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Towards Deforestation-Free Palm Oil in Indonesia: Implementation Challenges on HCV and HCS

Jakarta, 12 December 2014

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This publication includes the following:
1. HCV and HCS Approaches to Implementing Zero Deforestation: An introduction to similarities, differences, challenges and opportunities by Daemeter Consulting
2. Barriers and Bottlenecks: Bringing Innovative Management Practices to Scale in Indonesian Palm Oil by Daemeter Consulting, along with three summary case studies extracted from *Best Management Practices in Indonesian oil palm industry: Case Studies* by Daemeter Consulting and one summary case study extracted from *Golden Agri demonstrates real commitment to HCS forest conservation but legal threat lies ahead* by Greenomics Indonesia
3. Extract from *Oil palm in Indonesia: Governance, decision making, and implications for sustainable development: Summary for policy makers and practitioners* by The Nature Conservancy (TNC) and Daemeter Consulting

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Photos courtesy of Daemeter Consulting

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HCV and HCS approaches to implement Zero Deforestation: An introduction to similarities, differences, challenges and opportunities

daemeter

The last two years have seen unprecedented growth of sustainability commitments in palm oil. Increasing numbers of producers and downstream supply chain actors are committing to produce or purchase 100% certified sustainable palm oil, and leading supply chain actors are pledging to go beyond certification and source "No deforestation, No peat, No exploitation" products. These events are proof that business is responding to consumer demands for change, and offer proof that a fundamental business transformation is underway. Many observers have raised concern, however, the proliferation of commitments and tools they promote risks creating confusion and diluting momentum, as companies ponder - Which road to sustainability is the right one to pursue?

The growing popularity of High Carbon Stock (HCS) assessment to complement the High Conservation Value (HCV) approach illustrates the confusion created by recent trends. Sometimes, HCV and HCS are described as alternatives; other times they are portrayed as redundant. Both views reflect confusion over the two approaches, especially what they aim to achieve and how they differ. They also draw attention to three key questions - *How do HCV and HCS contribute to Zero Deforestation? Does committing to one effectively safeguard the other? Can HCV and HCS be combined into a single, integrated process to deliver sustainability compliance in one tool?*

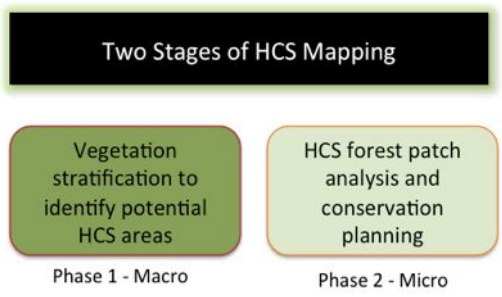
This brief aims to (i) describe HCV and HCS; (ii) highlight some differences between them, and opportunities to combine them; (iii) identify shared challenges they face to reduce or eliminate deforestation in practice; and (iv) suggest was forward to overcome these challenges.

What is HCS mapping?

The High Carbon Stock (HCS) mapping approach was developed in 2011 by Golden Agri-Resources Ltd (GAR) in collaboration with Greenpeace and The Forest Trust (TFT) to implement GARs landmark Forest Conservation Policy (FCP). Under the FCP, GAR committed to a Zero Deforestation footprint in all its new plantations, in addition to protecting HCVs and avoiding peat. To implement the FCP, GAR required a definition of forest, a robust, practical tool for mapping it, and a process for deciding Go/No-Go areas for development consistent with Zero Deforestation.

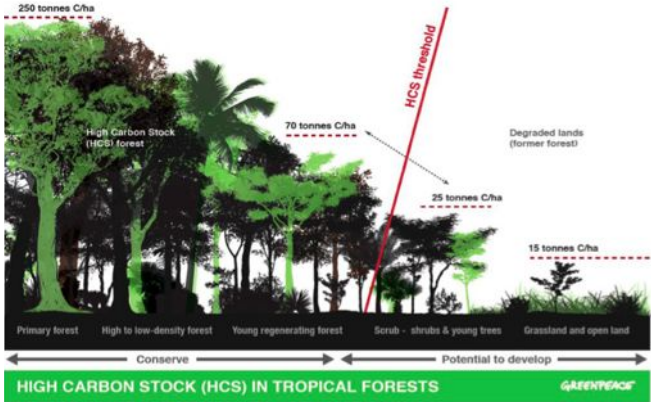
Despite its name, HCS is not a carbon mapping tool, but rather a structured, two-step process for (i) mapping vegetation cover to determine potential HCS forest areas and (ii) conducting field verification and patch analysis for determining HCS areas that may be developed and that must be protected (Figure 1).

Figure 1 Stages in HCS mapping



Phase 1 HCS mapping begins first with GIS and remote sensing analysis to conduct "macro level" mapping of aboveground vegetation using a

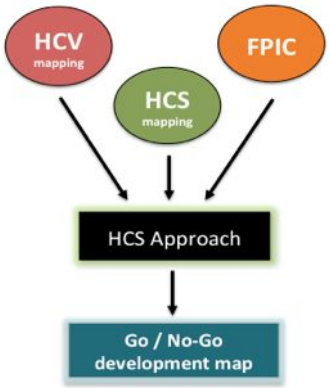
Figure 2 Vegetation stratification required for HCS mapping



stratification system depicted in Figure 2. Natural forest is mapped as "Forest Class 1, 2 or 3" depending on canopy structure and condition, followed by young secondary forest (belukar tua), scrub forest (belukar muda), grassland and open land. At this stage, areas mapped as Forest Class 1-3 or secondary forest (belukar tua) are considered potential HCS and set aside for protection. Field surveys are then carried out to verify mapping and conduct rapid biodiversity surveys of specified patches to assess their value. Phase 2 "micro level" HCS mapping makes use of a structured decision tree to determine viability of patches that are candidates for HCS protection, taking into account size, shape, distance to larger forest blocks, connectivity and operational feasibility.

