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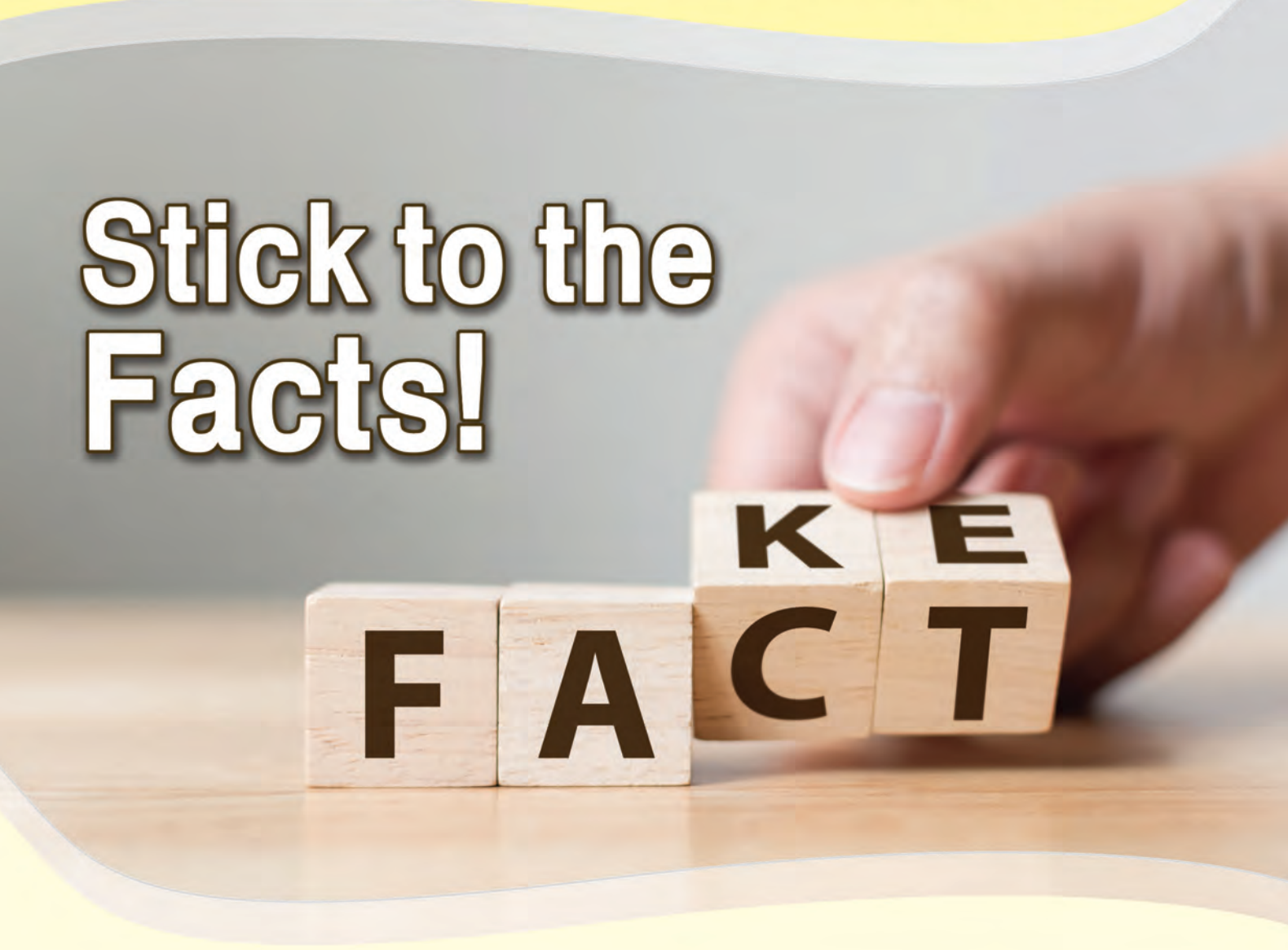

Focus on Palm Oil

Global Oils & Fats Business, a quarterly news magazine with a circulation of 25,000 copies worldwide has been reporting on the oils and fats industry since 2004 and continues to inform decision makers, regulators, health professionals and those involved in the oils and fats business on key issues widely discussed in the industry.

