

Part 3: Setting the Context

Jonathon Porritt

Jonathon Porritt is the Co-Chair of the Steering Committee for the High Carbon Stock Science Study. He is a Founder Director of Forum for the Future, which has an ongoing partnership with Sime Darby, one of the largest palm oil companies in the world, and is the independent Sustainability Advisor to the Board of Sime Darby.

This paper has been consulted on with members of both the Steering Committee and the Technical Committee, as well as a wide range of experts. Final accountability for the contents of this section of the Report rests entirely with the author.

The HCS+ Narrative

We are recommending that a new development model for the palm oil industry should be phased in over the next three years based on:

- The full and rigorous implementation of existing standards (RSPO etc) and processes (e.g. Free Prior and Informed Consent);
- A stronger Social Contract to share the value created by companies more equitably with local communities, employees and smallholders;
- A carbon neutral approach to all new oil palm development after application of a strict threshold defining High Carbon Stock forest;
- A clear commitment to multi-stakeholder planning, and more transparent governance processes based on consistent Monitoring, Reporting and Verification; and
- The active and ongoing protection of all forest set-asides, either HCV forest or HCS forest; within an **integrated sustainable development framework**.

In other words, HCS+ is all about a development model that minimises deforestation through equitable, transparent, conflict-free and carbon neutral oil palm development.

Section 1: Climate Change, Deforestation and the Palm Oil Industry

In September this year, the UN General Assembly signed off on a set of Sustainable Development Goals (SDGs), to take forward the progress achieved through the Millennium Development Goals between 2000 and 2015. Of the 17 Global Goals, ten are directly relevant to this Study:

- Goal 1: End poverty in all its forms everywhere
- Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3: Ensure healthy lives and promote well-being for all at all ages
- Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all
- Goal 9: Build resilient infrastructure, promote sustainable industrialisation and foster innovation
- Goal 10: Reduce inequality within and among countries
- Goal 12: Ensure sustainable consumption and production patterns
- Goal 13: Take urgent action to combat climate change and its impacts
- Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss
- Goal 17: Revitalise the global partnership for sustainable development

At the heart of the SDGs initiative is the idea that all such goals need to be pursued in an integrated and mutually reinforcing way. Ideally, there should be no trade-offs; work done on delivering one Goal should not be achieved at the expense of progress on any of the other Goals. (Raison et al, 2015.¹)

The palm oil industry today is as familiar with that idea of sustainable development as any industry in the world, starting with the operations of Felda in Malaysia back in the 1960s, and over the years, a huge amount of research has been done on improving both the environmental and social performance of the industry. More recently, it's had reason to ramp up those endeavours as a consequence of responding to the tide of controversy in which it's been engulfed for the last 15 years or more.

The High Carbon Stock Science Study is about the balance of the economic, social and environmental issues as they relate to the palm oil industry. More particularly, it's about reducing the emission of greenhouse gases from the conversion of forested land to oil palm (and the impact of that land use change both on the climate and on the ecosystem services that forests provide), and ensuring the most favourable social and economic benefits that the industry can generate. This is a challenging area in which there are no easy answers.

The primary focus of this Study is on the future expansion of the industry. But to arrive at a set of practical, consensus-based recommendations, it has obviously been necessary to review the evidence available both about the industry's record (in terms of that balancing act referred to above) and its current performance.

Historically, over a period of roughly 50 years, considerable wealth has been created through the conversion to oil palm of millions of hectares of rainforest in both Malaysia and Indonesia. The relative prosperity of both countries today is due in no small part to this industry.

But it came at a cost – as the industry itself recognises – both in terms of the significant environmental impact of those millions of hectares in Malaysia and Indonesia being cleared for development, and in terms of some indisputably negative impacts on local communities and indigenous people.

Such an ambiguous record is uncomfortable, but little is served by ignoring the dark side, from an historical perspective, of an industry that is understandably proud of the massive contribution it has made to the economic success of both nations. And pretty much the same picture emerges in all other countries where the palm oil industry has played a significant role.

The most dramatic period of growth for oil palm occurred between 1990 and 2010. According to the Food and Agriculture Organization, the area under oil palm increased from around six million hectares to just over 16 million hectares during that time, primarily in Indonesia and Malaysia.

This was also a period of accelerating deforestation. However, defining the relationship between the two (ie what percentage of the deforestation in those two countries was caused by new oil palm plantations) is much harder than might be imagined. There doesn't seem to be a clear consensus on the data for oil palm hectareage, levels of deforestation, and associated CO₂ emissions. In all cases, researchers concede that quality and accuracy of data are lacking.

¹ Raison, John, et al, 'HCS+: A New Pathway to Sustainable Oil Palm Development' (2015)

A study done for the Roundtable on Sustainable Palm Oil's (RSPO's) Greenhouse Gas Working Group in 2013 (by Gunarso et al²) looked at the 9.7 million hectares of new oil palm development in Indonesia, Malaysia and Papua New Guinea, between 1990 and 2010, and estimated that 36.5% of that area came from the conversion of forest, another 36.5% from land already in agricultural use, and 17.9% from grassland. These are obviously significant figures, but what that amounts to is approximately 180,000 hectares of forest converted into oil palm every year, a relatively small percentage of the estimated 8.5 million hectares of forest lost every year through deforestation and degradation. (See Page 20.)

Another study looking at drivers of deforestation in Indonesia between 2000 and 2010 showed that oil palm accounted for roughly one million hectares (around 23%) out of the 4.7 million hectares lost – with the rest accounted for by logging and conversion to plantation forestry (Abood et al 2014). On the other hand, another well-known study done by Stanford and Yale Universities (published in *Nature*³) assessed the loss attributable to new oil palm plantations in Indonesia at that time at around 57%!

It's this kind of uncertainty in the historical data that makes it so difficult to establish a consensus position. Estimates of the total annual contribution of the palm oil industry to emissions of greenhouse gases are also notoriously elusive. Even those that are stated with some degree of confidence (as in the claim from the Malaysian Palm Oil Council that the industry contributed just 0.08% of global greenhouse gas emissions in 2010⁴) have proved difficult to substantiate.

But one thing is clear: this is an industry that started out on a journey of reform more than 15 years ago. The RSPO was formed in 2004, and has made significant progress since then in negotiating a wide range of improved practices through the adoption of its certification scheme. The work that's been done on defining High Carbon Stock forests through this Study, and through other initiatives (including the High Carbon Stock Approach and the RSPO's own Emission Reduction Working Group) builds on those foundations; it would be impossible to make substantive progress on the HCS challenge without all the work that has already been done on the RSPO's certification process itself, on the identification and protection of areas of High Conservation Value (HCV), and on the use of Environmental and Social Impact Assessments (ESIAs) and the Free Prior and Informed Consent (FPIC) methodology.

