse gas emissions, it does not control all the levers required to reduce deforestation.

There is a gulf between policy goals and implementation in all countries, and this applies to both public and private sectors. In Indonesia, in April 2016 President Joko “Jokowi” Widodo announced a moratorium on the issuance of permits for oil palm development and mining activities on new

⁵⁷ Chris Lang, “Norway admits that ‘We haven’t seen actual progress in reducing deforestation’ in Indonesia,” *The REDD Monitor*, March 3, 2016, Web.

⁵⁸ See, for example, Pilita Clark, “The great land rush - Indonesia: Saving the earth,” *Financial Times*, March 1, 2016; and Giorgio Budi Indrarto, Prayekti Murharjanti, Josi Khatarina, Irvan Pulungan, Feby Ivalerina, Justitia Rahman, Muhar Nala Prana, Ida Aju Pradnja Resosudarmo, and Efrin Muharrom, “The context of REDD+ in Indonesia: Drivers, Agents and Institutions,” Working Paper 92, Center for International Forestry Research, Bogor, Indonesia, 2012.

⁵⁹ Chris Lang, “REDD is dead: what’s next?” and reader comments, *The REDD Monitor*, February 4, 2016, Web.

land. The policy amounted to an extension of an earlier policy banning the issuance of new permits on peatland and in primary forests. The previous president, Susilo Bambang Yudhono, issued a nationwide moratorium on clearing primary forests and peatlands, but only after giving away extensive tracts of peatland to various associates.⁶⁰ President Jokowi reserved the right to claw back peatland concessions previously granted.

On the announcement of the moratorium, “Industry analysts said Mr. Joko's announcement is an indication that the Indonesian government is listening to green advocates.”⁶¹ It may not be an indication of much more than that. The Jokowi administration has made other major announcements on economic reforms, but the will and capacity to follow through are in question. One long-time sympathetic observer of Indonesia summed up: “The government has been stronger on announcements than implementation.”⁶² A president who stakes his or her credibility on too many announcements on which he cannot deliver is in danger of not being taken seriously inside or outside his country.

One impediment to implementation is the multiplicity of voices and interests within the government. Even if President Jokowi is sincere in his wish to protect the forests and reduce greenhouse gas emissions through a moratorium on the expansion of oil palm plantings, his ability to harness the powerful bureaucracies charged with implementation of such a policy is in question. Moreover, even if the spread of oil palm onto pristine forest lands can be limited, the sanctity of the forests is by no means guaranteed, particularly given the threat of large-scale illegal logging operations tied to the military or other powerful figures. Illegal logging is estimated by the Corruption Eradication Commission, in a study sanctioned by President Jokowi, to have cost the government of Indonesia nearly nine billion dollars between 2004 and 2013, so the government should have reasons of its own to want to control it.⁶³

In any event, there has been more than enough embarrassment to go around recently. The role of Wilmar International in the Leuser ecosystem scandal mentioned in Section 3 is a case in point. In another instance, a coalition of Indonesian NGOs known as Eyes on the Forest documented that some of the largest palm oil industry players—including Wilmar, Golden Agri Resources, and Musim Mas—had obtained supplies of fresh fruit bunches from illegal plantation operations in five forest conservation areas in central Sumatra. These conservation areas total 263,150 hectares,

⁶⁰ Conversation with David Heesen, former environmental staff person with U.S. Agency for International Development in Indonesia, November 30, 2015. The actual coverage of the moratorium is also in question.

⁶¹ Francis Chan and Wahyudi Soeriaatmadja, “Jokowi Announces Moratorium on New Permits for Oil Palm Plantations, Mining Activities,” *Straits Times*, April 15, 2016.

⁶² Chris Manning, “Jokowi Takes His First Shot at Economic Reform,” *East Asia Forum*, September 13, 2015.

⁶³ Jonathan Vit, “Indonesia losing billions from illegal logging,” *Moongabay.com*, November 9, 2015.

but 81 percent of the land had been cleared for oil palm development by the end of 2015.⁶⁴ The Eyes on the Forest Web site also implicated illegal palm oil plantation operators in Tesso Nilo National Park in Riau Province with the poisoning deaths of dozens of Sumatran elephants, which are attracted to young oil palm plants.⁶⁵ It also noted the presence of intermediaries in the market who effectively laundered illegally obtained oil palm fruits to introduce them into the legitimate supply chains.

In its eventual response to the charges from Eyes on the Forest, Wilmar International did not deny the existence of the problem. Nevertheless, when an NGO identifies suspect or even hypocritical behavior on the part of several companies presumably most committed to sustainability, it is natural for eyebrows to be raised. Perhaps a basis for some optimism is that such local NGOs now exist and evidently operate effectively.

A Step Backward?

As evidence of the multiplicity of voices and interests within the government of Indonesia, literally the same week that the President made his announcement on the moratorium on oil palm development, it was reported that the Director General for Plantations at the Ministry of Agriculture was putting more pressure on the signatories to the Indonesia Palm Oil Pledge to disband the organization, under a threat that the Business Competition Oversight Commission would investigate IPOPOP for alleged cartelization of the market.