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EDITORIAL

The truth about ILUC determinations

The use of fossil fuels for energy and transportation is a major cause of climate change. Biofuels are being used as a replacement, as one of the solutions to abate climate change. The EU and the US must be commended for leading the world in using biofuels for transportation. Both have clearly specified policies, with the Renewable Fuel Standard established in 2005 by the US and the Renewable Energy Directive (RED) set up in 2009 by the EU. Currently, the RED is undergoing revision as RED II.

The cultivation of crops for food, animal feed and biofuels needs land. This leads to land-use change, which can be classified as Direct Land-use Change (DLUC) and Indirect land-use Change (ILUC). Both result in either a gain or a loss of carbon stock and greenhouse gas (GHG) emissions, which have effects on climate change and must be accounted for.

At present, biofuels are mainly derived from vegetable oils which are traditionally used for food and animal feed. Some examples are rapeseed, palm oil and soybean oil. When these sources are channelled toward producing biofuels, a shortage for food or animal feed is created. A series of complex crop substitution and land displacement takes place, resulting in ILUC.

According to the RED, ILUC occurs when cropland is used for biofuels feedstock production, thereby forcing food, feed and materials to be produced on new cropland elsewhere. It may happen near or far away from the place of origin. This is unlike DLUC, when new cropland is created for production of biofuels feedstock. It can be observed and can be accounted for in Life Cycle Assessment.

The problem with ILUC is that it cannot be similarly directly observed and measured, thus leading to great uncertainty over whether a particular land-use change is absolutely and without doubt an effect caused by biofuels demand. As such, econometric models are used to measure the ILUC effects. The Global Trade Analysis Project Model is used in the US, while the Computational General Equilibrium Model and Global Biosphere Management Model are used in the EU. Feedstock with high ILUC emission values will not be accepted as sustainable feedstock in the EU and US. Such reasoning sounds logical and proper.

The difficulty in implementing this rule is that ILUC emission values have been found to be extremely variable. MPOC confirmed this by conducting a study on rapeseed and palm oil biofuels using information in two recent European Commission Reports – Woltjer et al. (2017); 'Study Report on Reporting Requirements on Biofuels and Bioliquids Stemming from the Directive (EU) 2015/1513' and Overmars et al. (2015); 'Estimates of Indirect Land-Use Change from Biofuels based on Historical Data'.

Based on data in Woltjer et al. (2017), ILUC values were found to be extremely variable, even within each biofuel type. ILUC emissions for rapeseed biofuels had a range from -115 to 241 g CO_2/MJ, while that for palm oil varied from 20 to >400 g CO_2/MJ. The average ILUC emission of rapeseed biofuels feedstock was lower than palm oil, with 65 and 83 g CO_2/MJ respectively. When only studies with paired comparisons of rapeseed and palm oil were selected, rapeseed and palm oil biofuels had almost similar ILUC emissions of 87.6 and 89.6 g CO_2/MJ respectively.

The results obtained from Overmars et al. (2015) showed a different picture. EU rapeseed biofuels feedstock had a higher ILUC emission than Malaysian palm oil, with values of 10.2 and 9.4 g CO_2/MJ. Thus, all the three possibilities of whether rapeseed biofuels feedstock has a lower, similar or higher ILUC emission than palm oil biofuels feedstock are available. Such gross inaccuracies show that ILUC cannot be used to determine biofuels feedstock sustainability.

It has been a decade or more since the concept of ILUC was mooted. Neither the EU nor the US has come up with the threshold value to distinguish between low and high ILUC biofuels feedstock. It further shows the weakness of using ILUC for this purpose.

While the US seems to have relented on pursuing the concept of ILUC, the EU is still hot on the issue. It is urged that the EU reflects deeply on this matter. MPOC strongly feels that it is time for the ILUC concept to be put to rest. Its implementation, based on inaccurate results, will not only affect trade but will also wrongly penalise farmers who grow crops for biofuels.