HCS mapping is one of three critical inputs to a fuller, more comprehensive decision making process referred to as the "HCS Approach" (Figure 3). The HCS Approach takes into account not only HCS mapping but also conservation measures required to protect HCVs as well as community rights and livelihoods under an FPIC process. The final output from the HCS approach is a Go/No-Go map that ensures No Deforestation according to HCS, no loss of critical values according to HCV, and recognition of and respect for community rights and livelihoods potentially affected by forest protection efforts.

Figure 3 Schematic of the HCS approach



The HCS approach and HCS mapping that feeds into it are now monitored and coordinated under the multi-stakeholder HCS Approach Steering Group, currently developing a governance structure. An HCS Toolkit defining the HCS mapping methodology and fuller HCS Approach for determining Go/No-Go areas is being drafted and will be published in early 2015

What is High Conservation Value (HCV) mapping?

The HCV concept was developed in 1999 by the Forest Stewardship Council (FSC) as a key provision of the FSC standard for responsible forestry. The concept has gained global notoriety since then as a practical approach for balancing production and protection objectives within production landscapes, and is widely used in many natural resource sectors and sustainability standards. For example, HCV is a cornerstone of the Roundtable on Sustainable Palm Oil (RSPO) standard for sustainable palm oil, which requires producers to protect areas required for management to maintain one or more HCVs present in their plantations.

The HCV approach aims to help land managers achieve their production aims without sacrificing critical social and environmental values in the landscape, using a two-step process – first, by identifying areas that support exceptional social, cultural or biological values (the HCV areas), and second, by developing a stakeholder supported management plan, including conservation set asides, that permits production to take place while ensuring critical values are maintained in the landscape.

A Global HCV Toolkit to help guide implementation of HCV was developed in 2003. Since then, numerous guidance documents have been developed,[1] and 18 national interpretations of the Global Toolkit have been created worldwide, providing more detailed

[1] See e.g. https://www.hcvnetwork.org/resources/resources/folder.2006-09-29.6584228415

Figure 4 The six High Conservation Values

HCV 1 - Concentrations of Biodiversity
HCV 2 - Large Natural Landscapes
HCV 3 - Rare or Endangered Ecosystems
HCV 4 - Critical Environmental Services
HCV 5 - Basic Livelihood Needs
HCV 6 - Cultural Identity

guidance relevant to each national context. Indonesia developed a its first national Toolkit in 2003, and revised this again in 2008. Under the Toolkit, Indonesia defines six broad classes of HCV (Figure 4) and numerous sub-values under these headings.

The HCV process includes six steps (Figure 5), combining secondary and primary data collection, consultation with local communities and other stakeholders (including outside experts), and ground surveys to collect field information, verify desktop mapping and test the feasibility of proposed management to maintain HCVs present in the landscape. HCV identification results, management planning and monitoring are presented in an HCV report that must also be presented to local stakeholders for feedback to finalize Go/No-Go areas.

Like HCS, updated forest and other land cover mapping is a critical input to robust HCV assessment, though in some cases this has been a notable weakness of past assessments, and should be standardized. Unlike HCS, however, it is important to note that HCV does not prohibit natural forest conversion, except where forest protection is required to maintain one or more HCV in the plantation and surrounding landscape.

HCV is governed by the multi-stakeholder HCV Resource Network (www.hcvnetwork.org), which oversees a recently launched Assessor Licensing Scheme to license, monitor and verify performance standards of licensed assessors.[2]

Key conclusions

HCV and HCS mapping are complementary not competing approaches. HCS emphasizes land cover mapping to identify forests for protection to avoid future commodity driven deforestation. HCV uses a value-based approach, combined with forest and ecosystem mapping, to determine natural areas required for management to maintain critical social and environmental values.

Further illustration of the complementarity between HCV and HCS is reflected in the fact that the HCS Approach (Figure 3) explicitly relies upon designation of HCV mapping inputs to determine final Go/No-Go areas for a plantation.

Currently, HCV and HCS mapping are carried out separately by different experts, then combined later, but they could be integrated into a single process. For example, Stage 1 (macro) HCS mapping could be used an input to HCV assessment planning, and then field work for HCV and HCS verification could be combined as a coordinate effort to maximize synergies, reduce cost and improve quality. Then, decision making for areas to be protected under HCV (delineating the HCVMA) and those to be protected under HCS (i.e. Stage 2, patch analysis) could be done separately using the logic of each approach, and then reconciled as a single map to determine ultimate Go/No-Go maps.

Figure 5 Steps of the HCV assessment process

Source: Proforest (2008) Good Practice Guidance for HCV assessments

[2] https://www.hcvnetwork.org/als/apply-become-licensed-hcv-assessor

Field trials to pilot integrating HCV and HCS mapping into a single, integrated assessment tool are an urgent priority for future work.

Shared challenges to implementing HCV and HCS

In practice, HCV and HCS face a shared set of technical, legal, practical and management challenges for robust implementation in the field. Taking best management practices to scale will require overcoming barriers in five key areas, described below. Four of these are highlighted in Figure 1.

HCV and HCS face a **shared set of technical challenges:**

- How to complete robust land cover mapping using standard methods and shared data platforms to achieve consistent, robust outputs at reasonable cost (eg Landsat, GFW, aerial photography)
- How to field verify parameters that require ground survey (eg biodiversity, community needs & aspirations, forest condition) at a reasonable cost and quality?
- How to increase the pool of qualified practitioners to complete robust assessments at reasonable cost and committed to transparent, high quality reporting

HCV and HCS face a **shared set of legal challenges:**

- The Indonesian legal and regulatory framework does not allow for protection of large forest conservation areas within oil palm plantations
- The AMDAL has strong legal basis but neither HCV nor HCS is considered within it, and recommendations for mitigation under AMDAL are usually very different from HCV/HCS
- ISPO does not require protecting HCV/HCS as defined under Zero Deforestation commitments

HCV and HCS face a **shared set of practical challenges:**

- How to resolve conflict when community livelihoods are placed at risk by forest conservation required under HCV or HCS?
- How to apply HCV/HCS as a practical tool for balancing production and protection in heavily forested regions of Indonesia where oil palm development is only beginning (eg Papua)?
- Currently, forest conservation efforts in plantations generate significant costs, but few direct benefits to companies or communities. This needs to change.