The palm oil industry today

- Around 20% (amounting to around 11.75 million tonnes) of global palm oil production originates with Members of the RSPO. As of August 2015, that equated to around 2.65 million hectares of certified oil palm, which is roughly 16% of the total of 16 million hectares in production. Only half of that 20% is actually sold as Certified Sustainable Palm Oil.
- A further 5% of global palm oil is certified under the ISPO (the Indonesian Sustainable Palm Oil initiative).
- Much of the campaigning work around sustainable palm oil has been focussed on those companies involved in the RSPO and the ISPO. But that still leaves around 75% of global production that is not covered by any certification scheme.
- Total global production in 2014 amounted to 59.3 million tonnes. Around 75% of that is traded internationally, and the rest is used for domestic consumption, primarily for food production and the manufacture of soaps and cosmetics. Only a small percentage is currently used for biofuels, but many commentators believe that figure could increase significantly over the next few years.
- Of the area under oil palm in Indonesia and Malaysia, approximately 60% is plantation, while 40% belongs to smallholders either linked to those plantations or producing independently. It's more or less the same in Papua New Guinea, while countries like Thailand and Nigeria have much higher percentages of smallholders.

There is no doubt that the palm oil industry has been subject to unparalleled scrutiny during this time. Many involved in the industry itself see this as disproportionate, and often ask why it is that many of their competitors (other vegetable oils, and particularly the soybean industry) merit so much less attention. Campaigners see the focus on the industry as entirely appropriate given the level of tropical deforestation for which it is held responsible.

² Gunarso, P, et al, 'Oil Palm and Land Use Change in Indonesia, Malaysia and Papua New Guinea', Report for the Technical Panels of the 2nd Greenhouse Gas Working Group of the Roundtable on Sustainable Palm Oil (2013)

³ Carlson, K M et al, 'Carbon Emissions from Forest Conversion by Kalimantan Oil Palm Plantations', *Nature Climate Change* 3, 283-287 (2013) <http://www.nature.com/nclimate/journal/v3/n3/full/nclimate1702.html> [Accessed 9 Nov 2015].

⁴ Basiron, Tan Sri Datuk Dr Yusof, Malaysian Palm Oil Council, 'Countering Misperceptions of Malaysian Palm Oil: Where Are We Headed?' http://www.mpoc.org.my/upload/P10_Reach_and_Remind_Countering_Misconceptions_Palm_Oil.pdf [Accessed 9 Nov 2015].

One thing is for sure: the industry is now in a far better place to meet the kind of sustainability challenges (on carbon, biodiversity, human rights, community engagement and so on) that all agricultural crops will have to meet in the near future.

Getting itself 'fit for the future' has therefore never been more important to the industry. As the chapter that follows from James Fry makes clear, demand for palm oil and its derivatives is still growing, particularly in China and India. Given changes in the global food economy (with per capita consumption of vegetable oil - including use of biofuels - at around 60 kg in the US and Europe, but just 26 kg in China, and 17 kg in India⁵), few analysts believe that this trend is likely to abate any time soon.

They are also keen to point out that there are important sustainability benefits in being able to meet that demand using palm oil rather than any of its principal competitors. In terms of tonnes of oil produced per hectare, oil palm produces around 3.5 tonnes in comparison to soybean oil at around 0.5 tonnes per hectare, sunflower oil at 0.6 tonnes, and rapeseed (or canola) at 0.75 tonnes. (In other words, oil palm productivity is seven times that of the soy bean, six times that of sunflower, and five times that of rapeseed.) From a land use perspective, this is hugely significant. As James Fry points out, if there was no growth at all in the amount of land used for oil palm, with output fixed at current levels:

'The others would have to use exceptional increases in their areas to replace missing palm oil product output. If the lost palm output were to be made up solely from extra soybeans, the soybean area would have to rise from 111 million hectares in 2013 to 232 million in 2025. If rapeseed fills the breach, its area would have to rise from 36 to 109 million hectares. For sunflower on its own, the area would have to rise from 26 to 87 to million hectares.⁶

This is an important perspective that is insufficiently recognised in many of the debates about food security. As land becomes more and more scarce, and competition for access to that land becomes ever fiercer, it's clearly a priority to meet that growing demand for vegetable oils as efficiently as possible, with the lowest possible emissions of greenhouse gases, using as little land as is necessary. Suppress the use of palm oil in favour of its significantly less efficient competitors, and the indirect sustainability impacts may turn out to be much worse than the impacts of sourcing that palm oil in a genuinely sustainable way.

It may well be, at some point in the not too distant future, that innovative advances in biotechnology will provide cost-effective substitutes for palm oil and all other vegetable oils, and this is something the industry is starting to wake up to. But the projected growth over the next decade or so will still need to be met by more conventional land-based production.

So does that necessarily mean that more and more forested land will need to be cleared to meet that demand? Two alternatives to further clearance are seen to be preferable. First, developing new plantations on already degraded land. There is near-universal consensus that this should indeed - wherever feasible - be the top priority. However, industry representatives point out that the figures given for degraded land (in Indonesia, in particular) can be very misleading, in that a far smaller percentage of that land would actually be available for cost-effective development. And much of it is also less attractive to large palm oil companies because of the complexity of community land claims and disputes.

We should not shy away from that kind of reflection. Part of the 'economic bottom line' in any sustainable development framework is the need for private sector enterprises to be able to generate profit over the period of any investment. If the return on the investment made in any project is inadequate (because of reduced yields from poor quality land, for instance, or because of a shortage of labour or continuing conflicts with local communities) then it's more than likely that the investment won't be made at all.

The second alternative is to increase yields on existing land already developed for oil palm. This can be achieved in a number of ways: enabling smallholders to increase their productivity, which is often very low; establishing new smallholder and out-grower schemes; improving the quality of agronomy on existing plantations; and achieving further improvements in the basic oil palm genome. All of these options need applied attention from both private sector players and governments; given that such schemes will inevitably entail significant additional costs, it will be impossible for the industry to bear those costs on its own. It is encouraging that there is now a lot of effort being devoted to exploring new kinds of partnerships and financial models.

For all those reasons, most people acknowledge that there will need to be some new planting on land that is currently under forest cover. The question then - the principal question of interest to this independent Science Study - is this: is it possible to justify any further deforestation in order to increase total palm oil production and simultaneously to achieve sustainable development in fragile, impoverished parts of the world?

There are many who give an unequivocal 'no' in answer to that question. 'Zero deforestation' is the rallying call that captures the essence of that position. A number of the biggest oil palm companies in the world have already adopted some kind of 'no deforestation' pledge (either through the Indonesian Palm Oil Pledge or the Sustainable Palm Oil Manifesto), though the wording is carefully nuanced to distinguish between 'zero deforestation' and 'no deforestation of High Conservation Value or High Carbon Stock areas'.

