



2.6 Innovation to keep forests standing

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Prologue: The crunch heard around the world

Once you've seen Greenpeace's 60-second video from its campaign against deforestation in Indonesia, you can't *un-see* it. Blood drips down an office worker's face after he bites into what he thinks is a chocolate-coated wafer but is actually an orangutan finger. The crunching sound gives way to the sound of chainsaws, and the link between candy bars and rainforest destruction is now sealed in your memory, possibly forever. The series of events unleashed by the 2010 release of that video, however, mean that the story of forest destruction and palm oil has largely been rewritten. How did this happen, and what are the new challenges facing those who want to eliminate deforestation from being caused by the products we enjoy every day?

Making the commitment

The main targets of the 2009–10 Greenpeace campaign were Nestlé, the world's largest food company, and Sinar Mas Group, Indonesia's largest palm oil grower and pulp and paper producer. Since 2008, through statements by its board chair and participation in industry sustainability initiatives, Nestlé had already expressed its desire to see rainforest destruction stop. But the company had taken little public action to eliminate deforestation from its supply chains until the Greenpeace campaign was launched. On 13 April 2010, barely one month after Greenpeace's gruesome video was released, Nestlé wrote to Greenpeace and stated that it had stopped purchasing palm oil from Sinar Mas. On 17 May, it published its Responsible Sourcing Guidelines (RSGs) for palm oil, which eventually became a blueprint for companies that source and grow palm oil.



WHERE EXACTLY DO I
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Nestlé's guidelines affirmed that its future palm oil purchases would achieve five things: 1) come from plantations in compliance with local law and regulations; 2) protect peatlands; 3) respect indigenous and local communities' free, prior, and informed consent

for activities on customary lands; 4) protect high conservation value (HCV) forests; and 5) protect natural forests and forests of high carbon value.

Point 5 was the most contentious. The other elements of the responsible sourcing guidelines had been well defined in other sustainability standards, although debate around how to define “peatland” remained. However, no one had developed a definition of “forest” that could be implemented. How can “high carbon value” be quantified? How much degradation and logging can occur before the forest is no longer considered “natural”? It soon became clear that even Greenpeace was not quite sure what it was asking for. As Benjamin Ware, Responsible Sourcing Manager at Nestlé put it, “we had agreed on the title for a new textbook about no deforestation, but someone still had to write the content.”

Meanwhile, halfway around the world, Golden-Agri Resources (GAR) was reeling from the attack on its parent company, Sinar Mas. GAR, the world’s second-largest palm oil producer, considered itself an industry leader in terms of sustainability. In 1997 it was the first major Indonesian palm oil grower to commit to ceasing to use fire to clear land for new plantations, and in February 2010 it announced that it would not plant oil palm on peat soils, regardless of depth. It considered itself to be operating legally, and was committed to protecting HCVs and community land-use rights through its membership in the Roundtable on Sustainable Palm Oil (RSPO). GAR wanted to be reinstated as a Nestlé supplier and become the first grower to implement Nestlé’s guidelines, and the company decided to investigate what it would mean to implement the last and newest “no deforestation” RSG.

Innovation

To help it figure out what the “forest” in “no deforestation” meant, GAR turned to The Forest Trust (TFT), which has been helping furniture companies and timber importers trace their supply chains and eliminate deforestation since its founding in 1999. Nestlé chose TFT as its implementation partner to help it identify noncompliant palm oil growers in its supply chain and support them in implementing their guidelines. GAR asked TFT for help in developing a practical methodology for complying with the guidelines. As TFT’s founder Scott Poynton puts it, “GAR asked us: what is this High Carbon Stock forest thing? Where exactly do I tell the bulldozer drivers not to go?”

TFT recognized that GAR was serious about a no-deforestation policy for its operations, and invited the company to become a TFT member in September 2010. The two organizations looked at the available indicators for “forest” and realized that they would need to develop their own. The FAO definition of forest as land with a tree canopy cover of more than 10% and size greater than 0.5 hectares was too specific, and would classify tiny parks in Singapore as forests. The Forest Stewardship Council’s definition was too vague, stating that “young regeneration may be considered as natural forest after some years of regeneration.” How many years, exactly? The Indonesian government had stated that the

seven million hectares of new oil palm plantations it aimed to see planted should be on degraded (i.e., non-forest) land, but provided no definition of this.

GAR and TFT realized that if they were going to start from scratch to develop a workable definition for high carbon stock (HCS) forests, they needed to do it together with the campaigners who had helped push the no deforestation concept, especially Greenpeace. TFT, GAR and Greenpeace agreed to meet at the RSPO meeting in Jakarta in November 2010 to discuss GAR's draft Forest Conservation Policy and, it was hoped, to agree on a way to identify forests that need to be protected. After a few days of highly charged meetings, the three organizations arrived at a land classification methodology to test in the field:

- stratify land cover into non-forest, likely forest, and borderline areas, based on satellite image analysis;
- conduct field visits to determine forest quality, especially in borderline areas — carbon was proposed as the main descriptor of forest quality in the absence of other standardized metrics, with 35 tonnes of above-ground biomass used as the lower limit of borderline regenerating forests in Indonesia (based on scientific studies of secondary forests led by RSPO and Wetlands International); and
- recalibrate satellite image analysis based on the results of field visits to finalize land-cover maps and determine go/no-go areas for plantation development.