HCV and HCS face a **shared set of management challenges:**

- There are multiple pressures on forest set asides within plantations, not just conversion to oil palm. How to address this effectively?
- The practical challenge of managing forest conservation set asides within plantations is very high, yet the private sector has very limited experience and thus capacity to do this effectively
- There are clear opportunities for joint management of HCV/HCS areas through company-community partnerships, but how to achieve this in practice?

Overcoming shared challenges to implementing HCV and HCS

The following actions are recommended to overcome shared these shared challenges to HCV and HCS in the future.

- Work toward integrate AMDAL with voluntary HCV/HCS assessments, so that mitigation recommendations are aligned, providing a stronger legal basis for protection within plantations
- Work toward integrating landscape HCV/HCS assessment with required Strategic Environmental Assessment (KLHS) for spatial planning and development programs at provincial and district levels
- Develop tools and a common web based data platform for geospatial and other resources to facilitate robust assessment, consistent results and transparent reporting at lower cost
- Form an industry Learning Group to conduct trials (eg combining HCV/HCS into a single integrated tool), share and discuss challenges and successes, and facilitate cooperation to overcome shared constraints and promote group learning
- Develop large-scale capacity building programs to strengthen management and monitoring capacity, especially in the private sector

- Develop, trial and refine models for effective company-community co-management of set aside areas within plantations
- Explore how to integrate forest conservation measures required by HCV/HCS with national and sub national emission reduction programs and especially REDD+ and FREDDI to mobilize positive incentives for conservation
- Conduct a large scale, coordinated, targeted awareness raising campaign around sustainable palm oil to build a domestic constituency around Zero Deforestation supportive of policy reform

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Barriers and bottlenecks: Bringing innovative management practices to scale in Indonesian palm oil

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The Indonesian palm oil industry is undergoing fundamental transformation in business practices. National and international campaigns have created unprecedented demand for upstream producers to mitigate social and environmental impacts – and producers are responding. Growing numbers are treating impact mitigation as core to their investment strategy and operations. This reflects an ongoing shift in corporate mindset, with sustainability viewed as a source of innovation and brand value rather than a cost of production. This trend is unquestionably good, and it should be recognized and rewarded. But the pace and extent of change must accelerate to bring about the industry wide transformation required for sustainability.

In this background brief, we describe how leading palm oil companies are making great strides in developing Best Management Practices (BMPs) that serve as models for wider adoption. We also describe key barriers and bottlenecks to change that must be overcome to bring these and other innovative management practices to scale. Achieving this will require coordinated efforts focused on training, awareness raising, structured learning networks, policy reform, and realigning incentives for industry and local government to adopt new practices.

Innovative Best Management Practices

Oil palm plantations and mills are large, complex, integrated agro-industrial operations connected with the surrounding society, economy, and natural landscape. Implementing good practice to mitigate impacts in one area can bring positive benefits in another, just as poor practices can have adverse consequences in other areas of operation. Recognizing this, many companies are beginning to adopt a holistic management approach to capture multiple benefits and cost savings from mutually reinforcing improvements in social, environmental, productivity, and emissions mitigation areas.

As part of this background brief, in the chapter that follows we elaborate further select examples of leading best practice adopted by four members of the Indonesian Palm Oil Pledge.

- **Case Study 1. Asian Agri Group - Strengthening Smallholder Cooperatives**
  Asian Agri, through its subsidiary PT Inti Indosawit Subur, has developed award winning, industry-leading programs to strengthen institutional development, financial management and long-term profitability of smallholder (plasma) farmer cooperatives in Riau and Jambi. The programs markedly improve rural livelihoods and build shared value in company-community partnerships.

- **Case Study 2. Cargill - Yield Improvement**
  Cargill significantly increases crude palm oil (CPO) yields on their plantations by implementing low-cost, highly effective BMPs for yield management that allow more palm oil to be produced from the same land area. These BMPs increase profitability, reduce costs, and optimize land use on Cargill plantations, and if applied at scale by other companies could potentially reduce pressure to convert forests or other high-value sites while boosting production to meet rising demand for CPO.

- **Case Study 3. Golden Agri Resources - Eliminating Deforestation**
  Since 2010 GAR has been implementing its

landmark Forest Conservation Policy to eliminate deforestation from all of its new palm oil plantation developments. Through collaboration with civil society and other partners, GAR has co-lead development of the High Carbon Stock (HCS) tool, rapidly becoming an industry standard for implementing Zero Deforestation commitments.

- **Case Study 4. Wilmar International—Biodiversity Conservation**
  Wilmar has developed industry leading policies, procedures, tools, training programs and collaborations to identify, manage, monitor, and report condition of priority biodiversity conservation areas within its oil palm plantations. Many of these tools are being made public, and widely disseminated for application by other companies, thus helping the industry to overcome shared technical barriers to biodiversity conservation.

Future case studies on BMPs by IPOP members and other industry players to raise awareness and promote shared learning about innovation to mitigate impacts would help improve practices in other areas, including: Free, Prior, and Informed Consent (FPIC); dispute resolution procedures; identifying and avoiding socially and environmentally sensitive areas; due diligence for responsible investment to avoid high risk assets; and innovative local public sector leadership to improve oil palm governance at the district level.