⁵ Fry, James, 'Palm Oil and its Competitors: Market Realities' (2015)

⁶ Fry, James, *Ibid.*

Just to add to the confusion, some of the biggest users of palm oil have adopted a slightly different position through the Consumer Goods Forum, committing to 'zero net deforestation' by 2020 - a position that is obviously easier to reconcile with the kind of carbon neutral approach advocated in our Study than with a 'zero deforestation' position.

All in all, commitments of one kind or another theoretically cover around 90% of internationally-traded palm oil - up from around 5% two years ago. This demonstrates both the impact of NGO campaigns and the clear intent of leading players in the industry to play their part in helping to reduce levels of deforestation, notwithstanding the difficulties faced by those companies in translating these commitments into real change on the ground.

Even ten years ago, such commitments would have been seen as highly improbable. Historically, there's no country on Earth that hasn't cut down some part of its forests for agricultural, industrial or infrastructure development, and nations with significant rainforest reserves have been understandably indignant about being told what they could and what they couldn't do with their forests by countries that have ruthlessly exploited their own forests to promote economic development at some earlier point in their history.

The state of the world's tropical forests

- Tropical forests once covered 3.6 billion hectares, making up half of all the world's forests. A third of that has already been lost as a result of deforestation.
- Of the remaining area, only about 24% (600 million hectares) is in a mature and relatively undisturbed state. 30% is degraded, and 46% is in a fragmented state.
- At the overall level, the annual area of tropical forest lost every year remains very significant, at around 8.5 million hectares.
- Between 2000 and 2012, commercial agriculture was identified as the driver of around 70% of all tropical deforestation.

(All statistics from 'Tropical Forests: a Review' from the Prince of Wales's International Sustainability Unit, April 2015⁷)

But things are very different today. The emission of greenhouse gases from continuing peatland drainage and deforestation (as well as the equally problematic degradation of forests) makes such a significant contribution to today's worsening climate change crisis that it should be completely unacceptable for any kind of business-as-usual approach to continue. According to a report from the US Congressional Budget Office in 2012⁸, 12% of global greenhouse gas emissions come from the destruction of forests for agriculture, primarily in developing tropical nations.

According to the Prince of Wales's International Sustainability Unit, that figure of 12% may be a significant under-estimate:

'Tropical deforestation remains a major driver of global warming, emitting 0.8-0.9 Gigatonnes of Carbon (GtC) annually, equating to 8% of global carbon emissions. Less widely recognised, tropical forest degradation accounts for a further 0.6-1.5 GtC per annum, equating to a range of 6% to 14% of all anthropogenic carbon releases. In aggregate, the two sources may account for 14% to 21% of all carbon emissions, perhaps higher still when tropical peatlands and mangroves are included.'⁹

This kind of disturbing picture is widely recognised by all countries with significant rainforest resources, and many have already made important commitments to play their part in this global effort. Brazil has succeeded in reducing forest loss by around two-thirds over the last ten years; with the support of Norway and Germany, Peru recently committed itself to end deforestation by 2021.

But the challenge now is as much about degradation as it is about outright forest clearance. Much of the continuing degradation of the Indonesian rainforest, for instance, is driven by continuing poverty. The World Bank estimates that there are still 32 million Indonesians living below the poverty line of US\$1 a day, despite significant economic progress over the last 15 years. And for many of those people, there's little alternative but to provide for their needs as best they can by using the forests in which they live for slash-and-burn farming or small-scale oil palm development. This has been the biggest cause of the thousands of fires in parts of Indonesia that caused such devastating problems earlier in the year.

This kind of 'poverty-induced encroachment' remains a massive issue. Even those forests that have been 'set aside' as areas of High Conservation Value by big oil palm developers remain highly vulnerable to such encroachment; there's little if any incentive for companies to act as guardians of those forests even within their own concession areas, let alone outside them. Any new proposals for genuinely sustainable oil palm development in the future have to include workable solutions to that problem - and that's exactly what we believe can be achieved by ensuring that all new developments are 'carbon neutral' - delivering 'net zero emissions' if not net zero deforestation.

⁷ The Prince of Wales's International Sustainability Unit, 'Tropical Forests: a Review', (April 2015) <http://www.pcfisu.org/wp-content/uploads/2015/04/Princes-Charities-International-Sustainability-Unit-Tropical-Forests-A-Review.pdf> [Accessed 9 Nov 2015].

⁸ <https://www.cbo.gov/publication/426876> [Accessed 9 Nov 2015].

⁹ The Prince of Wales's International Sustainability Unit, *ibid.*

Against that kind of backdrop, the difference between ‘zero deforestation’ and ‘zero net deforestation’ may not seem all that important at first glance. But it’s crucial to the current debate. WWF has highlighted a number of potential problems arising from a narrow and over-strict application of ‘zero deforestation’:

- An exclusive focus on halting forest conversion might mean less attention is paid to redressing harm caused by past forest conversion (e.g. resolving social conflicts and compensating for past violations of customary land rights; restoration or compensatory conservation actions).
- Risk-averse, responsible companies could withdraw from high forest loss regions, allowing the entry of less responsible actors prepared to operate without adequate forest safeguards to supply less discerning markets.
- An exclusive focus on deforestation might mean that less attention is paid to forest degradation and forest management practices to prevent degradation.
- A wasteful investment in new stakeholder platforms, standards and verification systems could occur if deforestation-free initiatives by-pass, rather than build on, credible certification standards and their systems for stakeholder participation, auditing, chain of custody, control of claims and handling of grievances.

It’s also clear that ‘zero deforestation’ has been interpreted by many key players in both Indonesia and Malaysia as ‘zero development’. The recent establishment of the Council of Palm Oil Producing Countries (CPOPC) by the Indonesian and Malaysian Governments demonstrates how significant such concerns have become in both countries. (See Part 2.)

The Council’s remit is primarily to improve cooperation between big growers in both countries, to help stabilise prices and to promote the industry in key export markets. But it also wants to persuade those companies in both countries to re-think their ‘no deforestation’ pledges (as articulated, for instance, in the Indonesian Palm Oil Pledge (IPOP) and in the Sustainable Palm Oil Manifesto), partly because of the damaging impact of these pledges on smaller companies and on the millions of smallholders across the region who are not able to comply with the obligations currently laid upon them, and partly because of the impact of these ‘no deforestation’ pledges on their economic development strategies.

If anything, the stand-off between the proponents of a ‘zero deforestation’ approach (primarily within the western NGO community) and the more pro-development voices inside the industry itself has become even more pronounced over the last couple of years. In between, all sorts of ‘mediating initiatives’, including the Roundtable on Sustainable Palm Oil and the Consumer Goods Forum, are still trying to broker some kind of shared understanding.

In August 2015, the Consumer Goods Forum brought out its own Sustainable Palm Oil Sourcing Guidelines to support companies in the work that they’re doing to achieve ‘zero net deforestation’ by 2020.