Datuk Dr Kalyana Sundram,
CEO, MPOC

Stick to the Facts!

... in seeking to end deforestation

A controversial Greenpeace film about the 'plight' of the orang utan in Indonesia and Malaysia completely ignores the reality on the ground and is actually counter-productive.

I HATE to have to say this but James Corden and Bill Bailey have allowed themselves to be duped by an unholy combination of NGOs and naïve retailers.

I'm referring, of course, to the controversy over a recent film made by Greenpeace to highlight the continuing plight of the *orang utan* in Indonesia and Malaysia, if land is cleared for new oil palm development.

It's now getting a huge amount of airtime, as Greenpeace offered the use of the film to British supermarket chain Iceland for its Christmas advert.

Greenpeace has a strong relationship with Iceland, the only UK retailer which has committed to phasing out the use of palm oil in all its own products by the end of the year, on the grounds that its CEO Richard Walker doesn't know how to tell the difference between certified sustainable palm oil and uncertified palm oil.

(By the way, it's not difficult, Richard. You just have to pay slightly more for the certified oil than for the uncertified oil – but then your customers wouldn't like that, would they? And it would be really good if you made sure that the 500 tonnes a month you need were certified as sustainable, not least because a lot of certified oil doesn't find a buyer at the moment, and is sold as uncertified oil!)

When they checked the film, the regulator of broadcast advertising intervened to stop Iceland from using the film on the grounds that it was "too political".

And that's because it was made by Greenpeace for specifically "political" reasons, with no requirement on it whatsoever to worry about being "fair, decent, honest and true".

This has prompted a massive social media campaign, supported by Corden, Bailey and dozens of equally ill-advised celebs calling for the Rang-tan to be "liberated" from this wicked attempt to curtail freedom of speech.

To be honest, that's a laugh. The film is unashamedly propagandistic and emotional – as John Sauven, CEO of Greenpeace UK, has explicitly acknowledged.

It focuses on a young girl discovering a baby *orang utan* in her bedroom after it had been driven out of his forest home. They both have huge, dark brown eyes. It's well-made, and effective – but deeply manipulative. Why?

- It implies that the oil palm industry is the biggest cause of deforestation anywhere in the world. It is NOT. Not by a long chalk.

- It implies that tens of thousands of *orang utan* are still being killed in Indonesia and Malaysia every year because of oil palm development. They are NOT.

- It implies that all palm oil, whatever it's being used for and whoever produces it, is responsible for the death of thousands of *orang utan*. It is NOT.

- It implies that responsible consumers will inevitably have to take their share of responsibility for the deaths of *orang utan* as a consequence of purchasing products which contain palm oil. They do NOT.

Four big, fat, completely mendacious implications. Greenpeace does a lot of good work on palm oil issues in all sorts of different ways, but the story of sustainable palm oil is a complicated one, and it is not helped by willful misrepresentations of this kind.

Bizarrely, Greenpeace knows this as well as anyone. Earlier in November, Greenpeace UK released a video which explicitly acknowledges that boycotting palm oil is the wrong thing to do; that switching from palm oil to other oils can be the wrong thing to do, since palm oil is so much more productive per hectare; and that "growing palm oil without deforestation is possible, and there are growers working that way".

It then turns up the heat in its campaign against Asia's leading agribusiness group Wilmar, but does so within the kind of proper contextual background that is so seriously absent in the Rang-tan film. Will the real Greenpeace stand up, please?

More than a million people have signed up to the Rang-tan campaign since then. But it would be so good if we could help deepen their awareness here, bearing in mind that:

1. By any measure you choose to adopt, more deforestation today is caused by beef, by soybean, and by maize, than by palm oil. Especially beef, which is responsible for 80% of deforestation across the Amazon, and 65% of total deforestation.

2. Boycotting palm oil is purposeless, as has been recently acknowledged by the International Union for Conservation of Nature – in that the world will still need cooking oils, and all the substitutes will cause more damage than palm oil does.

3. The reason for that is simple. Palm oil provides 35% of global edible oils and yet takes up only 10% of the total global acreage devoted to edible oils. It is so much more efficient than sunflower or rapeseed oil, let alone soybean oil, which is itself a massive driver of deforestation throughout South America.