Barriers and bottlenecks to change

Taking best management practices to scale will require overcoming barriers in five key areas, described below. Four of these are highlighted in Figure 1.

Knowledge and human resources

A leading impediment to change is the slow rate of information flow on proven best management practices developed by industry. This creates a wide and growing knowledge gap between those with resources to innovate and their peers. Poor information flow reflects competitive relationships between companies making them disinclined to share, as well as corporate reluctance to advertise success for fear of becoming a target of negative campaigns. Structured learning networks are urgently needed to overcome this gap by accelerating knowledge transfer via peer-to-peer exchanges at all levels of corporate governance. A related challenge is the growing shortage of human resource capacity to implement innovative practices at scale. Companies struggle to attract and retain skilled employees in sufficient numbers to implement new programs. Concerted effort is required to retrain existing staff and equip new entrants to the labor force with necessary social engagement and environmental management skills. Training schools/programs are being developed and must be expanded rapidly, with multi-stakeholder support.

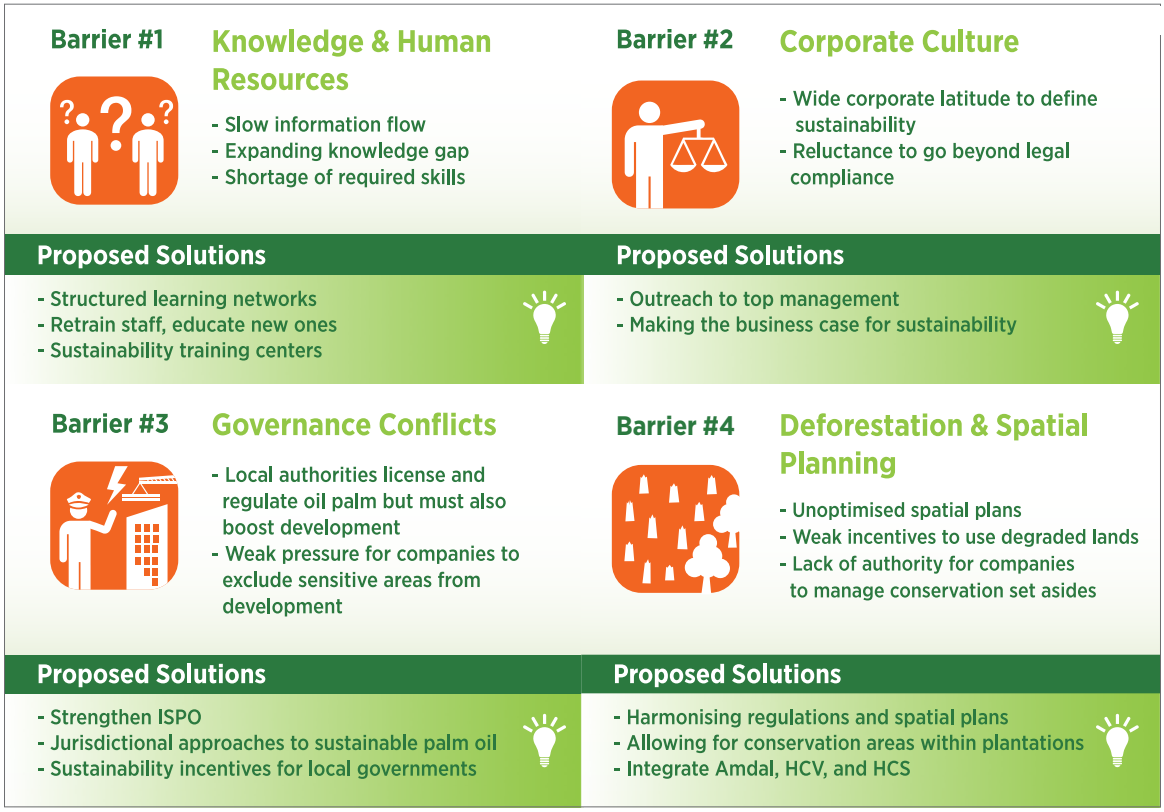
Corporate culture

Indonesia's current system of palm oil governance affords companies wide latitude to define and pursue their own vision of sustainability. This creates obvious challenges to scaling innovation when, for example, senior officers are not yet supportive of sustainability. Yet, it also creates unique opportunity to shape sustainability policies of large companies by changing the mindset of powerful decision-makers at the top. When top management accepts that meeting expectations of key stakeholders requires going beyond legal compliance, this creates new opportunities to shape ambitious sustainability goals. Work is needed to develop effective modes of outreach to embolden corporate leaders to take decisive action, to adopt sustainability as a core principle and to make operational changes required to implement their vision.

Conflicting governance responsibilities and incentives

Under Indonesia's decentralized system of palm oil governance, local authorities hold far-reaching powers to license development activities, approve EIAs and enforce regulations. They are also under pressure to generate revenues and accelerate development from palm oil. Faced with these responsibilities and incentives, local leaders sometimes tolerate bad actors because they deliver investment, and responsible actors face challenges meeting voluntary commitments (e.g. protecting forest within plantations) seen by local authorities as undermining development goals. This situation

Figure 1 Barriers and bottlenecks in scaling up innovative BMPs



is an impediment to sustainability, and must be addressed before innovative conservation policies can be brought to scale. Emerging discussion of "jurisdictional approaches" has the potential to address this problem, but only if local authorities are incentivized and rewarded to support sustainability.

Governance gap

Local government enforcement capacity is often severely limited by knowledge and resource constraints, a situation worsened by budgetary limits and pressures to support development. The emergence of third-party certification under ISPO is an effort to share this enforcement burden, but where enforcement remains a government responsibility, industry can be, in effect, largely self-regulating, bearing full responsibility for positive and negative development outcomes. Under these conditions, the major role of government in guiding oil palm development is through spatial planning, taxation and development policy, whereas that of companies is in determining how the regulatory framework is implemented on the ground. Corporate values and governance are critically important in this context, highlighting the need to close gap between corporate culture and consume demands where they exist.