‘The Consumer Goods Forum follows the WWF definition of zero net deforestation. ‘Zero net deforestation’ can be distinguished from ‘zero deforestation’, which means no deforestation anywhere. It acknowledges that some forest loss could be offset by forest restoration. Zero net deforestation is not synonymous with a total prohibition on forest clearing. Rather it leaves room for change in the configuration of the land-use mosaic, provided the net quantity, quality and carbon density of forests is maintained. It recognises that, in some circumstances, conversion of forests in one site may contribute to the sustainable development and conservation of the wider landscape. However, zero net deforestation is not achieved through the conversion of primary or natural forests into fast growing plantations. Such conversion would count as deforestation in assessing progress against the target.’

As ever, the devil is in the definitional detail. There is overwhelming agreement about the need for a complete halt to the conversion of primary (or ‘old growth’) forests, and of secondary regenerating forests that have reached a mature state. But what is meant by ‘natural forests’ in the above Guideline? Unfortunately, the whole debate about deforestation has been dogged by such inexactitudes, and this is one area where the Technical Committee has set out to determine far more rigorous thresholds regarding the difference between High Carbon Stock and Low Carbon Stock, based on the level of net greenhouse gas emissions from biomass and soils that would result from their conversion to oil palm plantations.

This context is critical. The Signatories to the Sustainable Palm Oil Manifesto include growers, processors, traders and users of palm oil, who chose to set up this Science Study specifically to address one of its principal commitments: ‘to accelerate the journey to “no deforestation” through the conservation of High Carbon Stock (HCS) and High Conservation Value (HCV) areas, and no new development on peat, regardless of depth.’

It has required a substantive investment in the work of 50 scientists (brought together in the 17 Consultants’ Reports that are presented as an Appendix to the Independent Report itself) to drill down into what is, after all, one relatively small part of the relatively huge story about accelerating climate change. The starting-point has, of course, been to understand the impact from the emission of greenhouse gases caused by the conversion of rainforest to oil palm. But that has to be seen as part of the bigger story about the global production of edible oils, seen as part of the bigger story of food security and the competition for land, seen as part of the bigger story about the total contribution of agriculture to the emission of greenhouse gases, which in turn must be seen as part of the bigger story about total greenhouse gas emissions from all sectors.

The relatively small contribution of the palm oil industry to that bigger picture is no reason to 'go soft' on the campaign to minimise deforestation from further oil palm development. But it should encourage people living in relatively affluent countries in the rich world, with some of the highest per capita carbon footprints in the world, to think less censoriously about people living in significantly less affluent countries, with some of the lowest per capita carbon footprints in the world. And to think even less censoriously about people living in the world's poorest countries, with next to no carbon footprint at all, who are intent on converting some of their still extensive forests into various agricultural crops – including oil palm. On the ground, poverty will continue to drive continuing degradation of forests until the needs of local communities are properly met.

That's why the recommendations from the Technical Committee (see box on Page 23) have not gone down the 'no deforestation' line, but are located unapologetically within a 'zero net emissions' (or 'no net loss') framework. In fact, as they say:

"Neither the HCS Approach" nor our own HCS+ methodology completely prevents deforestation (as in 'zero deforestation'), but they both aim to reduce it significantly. Experience over the last 20 years has taught us that no amount of high-level declarations will protect forests on the ground unless and until local people and communities can see their own economic interests and historic entitlements are better met through forests being set aside and protected for the long term, rather than cut down for short-term gain."¹⁰

Framing the challenge in terms of 'zero net emissions' rather than 'zero deforestation' is certainly timely. The all-important Conference on Climate Change in Paris, in December this year, is seeking to secure agreement from countries on achieving an appropriate timetable for a 'zero net emissions economy'. Ultimately, all sectors of the economy will need to demonstrate their ability to deliver continuing prosperity within that overarching constraint; for the oil palm industry to be the first to demonstrate such intent within the agricultural sector would be a strikingly impressive commitment.

It must also be clear to everyone involved in this debate that the only way to protect the world's remaining rainforests is for relevant nation states (or regional/provincial jurisdictions) to legislate for such an outcome. However good their intentions may be, voluntary 'no deforestation' commitments signed up to by progressive non-state actors, from both the private sector and civil society, will only ever have a limited impact.

In a country like Indonesia, that means reconciling continuing efforts to address rural poverty with the need to minimise deforestation – primarily through changes in land use policy. Indonesia has recently merged two ministries (Environment and Forestry) as a signal of intent in amending current land

use policies, and is moving towards a 'zero net emissions' approach. A number of Indonesian provinces are now actively exploring what such an approach would mean, from a much more integrated land use perspective. (See Page 27 in Section 2.)

Integration has been a preoccupation of all those involved in this Study from the start: integration of environmental, economic, social and governance issues; integration with existing tools and methodologies (HCV, ESAs, FPIC etc); and integration with other initiatives seeking to resolve some of these complex issues, particularly the HCS Approach.

Discussions have been ongoing between representatives of the High Carbon Stock Approach and the Steering Committee for this Study since its inception, and there is now a very engaged process under way to secure as full a convergence as possible between the two methodologies. (For further details of this convergence process, see the final chapter of this Overview Report.) Responsibility for securing that kind of convergence must now pass to those at the forefront of these discussions – in the RSPO, in the High Carbon Stock Approach, amongst the Signatories of the Sustainable Palm Oil Manifesto, through the Consumer Goods Forum, and so on.

The reality is that this Study is just the latest step in a complex process, not some kind of 'done deal'. And that's hardly surprising. Ultimately, many of these issues will have to be resolved by governments, incorporating today's emerging consensus about High Carbon Stock forests into national legislation. It is clear that ignoring this all-important role of government has not helped in seeking solutions on the ground regarding HCS forests.

Progressive palm oil companies, the Roundtable on Sustainable Palm Oil, other private sector parties, international NGOs and consumer campaigns in the rich world, have all succeeded in forcing the pace over the last few years. But what is now so urgently needed is leadership from the governments of all those countries where the palm oil industry is a major player. Without unambiguous legislative foundations, and a determination to enforce whatever regulations are put in place, it's difficult to see how the palm oil industry will ever be free of the kind of controversies that have flared up so frequently over the last decade or so.

The Tropical Forest Alliance 2020 (a public-private partnership) was set up specifically to help broker jurisdictional approaches to reducing tropical deforestation relating to key agricultural commodities – including palm oil. We hope it will now take forward its work on palm oil (in both Indonesia and West Africa) fully informed by the methodology and recommendations emerging from this Science Study.

** The HCS Approach is the name used for a multi-stakeholder initiative set up to promote the use of a 'no deforestation' methodology first developed by Greenpeace, The Forest Trust and Golden Agri Resources (GAR) in 2012. This methodology permits the clearing of small patches of forest as part of a more integrated land use approach.

¹⁰ Raison, John, et al, *ibid*.