4. The Roundtable on Sustainable Palm Oil has just incorporated strict "no deforestation criteria" into its basic principles and criteria, so there is now no excuse to go on arguing that RSPO certification does not help reduce deforestation.

At which point, I have to make a declaration of personal and professional interest.

In the first place, Forum for the Future does a lot of work with the oil palm industry, for which we are paid.

Our most important project is based in Indonesia where we're working with five large palm oil companies as well as a wide range of NGOs and international organisations to address complex labour rights challenges within the sector.

But this is also personal. I act as the independent sustainability adviser on behalf of Forum for the Future to Sime Darby Plantation – the largest producer of certified palm oil in the world.

I've watched Sime Darby Plantation in particular, together with other big players in the industry, incrementally get its house in order, in order to be able to sell genuinely sustainable palm oil in Europe and elsewhere, as certified by the RSPO.

None of these companies is perfect. Indeed, I remain a fierce critic of just how long it has taken to sort out some of the legacy issues. There are still far too many laggards in the industry, and a lot of environmental damage is still being done.

But to go on vilifying and demonising such a critically important industry, which continues to move forward on challenges like deforestation and better working conditions, makes no sense whatsoever.

The process of certification through the RSPO is indeed not perfect but it's the best way we have of sorting out the good stuff from the not-good-enough stuff – even if people like Richard Walker don't understand that basic reality.

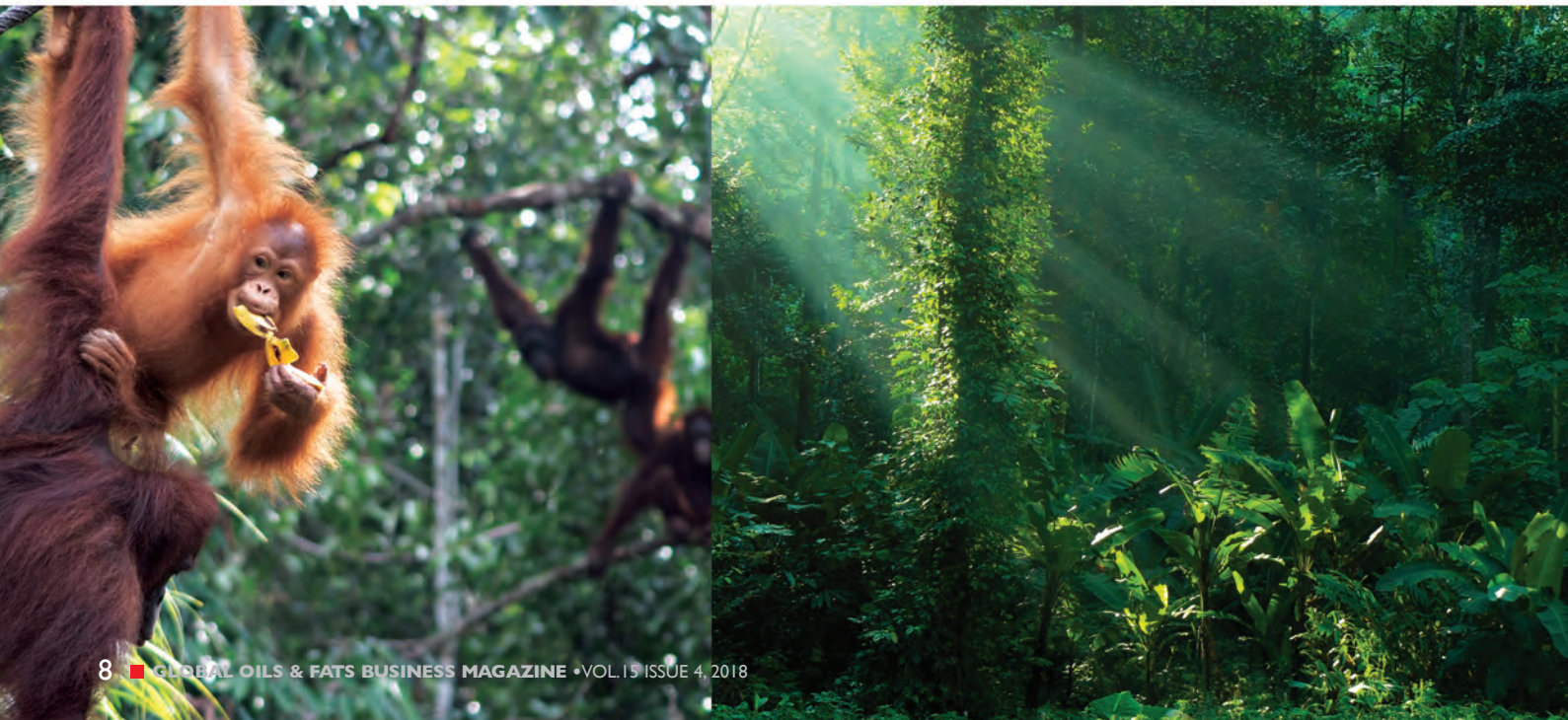
So don't give in to emotion here. Stick to the facts, difficult and messy as they inevitably are.