Deforestation and spatial planning

Many facets of Indonesia's regulatory framework reinforce sustainability, whilst others are at odds with emerging norms of good practice. Companies in the expansion phase of their business are increasingly under pressure to adopt Zero Deforestation policies, and establish new plantations on low carbon, deforested land. Such land is widespread in Indonesia, but much of it is unavailable for oil palm due to spatial planning decisions that delineated much of this land as permanent forest (Kawasan Hutan) where agriculture is prohibited. In addition, producers are under pressure to manage forest set-asides within plantations to mitigate their deforestation footprint. Yet current rules make it very difficult for companies to retain management authority over unplanted areas within their plantations. These policies are significant impediments to low impact oil palm, especially Zero Deforestation, and should be top priorities for advocacy.

Aligning incentives to overcome barriers and bottlenecks

Indonesia's complex framework of oil palm governance sends mixed signals to key actors concerning environmental and social performance standards. This is further complicated by often contradictory expectations of local stakeholders, civil society groups and consumers. Here we outline steps that could be taken to present two leading actors - business and government - with unambiguous positive and negative incentives for improved performance.

Producers require clear policy and regulatory guidance regarding characteristics of land where they can establish plantations, how they are required to develop and manage their plantations to meet minimum standards, and assurance that all producers will be held to these standards and punished for non-compliance. The potential financial benefits of adopting BMPs in terms of regulatory compliance, increased yields, social conflict reduction, and market access must be clearly communicated throughout industry. Industry organizations, possibly with donor support, should develop technical guidelines to guide producers in attaining BMPs and technical support through staff training and business-to-business mentoring. Downstream supply chain actors and investors can exert both positive and negative pressure on producers to adopt BMPs through contracting arrangements, and civil society groups can support the process through advocacy and in some cases technical support (e.g. with community relations or management of HCV or HCS forests).

Central government should harmonize various elements of the oil palm regulatory and legal framework to set unambiguous standards of performance. Procedures related to spatial planning and especially delineation of Kawasan Hutan boundaries require immediate and effective action. Environmental management requirements in several bodies of law should be consolidated and streamlined to reduce the regulatory burden on both producers and local government. Harmonizing the legal framework will be a long and complex task but presidential policy pronouncements and political dialogue could achieve significant results in the short term. Specific actions could include: (1) closer oversight of local government licensing decisions and regulatory practices in the sector; (2) issuing guidelines for how local leaders should balance oil palm expansion with sustainable development locally; (3) technical support to local government to improve their ability to perform regulatory tasks; and (4) a centralized system to monitor forest cover in plantation license areas and discipline those producers not adhering to impact mitigation requirements. The Indonesian government has strong incentives to take these steps to meet its own goals for reducing deforestation and carbon emissions, while maintaining healthy growth of palm oil production output.

Local government plays the greatest regulatory role in shaping environmental and social outcomes on the ground. Their actions are driven by very different incentive structures, as proponents of economic development on the one hand, and regulators of industry on the other. The national guidelines discussed above should contain explicit performance standards and incentives/disincentives for achieving an appropriate development/sustainability balance at the local level. Linkages to REDD+ and FREDDI hold obvious potential here. Local governments must also present palm oil producers with clear performance standards, transparent ground rules for licensing and regulatory processes, and even-handed treatment of all producers in terms of both rewards and punishment. Where local governments are markedly constrained by insufficient human and financial resources to serve their regulatory functions, they should instead provide support to local communities and producers with community relations and possibly environmental management. Perhaps the greatest incentive for local government to support implementation of BMPs and improved environmental and social performance is the potential for local and national recognition and resulting political visibility. This is an area of future positive incentive that merits significant research.

Case Study 1:
Empowerment of smallholder oil palm farmers through plantation company sponsorship and support
Asian Agri Group

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Oil palm companies contribute to rural development through many pathways. Beyond enhancements to infrastructure, provision of social services and philanthropic contributions, companies also directly support the development of smallholder oil palm farming enterprises. Plasma schemes come in various forms, but all entail company-provided operational, technical and financial support of farmers to produce oil palm fresh fruit bunches (FFB) sold to the sponsoring mill. When plasma schemes are successful, the positive impact on rural economies can be transformational. When they fail, the social and environmental impacts can be negative and long lasting. To a very large extent, the development benefits of plasma programs are determined by the performance of farmer cooperatives designed to support them.

Under most plasma arrangements, cooperative institutions provide critical farmer services, including: (i) ensuring fair prices are obtained for smallholder FFB sold at mills, (ii) transporting FFB to mills in a timely and safe manner to maintain quality, (iii) ensuring farmers have access to fertilizers and other inputs (e.g. quality seedlings), (iv) providing coherent bargaining with companies (e.g. over terms and conditions of business transactions), and (v) facilitating business diversification through training, access to credit, and related business support services. Cooperatives often fail in one or more of these functions, due to failed leadership, poor managerial systems, non-transparency, capture by elite interests, and collusion between cooperative leaders and their company counterparts.

Noting the strain failed cooperatives place on company-community relations and the business risk this represents, growing numbers of companies invest significantly in the success and longevity of smallholder partnerships as a core long-term strategy for building shared value. This case study describes an award-winning small-holder support program led by PT Inti Indosawit Subur, a subsidiary of Asian Agri Group, to support capacity building, institutional development, financial management and long term-profitability of small holder (plasma) farmers and their cooperatives in Riau and Jambi province. Asian Agri treats provision of technical, institutional and financial support to smallholders as an integral facet of its production model, supporting more than 29,000 smallholder farmers with total planted area of 60,200 ha organized in over 80 village business cooperatives.