In the same way, we hope that the Consumer Goods Forum will now work with both the HCS Approach and the Signatories to the Sustainable Palm Oil Manifesto to align the recommendations of this Study with its own commitment to 'zero net deforestation'. Consumers in Europe and the US are interested both in the environment and climate change, and in the wellbeing of those involved in the supply chains of critical commodities such as oil palm.

Such initiatives mark an important stage in the history of what has been, by any standards, a hugely successful industry. In essence, this Study is all about a new business model for an industry that has generated extraordinary wealth over the last 50 years – but at too high a price environmentally, and with too inconsistent a record in terms of 'sharing the value' with employees, smallholders and local communities. That old model (with the industry often mired in controversy, driven from one shock-horror NGO exposé to the next) has had its day, as more and more companies seek to meet higher social and environmental standards across their entire operation.

It's that understanding which gave rise to the Sustainable Palm Oil Manifesto, the Signatories to which have already adapted to the expectations of its customers and stakeholders to a degree that is insufficiently recognised by many commentators. Those Signatories to the Manifesto have also made a commitment on behalf of all those involved in their supply chains, including all suppliers to their mills and refineries.

The industry now has the opportunity, over the next few years, to go those extra miles, to help move the whole industry (including all the smallholders involved in it) on to a genuinely sustainable basis, and thereby secure future prosperity both for the producer nations and for all those directly involved in the palm oil supply chain, particularly at the community level. The goal, obviously, is to ensure that the fruits of this extraordinary crop can go on delivering significant economic benefits, across a wide range of economic sectors, indefinitely into the future.

In effect, that will entail the practical implementation on the ground of the same high-level Sustainable Development Goals that world leaders signed off on in New York in September 2015, ensuring what has often been referred to as 'equitable access to sustainable development'.

For countries like Indonesia, Malaysia and Papua New Guinea, the oil palm industry has already played a critical part in securing economic development, and many other countries (particularly in West and Central Africa and in South America) are looking to the oil palm as part of their own 'right to development'. But all future oil palm development will need to be done on a very different basis, with a far stricter adherence to existing standards already promoted through the Roundtable on Sustainable Palm Oil (particularly FPIC and participatory mapping), and a readiness on the part of leading companies to share the wealth generated by well-managed oil palm plantations more equitably with those most directly affected by the physical presence of those plantations. In effect, what that means is a new Social Contract between developers, employees and local communities, properly encoded within national jurisdictions.

The principal conclusion of our HCS Study is that it is perfectly possible to minimise deforestation, through carbon neutral oil palm development, and to protect areas of High Conservation Value, in ways which simultaneously generate good returns for private sector interests, and enhanced economic wellbeing for smallholders and local communities alike. That should be the new vision for all those intent on securing a viable, genuinely sustainable future for the oil palm industry.

Recommendations from the Technical Committee

- For large companies and associated smallholders, the following elements of HCS+ should be implemented immediately for new oil palm plantation developments:
 - > Protect High Carbon Stock forests, and high carbon stock organic soils, using the thresholds provided;
 - > Protect High Conservation Value forests and other riparian set-asides;
 - > Achieve carbon neutral development;
 - > Make stronger efforts to promote positive socio-economic outcomes, and to measure and report effectiveness.
- Within three years, the full HCS+ methodology should be refined and fully implemented, facilitated by learnings from comprehensive field studies evaluating the HCS+ methodology in diverse forest systems in differing countries. These trials should explore mechanisms to bring independent smallholders within the HCS+ sustainable development framework.
- Government support will be critical to achieving this. Making the protection of HCS forests a requirement for certification under the RSPO, and as a part of a purchasing policy for large companies, will also be important steps.
- The HCS+ methodology focusses on concession-level development, but governmental planning of land use at a larger spatial scale would produce greater overall benefits. This involves establishing conservation and development goals at much larger scales, and then allocating and managing land to achieve those objectives. Governments (or relevant state/provincial jurisdictions) must lead such planning, which will be guided by national priorities and goals, by working with all relevant stakeholders, including business, NGOs and communities.

(See Page 42 of the Extended Summary that follows.)

Section 2: Addressing Poverty, Protecting Forests: Managing the Trade-Offs

In producing its Independent Report, the Technical Committee has been acutely aware of the challenges referred to in Part 1. Its recommendations have emerged from consideration of many different factors, taking full account both of critical ecological issues (biodiversity, protection of water quality, soil fertility and so on) as well as a wide range of socio-economic concerns, both at the macro level (as they relate to national and regional prosperity) and the micro level, in terms of local communities and indigenous people. It's only possible to come up with meaningful recommendations on carbon (as in defining exactly what is meant by High Carbon Stock forests) if they're part of a much broader approach to sustainable palm oil in the round, taking into account social, economic and governance issues.

A huge amount of work has gone into those socio-economic issues, and the resulting HCS+ methodology is largely based on insights from the various consultancy reports commissioned as part of the overall Study:

- Atkinson, P. 'Palm oil in Liberia: Missed opportunities and second chances'.
- Ayodele, T., et al. 'Nigeria: A smallholder case study'.
- Colchester, M., et al. 'Respecting rights and securing livelihoods in conserving 'High Carbon Stock' forests'.
- Gillespie, P. & Harjanthi, R. S. 'Indonesian oil palm smallholders and High Carbon Stock: Considerations to avoid errors of the past'.
- Kasryno, F. 'The economic impacts of palm oil in Indonesia'.
- Khor, Y.L., et al. 'The Felda case study'.
- Suksuwan, S., et al. 'Overview of existing regulatory mechanisms and relevant actors'.
- Zen, Z., et al. 'High Carbon Stock (HCS) and the socio-economics of palm oil: Towards improving the sustainability of the palm oil sector in Indonesia'.

It matters enormously that the rights and interests of local communities and of smallholders are positioned at the heart of efforts to reduce and eventually eliminate the current levels of deforestation. As explained in Part 1, that makes it an imperative in a country like Indonesia to reconcile the Government's continuing efforts to address rural poverty with its stated intention of minimising deforestation and prohibiting any new agricultural development (for oil palm, rubber or forestry) on peatland.

Many of those rural poor in Indonesia are oil palm smallholders – roughly four million of them. As Rizal Ramli, Indonesia's Coordinating Minister for the new Council of Palm Oil Producing Countries (CPOPC), said back in October:

“Despite contributing 40% to the world's palm oil production, smallholders lack the capacity to meet standards set out in existing sustainability conventions, and thus their inclusion has been greatly limited. As the global consumer market raises its demand for sustainable products, the exclusion of these smallholders from the global production chain will only continue to rise. CPOPC will aim to provide a more encompassing sustainability model for smallholders. It must be emphasised that the better integration of smallholders within the global production chain will not lower internationally accepted sustainability standards. On the contrary, the new convention will seek to provide smallholders with better guidance on how to implement the industry's best production practices.”