Just as you should support the good guys in the oil palm industry, and criticise the bad guys, so you should support Greenpeace in the good work it does, but criticise it when it gets it wrong.

This write up published on 22 November 2018 by Sir Jonathon Porritt in his blog (www.jonathonporritt.com) was in response to a campaign against the alleged refusal of the broadcasting authority to allow a Christmas TV advert by UK retailer Iceland, from being aired on mainstream channels.*

The advert, originally produced as an animated short story by Greenpeace UK and narrated by celebrity, Emma Thompson, tells the story of an orang utan 'forced from her forest home to make way for palm oil production'. Two other UK celebrities James Corden and Bill Bailey also joined the campaign to lift the alleged TV ban.

**Sir Jonathon Porritt is the Co-Founder of Forum for the Future, UK's leading sustainable development charity, with over 100 partner organisations including some of the world's leading companies. He is an eminent writer, broadcaster and commentator on sustainable development, as well as the Independent Sustainability Advisor to Sime Darby Plantation Berhad, the world's no. 1 producer of certified sustainable palm oil.*



PALM OIL – A HOLISTIC VIEW

Malaysia's newly-minted Minister of Primary Industries, the Hon. Teresa Kok, delivered the keynote address at the European Palm Oil Conference in Madrid, Spain, on Oct 4. Among the key points was that sustainability is more than about preserving forests.

"Judging from the presence of participants from many parts of Europe and Asia, this is indeed a hallmark platform for a balanced debate on the many challenges associated with palm oil today. It is encouraging to see various stakeholders present, and I am glad to be in your esteemed company.

In Malaysia, we are in the midst of creating a new, more dynamic and sustainable era supported by new governance policies, and with many areas being redefined by the current popular government. Among items with top billing is palm oil, a major commodity and a significant contributor to annual GDP.

The organisers suggested that my address should dwell on sustainability goals and challenges, not only within Malaysia and its palm oil industry, but also incorporating the United Nations Sustainable Development Goals (SDGs).

As a nation, we have already expressed our SDG commitments on issues ranging from climate change and poverty eradication to women's empowerment. On this note, I am proud to say that these goals are intricately woven into our palm oil industry.

Malaysia has been proactive about sustainability in the palm oil supply chain. One of our plantations was the first to achieve RSPO certification, in August 2008. Malaysia currently accounts for nearly 42% of global production of certified palm oil. This has been volunteered generously by industry members; but, despite our best efforts, the noise of anti-palm oil sentiments continues to ring loudly throughout Europe.

We have stepped up the game and are now marching towards the goal of mandatory certification of our entire palm oil supply chain by end 2019, using the Malaysian Sustainable Palm Oil certification scheme as the national standard. So, when the Amsterdam Declaration kicks in from early 2020, I hope you will look to Malaysian palm oil for your needs.