Through provision of certified high-yield planting material; technical assistance on planting, tree maintenance and yield management practices; training on pest management including chemical-free methods; road maintenance; access to credit; and structured, on-going training to build institutional and management capacity of the cooperatives – the program has been acknowledged for its commercial success to farmers, sustainability milestones under both RSPO and ISCC standards, and has achieved national recognition as a model of exemplary agricultural cooperatives. The cases study offers key lessons to improve smallholder outcomes and serves as a model for adoption by industry.

The full report of the Best Management Practices case studies can be downloaded at www.daemeter.org

Case Study 2:
Best Management Practices to improve palm oil yields and reduce biodiversity, environmental, and climate impacts
Cargill Corporation

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Indonesia's average palm oil yield per hectare has increased only modestly since the 1970s. Realized yields remain far below maximum potential yield, and average approximately half those achieved by some of Indonesia's most progressive companies applying low-cost, yield enhancing Best Management Practices (BMPs). If adopted industry-wide, yield BMPs could potentially reduce pressure to convert up to 1.6 million hectares of land to new plantations up to 2050, while still meeting projected increases in demand. BMPs are designed to: (a) reduce fruit loss during harvesting; (b) maintain tree health; and (c) control fertilizer application and soil moisture.

Cargill, a large US-based food corporation, has been a leader in testing, improving and promoting BMPs through field trials at their plantations in Indonesia over the past decade. These trials showed that not only could yields be almost doubled from baseline conditions, but that high yields were possible even on marginal soils, demonstrating that degraded areas could be brought under cultivation, and potentially reduce pressure on carbon-dense and biodiversity-rich forest land. Experience implementing BMPs indicates that the amount of fertilizer needed to produce a kilogram of CPO can be markedly reduced from business-as-usual levels, reducing the GHG footprint of production.

Companies implementing BMPs, such as Cargill, Golden Agri-Resources, Ltd, and PT Astra Agro Lestari among others, are continuously monitoring and analyzing yield performance and finding ways to increase yields further, enjoying high returns on investment by increasing yields at the margin. Yet, despite financial and environmental benefits of BMPs, most oil palm companies and smallholders have not yet adopted BMPs, because past high prices and land availability created limited pressure to make required investments in infrastructure, staff training and management capacity. Incentives for BMP adoption are increasing, however, as CPO markets soften, land availability declines, and costs of developing new plantations rise. Industry associations and progressive firms can speed adoption through technical assistance, shared learning networks, and performance-based rewards. Government can encourage broader adoption by setting yield standards, e.g. through enforcement of BMP provisions in ISPO, but implementation ultimately depends on operations wide decision making by companies themselves.

The full report of the Best Management Practices case studies can be downloaded at www.daemeter.org

Case Study 3:
The use of HCS to apply Zero Deforestation policy and its legal implications
Golden Agri Resources

Greenomics Indonesia

The past several years have seen a proliferation of palm oil companies and buyers making stronger commitments to sustainability. Golden Agri Resources (GAR) was among the first when the company launched its landmark Forest Conservation Policy in February 2011 to ensure that its operations after that date have Zero Deforestation footprint. Along with The Forest Trust (TFT) and Greenpeace, GAR developed and piloted a methodology to define and identify High Carbon Stock (HCS) forests for conservation. The HCS methodology is central to implementing GAR's no deforestation commitments, and was first made public in June 2012.

Using this method, in March 2013 GAR announced the conservation of HCS forests in eight concessions, where new plantings were underway in West and Central Kalimantan. These concessions cover a total of 127,847 ha, 80% of which is plantable based on biophysical factors. Some 19,000 ha were identified as HCS forests.

A recent independent spatial analysis using up-to-date satellite images shows that the majority of HCS forests across seven the eight GAR concessions are being well protected. In one concession in Central Kalimantan, however, there are blocks of HCS forests that have been lost, due to multiple factors. Overall, GAR's conservation efforts to date have been successful, with room for improvement.

The future of these HCS forests is uncertain, however, since like High Conservation Value (HCV) areas, protection of HCS forests in plantations is not well accommodated by Indonesia's prevailing legal framework. Since the launch of GAR's HCS forest conservation pilot in March 2013, the company has made pro-active efforts to engage with government to recognize HCS as a tool and create a policy framework more amenable to forest conservation in oil palm, but progress has been slow.

In fact, new legal challenges were recently introduced by the Plantation Act, passed in September 2014, which stipulates that all plantable areas in a concession must be developed within six years after the HGU (Cultivation Right) title is awarded. Without a change to this provision, the 19,000 hectares of HCS forests in GAR's plantation could be subject to revocation by the state in a few years time.

This undesirable consequence could be avoided through future implementing regulations to the Act. The regulations will define, for example, 'environmental damage' that must be avoided under the law. If opening up HCS (or HCV) forests were defined as environmental damage, then they would be required for protection. Since these regulations have yet to be issued, there is an opportunity for concerned stakeholders to provide inputs.

This Greenomics Indonesia report can be downloaded at www.greenomics.org

Case Study 4:

Mitigating biodiversity impacts of oil palm through a comprehensive approach to conservation

Wilmar International

daemeter

Over the past twenty years, large areas of Indonesia's forests have been converted to agriculture, including oil palm plantations. This trend is likely to continue over the next decade to meet Indonesia's targets for palm oil production growth. The biodiversity impacts of past expansion have drawn significant national and international attention, creating pressure for companies to consider biodiversity in the siting, design and management of their plantations and mills. The impact of plantation development on biodiversity varies greatly depending on where the plantation is sited, as this determines: (1) whether natural ecosystems will be affected; (2) the condition and rarity of habitats affected; and (3) broader ecological importance of the area at a landscape scale, e.g. in maintaining connectivity between protected areas or providing hydrological services.