This provides a powerful reminder of just how important it is to pursue wholly legitimate concerns about deforestation within a wider socio-economic context. The vast majority of the tens of thousands of fires that caused the horrendous haze of pollution earlier in the year were not lit by large palm oil companies, but either by individuals and communities, many of which are still facing severe economic hardship.

We've taken on board that challenge (of improving socio-economic outcomes for local communities and smallholders) as a critical part of the Study. Over and above what is already required through the RSPO's New Planting Procedures and the FPIC methodology, we believe companies should be thinking in terms of a new 'social contract':

“The HCS+ methodology recommends that transparent negotiations leading to a mutually agreed social contract should become part of standard operating procedure for all companies where this is not already the case. This will ensure that social infrastructure provision becomes a more predictable aspect of company engagement with communities, which can be audited and is not dependent on the differential abilities of communities to negotiate effectively. These social contracts should ideally cover all aspects of the relationship between companies and communities, including the terms of attached smallholder arrangements and any assistance to independent smallholders, as well as the terms of community access to environmental set-asides and their role in the management of these.”¹¹

This is obviously not a business-as-usual approach in comparison to conventional oil palm development. Big companies today need to 'renegotiate their licence to operate', both with local communities and smallholders, and with

¹¹ Raison, John, et al, *ibid*.

governments and regulators. There will of course be additional costs associated with this kind of 'value share' strategy, but the business case for accepting a higher cost base lies in the prospect of conflict-free, genuinely equitable and sustainable palm oil being available to serve both international and domestic markets, indefinitely into the future.

The Technical Committee has recommended that a new business model of this kind should be captured, in part, through a Palm Oil Welfare Index (POWI):

"The POWI includes four outcome measures of welfare: income generated from oil palm concessions; food security; access to clean water; and access to social infrastructure facilitated by the company (health facilities, schools, and electricity). These four measures are combined into a single metric. Data need to be collected to establish a baseline prior to oil palm development, and then collected periodically thereafter (every few years) using consistent methods in order to monitor welfare changes effectively."¹²

(See Page 36 of the Extended Summary that follows.)

There is one further socio-economic consideration arising from the implementation of the HCS+ methodology – and that concerns the socio-economics of forest protection. Forest protection will inevitably incur significant ongoing costs (especially when there are large set-asides to support carbon neutral development), but will also provide significant livelihood opportunities, including employment for local communities. I shall address some of the funding implications of this a little later.

We were all aware that the Palm Oil Welfare Index is only one way to measure socio-economic outcomes for local communities and smallholders. One alternative measure, for instance, that provides ready-made estimates of poverty, broken down to the provincial level, is the Oxford Poverty and Human Development Initiative. Its Multidimensional Poverty Index (MPI) uses ten different indicators which can then be used to assess the 'before and after' outcomes.

Beyond that is the whole discipline of traditional welfare economics, which could be used to evaluate the socio-economic impact of oil palm development. The Steering Committee overseeing the Study was fortunate enough to include Dr James Fry, of LMC International, author of the preceding chapter in this Overview Report. He drew colleagues' attention to a highly regarded paper by Layard, Marraz and Nickel¹³, using data from over 50 countries from 1972 to 2005, which estimated the best way to compare the welfare gains (or 'marginal utility', in economics terminology) from raising incomes for different beneficiaries. Applying their conclusions, it emerges that an extra \$1 for someone on a subsistence daily income of just \$1 has eight times the welfare benefit of an extra \$1 for someone earning \$5, and

18 times the benefit of the same \$1 for someone earning \$10.

"The great appeal of this approach is that it may be applied during the impact assessment of any project. As well as prior carbon stock, it should be possible to estimate accurately the number of workers and the increase in their average incomes that will emerge from the project. The same applies to the revenues generated for the government via taxes and for plantation owners, as well as for suppliers of inputs such as fertiliser. The same methodology applies directly to smallholders, whose incomes are the profits they earn on their oil palm plots."¹⁴

Dr Fry was keen to see if this kind of approach might allow for some kind of 'trade-off' between emissions from conversion of forest to oil palm, on the one hand, and welfare gains on the other. In other words, depending on demonstrating more substantive welfare benefits, could the threshold for defining HCS forest be set at a higher level?

"Maybe the best way in which to understand this is to suppose that there are two alternative projects, each with an identical loss of carbon stock per hectare. Imagine that one of these projects is in an extremely poor area, where the boost to incomes and standard of living is universally acknowledged to be very worthwhile, while the other is in a more prosperous region, with fewer clear, socio-economic benefits from the project. It seems certain that, given the choice, everyone will favour the first project. Will it be reasonable for an HCS+ methodology to take no account whatsoever of the extra socio-economic benefits, and assert that there is no amount of welfare gain that could compensate for the loss of even one tonne of carbon stock? Most people's answer to that question would almost certainly be 'no.'¹⁵

It has to be said that members of our Technical Committee were not persuaded by this alternative approach, primarily on the grounds that there was no sufficiently rigorous mechanism for consistently assessing this kind of trade-off. Moreover, there could be no a priori guarantee that any new oil palm development would end up delivering the socio-economic benefits that were hoped for.

They felt it would, however, be useful for assessing the best locations for new oil palm development, once it had been established that all those locations could be developed whilst still staying within the 75 tonne threshold. It obviously makes good sense to locate oil palm development where its welfare impacts can be maximised.

For those who are interested in these crucial socio-economic concerns, Dr Fry has produced for the Steering Committee a very detailed paper, 'Socio-Economic Considerations in HCS+'. In shaping that approach, Dr Fry engaged with

¹² Raison, John, et al, *ibid*.

¹³ Layard, R., Mayraz, G., and Nickell, S.J., 'The Marginal Utility of Income' – revised version SOEPPapers on Multidisciplinary Panel Data Research, Deutsches Institut für Wirtschaftsforschung, Berlin, April 2008 <http://www.diw.de/soeppapers>

¹⁴ Fry, James. 'Socio-Economic Considerations in HCS+'

¹⁵ Fry, James, *ibid*.

all the major growers on the Steering Committee, via a formal questionnaire, to provide data in order to calculate prospective socio-economic benefits from new plantations versus their impact in terms of deforestation and loss of carbon stock. That paper can be found on the LMC website (www.lmc.co.uk) or the High Carbon Stock Study's own website (<http://www.carbonstockstudy.com/resource-centre/key-documents>).

For many people concerned primarily about putting an end to all deforestation just as fast as possible, much of this may seem somewhat irrelevant. But it remains the critical concern for countries still confronted by significant challenges in terms of rural poverty, and is particularly critical in densely forested countries (such as Gabon, Liberia and elsewhere in West and Central Africa) or certain regions in Indonesia.

The principal case study undertaken by the Technical Committee was in Gabon, a country which still has more than 85% of its land in forest, and has ambitious plans to address food security and rural poverty issues through a programme of agricultural diversification, including up to 500,000 hectares of oil palm. (Reference to case study in the Independent Report.)