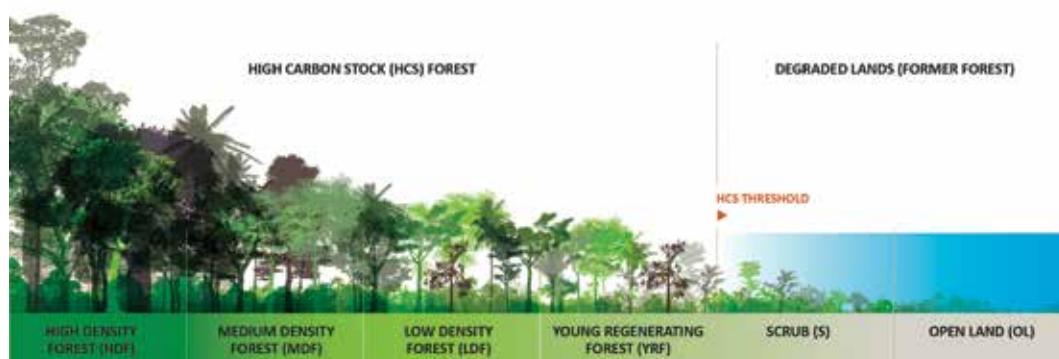
GAR proposed that the methodology be tested in its PT Kartika Prima Cipta concession in West Kalimantan, which was still heavily forested. TFT's technical staff would lead efforts to classify images and conduct field visits, and GAR invited Greenpeace to observe the process and join the field surveys. Crucially, GAR agreed to cease all land-clearing activity while the three organizations carried out this work. GAR was clear that it eventually needed to develop its concessions, and that the intended outcome of the process was to be able to create clear go and no-go maps so it could resume planting oil palm. The pause in land clearance, however, and GAR's willingness to share concession maps and satellite images with Greenpeace allowed a truly innovative solution to the challenge of deforestation to be cooperatively developed by groups and individuals who had historically been adversaries.



In February 2011 — while the organizations were agreeing on terms of the pilot project — GAR announced its new Forest Conservation Policy. This mirrored Nestlé's RSGs and included a provisional definition of HCS forest as having at least 35 tonnes of above-ground biomass. The policy also included a moratorium on new clearing while the HCS methodology was being tested. Greenpeace met the announcement with cautious optimism, and Nestlé continued to offer support for the collaboration and an openness to reengage with GAR if it could ensure that it would implement GAR policy throughout its operations.

In June 2012 GAR, TFT and Greenpeace announced the results of their work. Their report described six distinct land-cover classes relevant to differentiating forests from degraded land. Low-, medium- and high-density forest — along with “old scrub” (now called young regenerating forest) — were to be protected, while young scrub and open land could be developed (see Figure 1.) The test plots, which used forest plot sampling and carbon estimation proposed by Sandra Brown of Winrock International, estimated that carbon for above-ground biomass averaged 60 tonnes per ha in young regenerating forest and 27 tonnes per ha in young scrub. This indicated that the original proposed cut-off of 35 tonnes per hectare was broadly accurate, at least for secondary forests in West Kalimantan. Nestlé resumed purchasing from GAR in September 2011.

Figure 1. High carbon stock classification



The report included the HCS Forest Patch Analysis Decision Tree, a relatively simple way to prioritize the protection of isolated forest patches based on their overall size, core area, connectivity to other forests or protected areas, and proximity to forest degradation risk factors such as roads or villages. Conservation science was used to determine thresholds of patch quality, to decide which patches provide important habitat or connectivity, and which were less important or at likely risk of encroachment and could be converted to plantations.

Although a credible group of NGO and corporate stakeholders had developed a way to implement a company’s commitment to zero deforestation, the 2012 High Carbon Stock Study was met with as much trepidation as fanfare. The plantation company claimed that the policy was cost-effective to use and that they could still maintain a profit while protecting forests using the new HCS definition. The NGOs seemed to be happy that forest protection was maximized; based on decision-making that used the best available science, 25% of the sample concession was proposed to be conserved. Questions remained, however. What would the Indonesian government say? Would other palm oil companies agree to set aside such large areas of land? Other large companies and buyers were reluctant to sign up.