The SDGs do not mince words when they prioritise poverty eradication. In Malaysia, we could not imagine achieving this primary sustainability goal without palm oil. We have 650,000 small farmers who operate 40% or 2.3 million ha of the oil palm planted acreage of 5.8 million ha. This surprises most people, who assume that the Malaysian palm oil industry is run by business corporations.

Our small farmers depend on oil palm for their livelihood and to meet basic needs. They face a very grim future when NGOs like Greenpeace brand palm oil as 'dirty'. Many activists also have a tendency to tar all sources of palm oil with the same brush.

To the government, oil palm cultivation is synonymous with poverty eradication. Since Malaysia's independence in 1957, the poverty rate has fallen from over 50% to below 5%. According to the World Bank, less than 1% of Malaysian households live in extreme poverty.

We plan to support the communities and businesses that have made this a reality over the past 60 years. There is more to do. Thus we ask you, especially end users in Europe, to join us in the poverty eradication goals by using sustainable Malaysian palm oil.

How do we achieve this?

Please work with us to improve the productivity of small farms, and adopt small palm oil cluster certifications as part of your corporate social responsibility.

"We have 650,000 small farmers who operate 40% or 2.3 million ha of the oil palm planted acreage of 5.8 million ha."

When productivity increases within the small farmers' community, there will be little need to expand into new land for oil palm cultivation. I know that Europe is passionate about rainforests and their mega biodiversity. Being passionate alone will not save these forests – actionable activities will.

Malaysia is talking with the European community, and many positive programmes should fall in place soon. As such, I urge continuous support and collaboration from all – don't hamper our genuine efforts toward the sustainability of palm oil.

Commitmentto sustainability

I am proud to say that Malaysia is a world leader in sustainable palm oil production, environmental protection and successfully using oil palm cultivation as a tool to uplift rural communities out of poverty. What we are doing is to provide you with a certified sustainable palm oil supply chain, governed by not only Malaysian laws but also by those prescribed through international standards.

Good agriculture practices honed through a century of plantation management expertise is the norm among Malaysian oil palm growers. For example, they adopt Integrated Pest Management, which encourages the use of non-chemical pest control methods to preserve the environment. These investments, as well as new technologies and planting techniques, are progressively improving plantation yields while avoiding unnecessary chemical and environmental stress on planted areas.

Government regulations underpin the sustainability efforts. Open burning is illegal in Malaysia; under the zero-burning practice, old oil palm stands are felled, chopped and left to decompose in the fields. This ensures an environment that is free of transboundary haze and smoke pollution, a major concern for environment and climate scientists.

The industry has also committed to reducing its overall carbon footprint. A major step being undertaken is the adoption of methane capture technology – 92 methane capture facilities have been completed and over 150 more are in the planning or construction stage. Such technology will help reduce greenhouse gas emissions and ensure that Malaysian palm oil meets stringent environmental and sustainability standards.

Another priority for the government is to keep our commitment to preserve 50% of the land under forest. The Malaysian palm oil industry is focused on improving productivity and yields, rather than expanding land under oil palm. However, sustainability is about more than just forests. The United Nations' definition of sustainability is extremely clear: social and economic sustainability are on an equal plane with environmental sustainability.

So the government is also focused on supporting small farmers and their economic communities. This includes developing infrastructure, granting financial assistance where needed and, of course, protecting the ability of small farmers to earn a living.

High-level stakeholderengagement

Trade in palm oil is only one part of Malaysia's relationship with Europe. The relationship is strong, but it is to be hoped that this can become stronger still. The Malaysian-EU Free Trade Agreement has not made much progress in recent years. Attempts by the EU to phase out Malaysia's main commodity will not help. There is more trade and political cooperation that we can look forward to.

The European Parliament's aggressive efforts to phase out palm oil biofuels are of high concern for all in Malaysia – not only because of the negative impact it would have on our economy and in particular on our small farmers, but also because of the negative message it sends on sustainability.

Malaysian companies have done everything required of them, including meeting the onerous sustainability criteria set down by the EU. We also use the German ISCC and RSPO systems. Having met these demands, Malaysia was then threatened with the cancellation of all its palm-based products.