In Liberia (which still has around 45% of its land under forest cover) the need for rural development is even more compelling, after years of devastating civil war and a slow economic recovery cruelly cut short by the recent Ebola outbreak – which has still not been finally eliminated.

Having seen for myself the poverty in both these countries, I would argue that their right to use some of their forested land for agricultural development (including some oil palm) is indisputable. In Gabon, there may be some prospect for alternative economic strategies (including eco-tourism), but in Liberia the options are distressingly few and far between. In both these countries (and in other very poor, densely forested countries or regions), a strict 'zero deforestation' approach seems both inhumane and potentially 'colonialist' in its overall approach.

As we discovered in the course of our Study, no-one has yet come up with a convincing answer to these issues in densely forested countries. As part of the convergence process, both the Signatories to the Sustainable Palm Oil Manifesto (as 'owners' of the Science Study and the resulting HCS+ methodology) and representatives of the HCS Approach will be carrying out further work in this area.

The Technical Committee recognises that further work needs to be done to tailor the HCS+ methodology for countries with high forest cover. Although it does not reference any specific trade-off as such, the recommendation of a slightly higher threshold for defining High Carbon Stock (set at 75 tonnes of carbon per hectare, which would permit the conversion of some young regenerating forest) is a de facto acknowledgement that this minimised level of deforestation can indeed be justified by the potential socio-economic benefits that will accrue from new oil palm developments done in the right way.

And what 'done in the right way' means, in essence, is the following:

- Strengthening the auditing process and metrics to ensure strict compliance with a threshold of 75 tonnes of carbon per hectare;
- Use of carbon mapping techniques that can reliably distinguish between forest above and below that threshold;
- An obligation to ensure that all new developments are carbon neutral (ie with 'zero net emissions' over the concession area as a whole, or between concession areas managed by the same company);
- Strict compliance with the RSPO's existing requirements, including participatory mapping and Free Prior and Informed Consent;
- An unambiguous commitment to sharing more equitably the value created through efficient oil palm plantations, with employees, smallholders and local communities; and
- A commitment to monitor all socio-economic interventions through the new Palm Oil Welfare Index (POWI).

This represents an extraordinarily demanding set of obligations for even the biggest palm oil companies today. As the Steering Committee has commented in its response to the Independent Report from the Technical Committee:

"We believe that the proposed HCS threshold of 75 tonnes of above-ground carbon per hectare, which rules out any conversion of forest above that threshold, will make new oil palm developments very challenging in many parts of the world. However, we also understand the scientific analysis that supports this figure."

Moreover, the Steering Committee goes on to remind people that "one of the three Pillars of sustainable oil palm development highlighted by the HCS+ Study is economic viability. Practical implementation of HCS+ requires verification of its cost-effectiveness through testing and field trials in varying environments and landscapes."

At a time of very low prices for palm oil, this emphasis on cost effectiveness is entirely reasonable. It will indeed need to be tested to ensure that palm oil companies will be able to finance the recommended HCS+ methodologies (carbon neutral development, the Palm Oil Welfare Index (POWI), the protection of set-aside forests from further encroachment, and so on) on top of their existing obligations under the RSPO's New Planting Procedures. Smaller companies will find that very difficult, and smallholders will find it impossible. Even big companies will struggle to take on the kind of forest protection obligations (as entailed in the carbon neutral approach) on an indefinite basis.

All of which points to the need for some additional source of funding from the international community to make this aspect of the HCS+ methodology viable. The well-established rationale for this remains strong: if developing

and emerging countries are no longer able to convert their forests into agricultural crops, in order to avoid the emission of greenhouse gases and to protect biodiversity, then wealthier countries should be prepared to 'compensate' them proportionately for the 'profits forgone' by keeping the carbon locked up in the forests rather than causing it to be released by converting to agricultural crops.

That was the thinking behind REDD – Reducing Emissions from Deforestation and Degradation – and its successor programme, REDD+. But after many years of often very circular discussions and negotiations, the whole REDD+ mechanism is now at risk:

"The early vision that REDD+ would deliver large-scale compensation to those developing nations that succeed in reducing their greenhouse gas emissions from deforestation and forest degradation must be re-examined. After six years of negotiations and experimentation, the compensation mechanism has not materialised at scale. Many of the political leaders from both developing and industrialised nations who made courageous and politically risky decisions to put REDD+ into practice are frustrated by the lack of deeper financial commitments to REDD+. Indigenous peoples and traditional forest communities have participated in numerous dialogues on REDD+, but tangible benefits for their communities are virtually non-existent. Farmers and livestock producers have seen few or no benefits for the steps they've taken to forgo deforestation and reduce their emissions."¹⁶

This frustration led to the idea of establishing REDD+ schemes at the jurisdictional level – state, provincial or regional – aimed at improving the livelihoods of indigenous and other low-income rural groups, whilst reducing emissions of greenhouse gases and conserving biodiversity, soils, water and other 'ecosystem services'. The essence of this approach is that it's unequivocally about responsible economic development – or 'low-emission rural development':

"Low-emission rural development must be defined broadly if it is to garner deep, durable political support. It should include the steep reductions in deforestation and forest degradation that are the focus of REDD+. But it should also improve rural livelihoods, create jobs, improve services, increase market access and investment, and protect and restore natural capital. All of these aspects of rural development are within reach in many tropical nations."¹⁷

For me, this is the missing element in a lot of the debate about REDD+. Too narrow a focus on reducing deforestation (in terms of hectares of forest lost) has ignored the uncomfortable reality that forest (even forest that has been formally designated and set aside as High Conservation Value or High Carbon Stock) will continue to be degraded through constant encroachment – unless such schemes simultaneously deliver economic development for communities and the rural poor. In other words, the emphasis now should be on Reducing Emissions from Deforestation and Degradation through Low Emissions Rural Development.

This is particularly relevant in Indonesia. The haze arising from the worst ever 'burning season' this year has re-focused attention on how best to work with communities and smallholders to restrict this kind of horrendous economic, environmental and health-related damage. The Indonesian President has repeated his strong intent to stop further development on peatland, but his principal concern is still to improve the economic wellbeing of Indonesian's four million smallholders and other farmers.

His Government is also keen to persuade large palm oil companies to do much more to help smallholders – not just the 'attached' smallholders they are already responsible for, but independent smallholders in the vicinity of their plantations. At the most recent session of the Roundtable on Sustainable Palm Oil in Kuala Lumpur in November, Sime Darby committed to support all independent smallholders up to five kilometres from the boundaries of their concession areas in Indonesia – in effect, to create fire-safe zones by helping them clear their land mechanically rather than by burning. It is hoped that other big companies in Indonesia will now follow suit.