A plantation company can mitigate impacts on-site by identifying and managing areas that provide important habitat, maintain key ecosystem services, or provide dispersal routes for animals through the plantation. Where companies make such commitments, they must invest significant human and financial resources to plan, manage, and monitor conservation set-asides and establish mechanisms to coordinate this work other operations. Biodiversity conservation efforts can be supported by multi-stakeholder partnerships with local communities, local government, civil society groups, and adjacent land users. But even then, companies face significant challenges, as standard approaches and guidelines for managing biodiversity in plantations are still being developed, and facets of Indonesian government policy make it difficult for growers to implement effective measures. Large plantation companies tend to be more willing than smaller ones to experiment with biodiversity conservation in developing new industry standards and ensure access to sensitive markets.

One such company is Wilmar International Ltd. Wilmar exemplifies efforts being made by palm oil producers to conserve biodiversity within plantations, and through collaboration with the conservation community develop tools, guidelines and standards of good practice for industry. The experiences of Wilmar provide valuable lessons for industry and for other actors working to mitigate biodiversity impacts of oil palm. As mandatory certification requirements under the Indonesian Sustainable Palm Oil (ISPO) are applied over the next few years, all companies will be required to make some effort to mitigate biodiversity impacts. Important elements of an action agenda to build upon recent momentum and improve future outcomes are: (a) aligning legal requirements and incentives to support conservation; (b) revising spatial plans to avoid licensing in forested areas and focus future development on deforested, low-carbon, low biodiversity areas; (c) create and promote use of biodiversity management tools and standards to reduce costs and increase effectiveness; (d) increase the pool of Indonesian biodiversity management experts; and (e) improve the capacity of stakeholders, especially local government and communities, to play an active role in biodiversity conservation.

The full report of the Best Management Practices case studies can be downloaded at www.daemeter.org

Oil palm in Indonesia: Governance, decision making, and implications for sustaimable development Executive summary

The Nature Conservancy
Protecting nature. Preserving life.™

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Context and Rationale for the Study

Palm oil is a critical part of Indonesia's national development strategy and a source of significantlocal development benefits. At the same time, past social and environmental impacts have drawn criticism from inside and outside Indonesia. The economic, social, and environmental benefits and costs of palm oil are determined by a wide range of decisions made by many different actors across the supply chain. The purpose of this analysis is to describe Indonesian oil palm decision-making processes in terms that are understandable to a range of audiences, including government officials, the private sector, civil society, international consumers, and donors. This report aims to (a) **provide a balanced perspective to help bridge between proponents and critics of oil palm,** and (b) **highlight opportunities to align decision-making more closely with Indonesia's Green Growth objectives.**

This study organizes a selection ofkeydecisions made by different actors involved in palm oil development, explains how decisions affect development outcomes, and recommends ways to support ongoing improvements in performance. This information provides a basis for a more informed policy dialogue, drawing attention to concrete means for improving decisions, and giving actors a better sense of their role and how they might collaboratemore effectively to achieve particular outcomes.

Analytical approach

The study **identifies key decision points and actors involved in key oil palm decision processes,** grouping decision points based on those that determine: (a) where oil palm licenses are issued; (b) how plantation and mill management practices determine the environmental impact of operations; and (c) how company-community partnerships, including smallholder agreements, are formed and operate over time. The study qualitatively **describes expected outcomes of decisions,** focusing on the five different types of development outcomes from oil palm commonly highlighted in government planning documents and elsewhere: local (District) economic benefits, community benefits, improved district oil palm governance, impacts on the natural environment, and carbon emissions from oil palm development. The study **provides recommendations to promote Green Growth outcomes** with respect to those five dimensions. Since conditions vary widely across Indonesia and among plantations, many of our recommendations should be seen as working hypotheses that merit further investigation through research, policy dialogue, or pilot programs.

Key recommendations

The report provides a number of key recommendations for strengthening palm oil governance, practices and development outcomes. These include:

Note: MoA=Ministry of Agriculture, MoF=Ministry of Forestry, MoE=Ministry of Environment, MoFn=Ministry of Finance

Main recommendations	Sub-recommendations	Main audience	Immediacy and potential impact
Cross-cutting issues			
Collaborate on making ISPO a valuable and internationally recognized part of Indonesia's green development strategy	Broad-based stakeholder support for ISPO can help markedly to ensure the standard is implemented with maximum effectiveness.	MoA, ISPO, multi-lateral programs	Short term and **medium impact**
	Increase leadership from the Indonesian Chamber of Commerce (KADIN), the Indonesian Business Council for Sustainable Development (IBCSD) and palm oil producers association (GAPKI) to promote and strengthen ISPO.	KADIN, IBCSD, GAPKI	Short term
Strengthen and improve local government systems for management of the palm oil sector	Central government agencies could strengthen guidance, training, and related support programs to district governments to develop more uniform capacity to regulate oil palm development	MoA	Medium term
	Provide districts with training, improved spatial data, and decision support tools for spatial planning and palm oil development planning.	MoA, BAPLAN	Medium term
	Encourage and support local governments to consider a fuller range of development benefits and costs when issuing oil palm licenses to maximize positive secondary benefits	Bupatis, Dinas-level government	Medium term
Decisions that determine where oil palm licenses are issued			
Strengthen and improve local government systems for management of the palm oil sector.	Develop, pilot and implement fully a transparent, on-line licensing registration system	MoA, Dinas-level government	Medium-long term
	Review and update the Joint Decree of MoA and the National Land Agency (1999) on issuance of Location Permits	MoA, National Land Agency	Medium term and high impact
Update and fully operationalize suitability criteria consistent with Indonesia's Green Growth objectives to ensure that unsuitable land is not brought under cultivation	Develop clear, national-level land suitability criteria for oil palm development including social, physical, biodiversity, and GHG emissions considerations as a guide to local government licensing decisions on land zoned for agricultural use	MoA, MoF, MoE	Medium term and high impact
	Improve the quality, credibility, and influence of the environmental impact assessment process	MoE	Medium-long term
	Review and where appropriate revise regulation on oil palm development on peatland	MoA, MoF	Short term and high impact
Increase the availability of suitable, low impact land for oil palm development	Simplify and expedite mechanisms for making low-carbon, deforested areas within the Forest Zone available for agriculture	MoF, MoA	High impact
	Explore opportunities for smaller mills that require a smaller planted supply base	MoA, CEOs, district, CSOs	Medium-long term