The Indonesia Palm Oil Pledge had met resistance from local governments and the national government of Indonesia from the outset. The IPOPOP was in particular perceived within the government to have encroached on its policy prerogatives. This perspective was offered, for example, by Musdhalifah Machmud, Deputy Minister for Food and Agriculture at the Coordinating Ministry for Economic Affairs.⁶⁶ As Wilmar International sustainability executive Sharon Chong Choy acknowledged to us in January 2016, firms ultimately have to operate in spaces in which sovereign states set the rules.

The six multinational palm oil companies that had signed the Indonesia Palm Oil Pledge did eventually announce, on July 1, 2016, that IPOPOP was to be disbanded, allegedly as major new policy breakthroughs in Indonesia meant that its purposes had been fulfilled.

The reality behind the scenes was far murkier. Government officials had complained that the IPOPOP consortium had disadvantaged smallholder oil palm farmers, and it was reported that in October 2015 the government had requested the IPOPOP consortium to exempt smallholders from its no-

⁶⁴ David Fogarty and Arlina Arshad, "Top Firms 'Supplied with Illegal Palm Oil'," *Straits Times*, April 15, 2016.

⁶⁵ Eyes on the Forest also displays satellite-based maps of forest fires in Indonesia, in collaboration with the World Wildlife Fund in Indonesia and Google Earth Outreach.

⁶⁶ See Michael Taylor, "Big palm oil's pledge to preserve forests vexes Indonesia," *Reuter's*, October 6, 2015, Web, April 4, 2016.

deforestation pledge. However, at least one close observer believed this to be political theater, as the President of the Indonesian Smallholders Association had come out in support of the IPOP and its commitments, since the IPOP member companies had taken the lead in engaging with and supporting smallholders.⁶⁷

Nevertheless, there could have been some basis for the allegation that the IPOP signatories had excluded smallholder producers of oil palm from their supply chains. The private costs of using fire to clear forest land are generally a fraction of the private costs of clearing land through other means. If smallholders were particularly inclined to use fire to clear forest lands—perhaps because of weak law enforcement and the absence of reputational concerns—the IPOP companies would have had a collective action problem: each would have been tempted to obtain FFB directly or indirectly from low-cost smallholders, gaining a competitive edge on their IPOP partners. An agreement to resist such temptation, if enforceable, would be constructive in environmental terms, even while it could have cut smallholders out of the supply chain and slowed oil palm development.

Some observers believed that the real resistance came from medium-sized palm oil companies that felt impeded in their ability to extract profits from the business, along with their sponsors within the government. Others argued that the real stakes were the capacity to develop the last major forested frontier within the country in West Papua.

In broader political terms, restrictions on the rate of oil palm development would ultimately slow the rate of growth of real GDP, which could be an important measure of the performance and thus the legitimacy of the government. On this issue, Musdhalifah Machmud was quoted as saying: “part of our country we have to protect for forests, and the other part we have to do some economic activity so the people around it can improve their prosperity” (Taylor, note 66 above).

A more cynical interpretation is that powers within the government, not necessarily the President, wished for the weaker ISPO standard to prevail over the stricter IPOP standard because otherwise these officials could have lost their ability to impose the binding constraint on otherwise lucrative development, which could have enhanced their own cash flow or at least their prestige.

Yet another possible explanation for this resistance was that the restrictive standard might have interfered with international aid. In particular, recall the \$1 billion that the government of Norway committed to the government of Indonesia for its compliance with the REDD+ program. If forest conservation is achieved through private rather than governmental initiatives, it is unclear whether the government would receive such aid.

There had been some divergence of opinion among environmental organizations on the impacts dissolution of IPOP. Annisa Rahmawati, a forest advocate for Greenpeace Indonesia, issued a

⁶⁷ “Failure of Indonesia’s palm oil commitment ‘not bad news’,” commentary by Scott Poynton, founder of The Forest Trust, *Moongabay.com*, July 27, 2016.

statement that included the complaint that, “instead of applauding and promoting this sensible private sector initiative, government officials have bullied and threatened IPOPOP members.”⁶⁸

Glen Hurowitz, a senior fellow at the Center for International Policy in Washington, DC, observed that company-by-company enforcement of zero-deforestation policies would be of limited effectiveness in reducing deforestation in the long run. “That requires cooperative efforts by government and industry,” he noted. He also claimed that the critics of IPOPOP within the government of Indonesia were “rogue” mid-level officials whose interests and views were at variance with those of President Joko Widodo and other national leaders (Shah, note 68 above). Hurowitz had been instrumental in persuading the CEO of Wilmar International to commit to its policy in December 2013, and no doubt he would have had access to solid inside information.

On the other hand, Scott Poynton, founder of The Forest Trust, despite his belief that some of the charges leveled at the IPOPOP companies were trumped up, nevertheless argued that IPOPOP had become a distraction and did not believe that its demise would seriously impair efforts against deforestation (Poynton, note 67 above). The short history of IPOPOP as depicted by Poynton seems to reveal a certain animus on his part toward the organization and the announcement of its formation at the UN Climate Summit of 2014. TFT includes as members some of the signatories of IPOPOP; based on the tenor of his views, perhaps some organizational rivalry was at play.