But there's now a growing consensus that more permanent solutions can best be implemented at the provincial level. There are a number of Indonesian provinces already committed to more integrated land use strategies – such as South Sumatra's new Spatial Plan – in which any new oil palm development will have the highest social and environmental conditions 'baked in' from the start. Central Kalimantan has been designated as a REDD+ pilot province, adopting the target of reducing deforestation by 41% by 2020 – in line with Indonesia's overall national target. Other initiatives are under way in Aceh, East Kalimantan, West Kalimantan, Riau and Papua – the latter being the focus of particular attention as one of the poorest and most densely forested provinces of Indonesia.

The Malaysian state of Sabah wants to go even further, pursuing a strategy to ensure that all palm oil from its plantations and smallholders can be exported as Certified Sustainable Palm Oil under the RSPO's rules.

There are many organisations now intent on supporting these approaches, including national governments like the USA and Norway, and various UN agencies. The UNDP is particularly well placed to play an influential role in Indonesia through its Sustainable Palm Oil (SPO) initiative. This aims to develop national and provincial capacity to promote and scale up sustainable palm oil by strengthening smallholder farmers, supporting policy reform, and reducing deforestation through public-private partnerships. And I've already mentioned the important work of the Tropical Forest Alliance (see Page 22 in Part 1).

We believe that all these jurisdictional approaches open the way for the kind of conflict-free, carbon neutral oil palm development which the Technical Committee's Independent Report is advocating. The focus of the HCS+ methodology (at concession level) is on 'zero net emissions', with a much stronger emphasis on enhanced socio-economic outcomes

¹⁶ Nepstad, D., et al, 'Re-framing REDD+', Amazon Environmental Research Institute, 2012. dneptad@ipam.org.br

¹⁷ Nepstad, D., et al, *ibid*.

for communities and smallholders. But carbon neutral development of this kind depends entirely on the areas of forest that are set aside (as both High Conservation Value and High Carbon Stock) being properly protected and actively managed on an indefinite basis – and that’s where jurisdictional REDD+ schemes will need to be established.

Similar approaches are now being actively advocated by organisations such as Conservation International, and a number of projects are already in place under the auspices of a Norwegian programme funding Jurisdictional REDD+ approaches in Costa Rica, Brazil, the Democratic Republic of Congo and Peru.

Peru is pioneering a number of jurisdictional REDD+ schemes, including:

- The Madre de Dios scheme has successfully protected around 100,000 hectares of critical rainforest since 2009. The success of the scheme has depended on cooperation with local communities most directly affected; more than 400 people are now directly employed through the project, receiving training in forest management, safety and social issues – all funded by carbon credits purchased through the voluntary carbon market under the Verified Carbon Standard.
- the Alto Mayo Protected Forest (AMPF), in the San Martin region, was the world’s first verified REDD+ project in a formally protected area. The AMPF was being seriously encroached on by illegal loggers and migrants, but also by local coffee farmers desperate for new land. A host of conservation agreements (brokered by Conservation International) have ensured that local communities receive technical assistance, efficient cookstoves and access to other services in return for their commitment to manage the land properly and to protect the forest. Since 2012, this project has avoided emissions of more than 3 million tonnes of CO₂.

There is a growing sense of confidence in Indonesia that these jurisdictional approaches could break the log-jam in accessing the \$1bn committed by Norway as part of its commitment to REDD+ initiatives. Most REDD+ schemes to date have failed to incorporate farmers and other parties involved in forest degradation, and have done little to address often contradictory agricultural laws.

In a new paper (‘Zero Deforestation Zones: The Case for Linking Deforestation-Free Supply Chain Initiatives and Jurisdictional REDD+’¹⁸), the Environmental Defense Fund in the United States has emphasised the importance of “leveraging synergies between Jurisdictional REDD+, private sector initiatives, and governmental laws and regulations. Companies would source commodities that meet their deforestation commitments from jurisdictions implementing REDD+ programmes, government monitoring systems, and functioning private sector initiatives.”

Whilst I may differ with the use of the terminology of ‘Zero Deforestation Zones’ (on the grounds of both impracticality and inconsistency: “Even indigenous groups with sustainable

land uses clear forests for swidden agriculture”), its practical recommendations are very much in line with those of the HCS+ methodology:

“Our definition focusses on zero net emissions from deforestation across a jurisdiction. Each jurisdiction has different levels of deforestation and government capacity, so the exact definition of ‘zero deforestation’ should be adapted to the context of the jurisdiction, following common guidelines based on REDD+ methodological frameworks and existing public and private commitments. Jurisdictions should account for both deforestation and degradation, as well as conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks.”¹⁹

Finally, the Consumer Goods Forum is also getting involved in these jurisdictional approaches. Having committed back in 2010 to achieving ‘zero net deforestation’ in their supply chains by 2020, it’s struggled to provide sufficiently robust guidelines to its members on operationalising this commitment. (See Page 21 in Part 1.) In a new initiative,²⁰ a coalition of some of the most influential members of CGF is now re-emphasising the critical role of governments: “We know that the next stage in the journey to tackle deforestation is to create solutions at a jurisdictional (whole landscape) level to manage the many causes of forest loss together rather than through individual, isolated initiatives.” And in a move that will certainly encourage initiatives like those referred to above in Sabah, or Central Kalimantan and South Sumatra:

“We come together to signal our individual commitment as companies to prioritise our commodity sourcing from areas that have designed and are implementing jurisdictional forest and climate initiatives. This will bring together the power of global agricultural supply chains and strong government commitment to reduce greenhouse gas emissions from forests and other landscapes while advancing economic development. This ‘Produce and Protect’ approach represents a significant new kind of public-private partnership in addition to and supportive of our current commitments to net zero deforestation. It reflects our commitment to reduce or eliminate deforestation from our supply chains, while benefitting from strong government commitments, significant public investment, and lower-risk sourcing.”

In a way, this confirms what is now clear to all: lasting solutions to the controversies still surrounding the palm oil industry need to be driven by governments, operationalised at the jurisdictional level, supported by private sector interests both within and beyond the industry itself, and be based on the twin imperatives of minimising emissions of greenhouse gases from deforestation and degradation while simultaneously improving conditions for millions of the rural poor in key countries.

We firmly believe that the HCS+ methodology, developed by the Science Study’s Technical Committee over the last 18 months, and strongly supported by the Signatories to the Sustainable Palm Oil Manifesto, will become a critical part of helping to deliver those solutions over the next few years.

¹⁸ Meyer, C., and Miller, D. ‘Zero Deforestation Zones: The Case for Linking Deforestation-Free Supply Chain Initiatives and Jurisdictional REDD+’ in *Journal for Sustainable Forestry*, Volume 34, Issue 6-7, (2015) <http://www.tandfonline.com/doi/abs/10.1080/10549811.2015.1036886> [Accessed 23 Nov 15].

¹⁹ Meyer, C., and Miller, D., *ibid*.

²⁰ Produce and Protect Statement (Dec 2015) http://tfa2020.org/wp-content/uploads/2015/12/01122015_Produce-Protect-CGF-statement.pdf [Accessed 1 Dec 15].