Main recommendations	Sub-recommendations	Main audience	Immediacy and potential impact
Develop legal tools and build implementation capacity to strengthen management of areas with high conservation value in land zoned for agricultural use	Strengthen the legal right of plantation companies to retain and manage unplanted conservation areas within the HGU for the plantation	MoA, MoF, district, ISPO	Medium-long term and **high impact**
Decisions affecting environmental impacts of plantations and mills			
Develop legal tools and build implementation capacity to strengthen management of land with high conservation value in land zoned for agricultural use.	Create financial incentives for companies to maintain undeveloped areas in plantations	MoA, MoFn, RSPO, ISPO, KADIN, CEOs	Short term and **high impact**
	Encourage local governments to enact additional requirements for oil palm plantation licenses to ensure that local environmental or social values are protected	Local govt, Bupati, DISBUN	**Medium term**
	Support private sector-led efforts to make explicit, progressive goals for management of conservation areas within oil palm plantations	CEOs, RSPO	**Medium term**
	Make plantation companies more accountable for contractors hired for land clearing and improve systems for managing contractors	MoA, district, CEOs	**Medium term**
	To reduce encroachment pressures by local communities into conservation areas, companies should consider voluntary limits on how much community land they are prepared to place under oil palm cultivation	CEOs, ISPO	**Medium term**
Develop innovative policy measures and fiscal tools to promote and reward investments in Zero Waste technologies to maximize net positive impacts of mill operations	Increase industry-wide uptake of advanced waste treatment and utilization practices and technologies, requiring that the following actors make some or all of the following decisions	MoA, MoE, ISPO, CEOs	**Medium term**
	Create fiscal and financial incentives to promote (a) methane capture, (b) increased use of Land Application techniques for POME where appropriate, and (c) composting technologies toutilize soild waste by-products productively, produce electricity and reduce use of chemical fertilizers	MoA, MoFn, ISPO, RSPO	**Medium term**
Increase the probability that land is allocated to responsible companies	Link access to land for additional oil palm development to successful company performance in the past.	MoA, ISPO	**Short term and potentially high impact**
	Explore mechanisms to eliminate the involvement of licensing agents, companies or individuals that specialize in getting licenses, clearing land and then on-selling licenses	MoA, district, Bupati	**Medium term**

Main recommendations	Sub-recommendations	Main audience	Immediacy and potential impact
Promote investments in yield enhancement and reward good performance to optimize production on existing and future plantations	Promote industry-wide CPO yield improvements through encouraging specific actors to make some or all of the following decisions	MoA, CEOs	Short term and **high impact**
Decisions that influence company-community relations in palm oil			
Ensure communities are well-informed and able to participate effectively in negotiations with oil palm companies from earliest phases of oil palm development, including pre-licensing consultations	Make governments accountable for mandatory provision of accurate and readily understandable information for candidate smallholder farmers and community members	MoA, District, bupati	Medium-long term and **high impact**
	Develop guidelines for establishing a more structured approach for local government to support company-led *sosialisasi* and later negotiations	MoA, District, bupati, CSO	Medium term
	Develop a set of standard guidelines for community engagement	MoA, ISPO, CSO	Medium term and **high impact**
	Review and clarify minimum requirements for land division between Company and Communities as stipulated in MoA Regulation No. 26 (2007).	MoA	Short term
	Through pilot trials, develop a mechanism for district government to provide negotiation support for all parties during the formation of benefits sharing agreements, especially smallholder partnership arrangements.	MoA, District, bupati, CSO	Medium term and **high impact**
	Develop clear, binding agreements between companies and communities regarding where and when smallholder plots will be developed.	District, CEOs, CSO, ISPO	Near term
	Develop and require use of model agreements for land release and smallholder partnership arrangements.	District, CEOs, CSO, ISPO	Medium term
	Clarify and strengthen oversight of plantation company obligations to support smallholder yields and create incentives that promote compliance with existing requirements.	MoA, ISPO, CEOs	Medium term and **high impact**
Develop measures to ensure levels of community benefit during implementation of smallholder partnership agreements are in accordance with negotiated terms and conditions.	Support effective smallholder training by district government, extension support trainers, plantation companies, supported financially by users and buyers of oil palm products	District, CEOs, ISPO, RSPO, CSO	Medium term
	Job creation or other forms of community livelihoods support during the period when palms are maturing should be agreed upon between companies and communities during *sosialisasi* for land release	MoA, CEOs, ISPO	Medium term

Main recommendations	Sub-recommendations	Main audience	Immediacy and potential impact
	Consider development and use of a more flexible and transparent fresh fruit bunch (FFB) price setting system that is easier for smallholders to understand and that creates opportunity for merit based pay that rewards good quality fruits	MoA, Provinces, GAPKI	Medium term

This is an extract from Paoli G.D., P. Gillespie, P.L. Wells, L. Hovani, A.E. Sileuw, N. Franklin and J. Schweithelm (2013) Oil Palm in Indonesia: Governance, Decision Making and Implications for Sustainable Development. The Nature Conservancy, Jakarta, Indonesia. Download the full report at www.tnc.org and www.daemeter.org. A follow up and update to this publication is expected to be available for download in 2015.

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