In any case, from a theoretical standpoint, Hurowitz may have come closest to the mark. The IPOPOP signatories were standing by their commitments in the immediate aftermath of its dissolution, but the problem is that adherence to strict standards is costly, and there would be a tendency to free ride on the reputational benefits. To the extent that altruism was a motivation of the IPOPOP signatories, a basic economic observation that we all may wish to do the right thing—as long as it does not cost too much—could have come into play. Alternatively, companies battling head-to-head for market share in a world in which consumer information is excellent, but nevertheless far from perfect, would be tempted to cheat.

Finally, is it possible that the push for sustainable practices in the oil palm sector is an elaborate theatrical production in which each party plays a politically expedient defined role? The major corporate palm oil producers that were signatories to the IPOPOP were keen to demonstrate that they were doing their utmost to protect the tropical rain forests and to prevent the haze problem from the burning used to clear forestland for oil palm. If the government of Indonesia were to disband the IPOPOP, then maybe the IPOPOP had to some extent served its purpose, from the perspective of these companies.

7. Concluding Remarks

There are reasons both to be gloomy and optimistic about prospects for reduction of deforestation and GHG emissions related to oil palm cultivation in Indonesia and Malaysia relative to their current growth paths.

⁶⁸ Vaidehi Shah, “Indonesian Palm Oil Pledge disbands,” *Eco-Business.com*, July 1, 2016.

From a technical perspective, there are ways to maintain or even expand palm oil output while avoiding additional deforestation. Industry observers have pointed out that intensification efforts could increase yields substantially in Indonesia, in which palm oil yields per hectare are reportedly half the level in Malaysia.

Technological breakthroughs of recent years have also meant that high-resolution satellite imagery can now pinpoint the locations of major forest fires. The NASA Aqua and Terra satellite have offered a Moderate Resolution Imaging Spectroradiometer (MODIS) system to identify fires within Indonesia and around the world since the year 2000. The resolution is one-kilometer squared per pixel.⁶⁹ A newer generation of satellite imagery has also been used to detect fires since 2012, based on a Visible Infrared Imaging Radiometer Suite (VIIRS) sensor aboard the NASA Suomi-NPP polar-orbiting satellite. The VIIRS sensor offers very high resolution—375 meters squared per pixel.⁷⁰

Other satellite initiatives are also in play. A collaboration between The Forest Trust and Airbus, called Starling, will use radar and high resolution imagery to verify that plantations have not engaged in deforestation; Wilmar, Nestlé, Ferrero and other companies will participate (Gore-Langton, note 38 above). This is significant because technology may now make it possible for downstream users of palm oil to better verify contractual compliance by their upstream suppliers.

These eyes in the sky literally provide greater transparency that can bring intensified pressure from the international sphere on those responsible for the fires. For example, under domestic and international pressure, the Indonesian government released the names of some companies implicated in burning during the disastrously smoky year of 2015. One can imagine that some of the pressure would have come from other companies in the vicinity of the fires that were not responsible for them.

Even so, any hope along these lines must be tempered by certain uncomfortable realities. First, even if Western consumer and environmental organizations are able to keep the pressure on for environmentally sustainable practices, all the certification standards now in effect combined, cover only a fraction of the oil palm output that supplies the palm oil sector is certified. The remainder can be proffered to markets that care only about price, not about biodiversity or the state of the planet generally. Thus, even if a very significant portion of oil palm were produced according to the strictest standards of traceability and sustainability, a substantial portion, which would have cost advantages over oil palm produced subject to these high standards, would be outside of effective control.

⁶⁹ See, for example, arthobservatory.nasa.gov display of imagery from March 7, 2014, Web, May 30, 2016. Earth Observatory noted that it was reported by local news that some intense fires were burning in the Giam Siak Kecil-Bukit Batu biosphere reserve, and had been deliberately set to clear land for palm oil plantations. The reserve has over 700,000 hectares of peat forest and harbors large mammal species including the Sumatra tiger, elephant, tapir, and sun bear.

⁷⁰ Susan Minnemeyer, Sarah Sargent and Mikaela Weisse, “Fighting fires with satellites: VIIRS fire data now available on Global Forest Watch,” May 19, 2016, Global Forest Watch.

Indonesia in particular now uses an export tax on palm oil products to subsidize development of a palm-oil-based biodiesel sector. The biodiesel fuel is too viscous to be used in cold climates, but can have extensive use in Indonesia itself as well as many other warm countries. The biodiesel sector may offer a huge market for anonymous palm oil. In addition to providing the subsidy to biodiesel development and sinecures to favored former government officials who manage the development fund, however, the export tax lowers the domestic price of palm oil relative to the world market price; that may have the effect of limiting oil palm development to some extent.

Finally, the demise of the Indonesia Palm Oil Pledge highlights the idea that, despite the great power of multinational corporations in the global economy, as well as the roles played by international organizations like ASEAN and the United Nations, national governments and the many layers and diverse interests of officials and politicians within them remain the ultimate arbiters of economic decision making and regulation around the world.

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