Gaining momentum

Partial acceptance of the HCS approach came in February 2013, when GAR's associated company Asia Pulp and Paper (APP) announced its own Forest Conservation Policy. The policy declared a moratorium on new clearing for plantation establishment until all of its and its supplier's concessions had been mapped using the HCS approach. APP had also been subject to high-profile campaigns by WWF, Greenpeace and others, which accused the company of clearing hundreds of thousands of hectares of forest in Indonesia for pulpwood plantations. APP had been watching the progress of GAR and the development of the HCS methodology with keen interest, and when it decided to adopt the HCS approach, this sent a strong signal to companies across Indonesia and around the world that there was now a practical way to put the "forest" into "zero deforestation."

The Government of Indonesia also began to take notice. APP is the country's largest pulp and paper company, managing or sourcing from one million hectares of forests with operations in China, North America, and Australia, and is a high-profile commercial success. APP's announcement that it would protect HCS forests throughout its operations created an awareness of the issue on the part of Indonesian companies in all commodity sectors, from oil palm to rubber to pulpwood. Wilmar's similar announcement in December 2013 rocked the entire palm oil industry. Although Wilmar is not a major palm oil producer, it trades approximately half of the world's palm oil, sourcing from 80% of Indonesia and Malaysia's plantations. The company's "no deforestation, no peat, no exploitation" policy promises to protect forests, peatlands and people throughout its supply chains, which effectively transforms the entire industry.



Consolidation

With Wilmar's announcement and support for the HCS approach, coupled with NGOs rallying around the concept as the only workable solution to identify forests for protection, more commodity buyers felt comfortable referencing the HCS methodology in their own zero deforestation policies. In 2014, the HCS Approach Steering Group was founded by about 20 NGOs and companies along with TFT, GAR and Greenpeace. The steering group has embraced the critical but collaborative culture of the original partnership; NGOs call out fellow steering group members when they breach their policies, but at the same time help them to fix their problems.

By the end of 2016, the world's largest palm oil, pulp and paper, as well as rubber companies, had adopted the HCS approach as their methodology for implementing zero deforestation. Other large oil palm producers who developed their own HCS methodology

in parallel have recently joined forces and will incorporate their scientific findings into the HCS approach.

What can be learned about NGO and company collaboration from this HCS story? Five main elements contributed to the development and adoption of the HCS approach in a relatively short time period.

Space and time for innovation. Such a large issue could not be solved in just a few months, and GAR took the pressure off campaigners by agreeing to stop its bulldozers while stakeholders figured out how to define zero deforestation.

A committed buyer. Nestlé kept in close contact with GAR through regular calls and meetings, sending a strong signal that it would reinstate purchases if GAR was able to find a way to meet its policy.

A small group of credible experts. The only tool for implementing sustainability policies in palm oil is the RSPO, which was too unwieldy to support rapid innovation of a shared approach. Instead, a practical way forward was developed and tested by a small multi-stakeholder group and then shared with the rest of the industry.

A strong scientific and technical foundation. From the beginning, the HCS methodology was based on carbon and conservation science, and it developed objective indicators that can be used in any tropical forest.

Open-source technology. The originators hoped that the HCS approach would be widely adopted across other commodities, and not be limited to one plantation company or buyer. Thus, the first activity of the HCS Approach Steering Group was to develop a toolkit and training programme for practitioners.

The challenges ahead

Has the link between tropical forest destruction and commodities such as oil palm and pulpwood been broken? TFT would argue that the nature of the problem has fundamentally changed, but the overall challenge remains. On the positive side, it is unlikely that a grower today would clear thousands of hectares of forest at a time without hearing from customers, as was commonplace just five years ago. With real-time satellite information, targeted NGO campaigning, and the HCS approach showing companies that they can expand operations while protecting forests, large-scale deforestation is gradually being brought to a halt.

But new challenges have evolved. Although new approaches that can eventually stop deforestation by large companies are showing success, smallholders will become the major drivers of deforestation. Global demand for commodities continues to grow, and farmers will expand their holdings to meet that demand. Bit by bit, hectare by hectare, smallholder expansion will chip away at remaining forests, including those in protected areas.

This presents a special challenge for those who fight deforestation and is one that current tools cannot address. Methodologies such as the HCS approach can be adapted to make it easier to identify HCS forests on smallholder land, and Greenpeace Indonesia has partnered with the smallholder association SPKS to do just that. But once a forest is identified, how can its protection be ensured? Ethically, smallholders cannot be denied their right to a decent livelihood. But if a company says that it can't buy oil palm planted on a smallholder's former forest, it is effectively denying that smallholder a socio-economic benefit. Governments of countries with high forest cover and high economic needs are rightly challenging stakeholders, feeling that if a deforestation-free approach cannot be found to lift their populations out of poverty, they will prioritize agricultural development over forest protection.

Implementing zero deforestation while including smallholders' livelihood needs is the next test. The HCS approach has solved part of the deforestation problem, but not all of it. A win-win scenario is possible, with smallholders and forests thriving side by side, but how can this be achieved? Over the next few years TFT will aim to replicate the same innovative spirit that developed this practical method to implement zero deforestation, in order to tackle this next and more complex challenge.

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