Nonetheless we are happy that we received support from some governments in the EU, including Spain. They recognised that the idea was in contravention of WTO rules and therefore refused to endorse it. The right decision was made by the Council of the EU and the European Commission: but it is still highly regrettable that Members of the European Parliament attempted to harm our small farmers by spreading inaccurate information and allegations.

There are misunderstandings in Europe. I read allegations that Malaysia is rapidly deforesting, destroying biodiversity and so on. This is certainly not true. I know there are many issues with the 'no palm oil label' in Europe. This may be heavily influenced by the broader negative environment that is driven by the EU institutions in Brussels and in member-states. All such actions are very damaging to palm oil's image in Europe.

I would like to hear your views on these issues and to have an honest discussion on how we can collaborate to solve this perception and problem. As I have said, Malaysia has a proven track-record of sustainability and we will continue with this agenda, no matter what transpires. If Europe chooses to phase out or restrict Malaysian palm oil, it would send a terrible signal. It would say to everyone in the developing world that investing in sustainability does not pay.

To redress the balance and to treat Malaysian palm oil more fairly, stakeholder engagements at a high level would be helpful. I hope we can establish a good working relationship. Malaysia is doing its part with our renewed commitment to sustainability and environmental protection. I humbly request you to support its good agricultural practices and sustainability efforts.

Spain, for example, is an important export destination for Malaysian palm oil and its products. From January to August 2018, it imported 259,701 tonnes of Malaysian palm oil, an increase of 46.8% compared to the corresponding period last year. We hope that the imports will continue to grow.

We also acknowledge the importance of ensuring that correct information about the oil palm industry is communicated to consumers. In this regard, I am pleased to share with you that we have published the *Pocketbook of Oil Palm Uses* in Spanish, with information on the Malaysian oil palm industry.

It covers sustainable practices of the industry; nutritional benefits of palm oil; versatility of palm oil for food, non-food and animal feed applications; and uses of oil palm biomass. Malaysia hopes that the information provided, and communication between producer and consumers, will continue to be enhanced for mutual benefit."

This is an edited version of the speech.

Does the RSPO Have a Future?

Costly criteria, inadequate returns

The Roundtable on Sustainable Palm Oil (RSPO) was established in 2004, in response to attacks on the industry on environmental and social grounds. Members include growers, traders, financiers and end users, as well as concerned NGOs. Its aim is to 'transform markets to make sustainable palm oil the norm' and to 'advance the production, procurement, finance and use of sustainable palm oil products'.

The objectives are admirable, but palm oil certified as sustainable by the RSPO constitutes less than 20% of world production, and users have failed to take up more than half the certified oil. Here, I give an outsider's view on the RSPO's development, and what the future may hold for the RSPO.

A set of Principles and Criteria (P&C) was adopted by the RSPO General Assembly in 2007, and has been revised twice since then (this paper was written before the 2018 revision was published). Individual plantations and mills are audited against these criteria and, if they meet the requirements, their annual production is certified as sustainable. RSPO membership is voluntary, but on joining, growers have to agree to a 'time-bound plan' to become fully certified. Palm oil users can buy certified oil, and mark their products as 'containing certified sustainable palm oil' (CSPO).

In 2009, the RSPO adopted a New Planting Procedure (NPP), which requires social impact, environmental impact, high conservation value (HCV) and greenhouse gas (GHG) assessments to be undertaken before a new development. Free, prior and informed consent (FPIC) by local communities to any development is essential.

For sustainable palm oil to become 'the norm' a major proportion of palm oil must be sustainably produced and, if the RSPO is to be the vehicle for this, the majority of producers should be members. The reality is that the certified area peaked at 2.77 million ha in 2015 (just under 20% of the global oil palm area), but has since declined. In 2017, the RSPO had 170 member-growers but only 76 were certified.

When the RSPO was established, growers expected that demand for CSPO would be high, and that it would therefore command a premium price. However, in 2014, the premium was only about US$2 per tonne, about 0.3% of the selling price. In 2016, 12.1 million tonnes of palm oil was RSPO-certified, equivalent to 18.3% of world production; but less than half (5.6

Table 1: Southeast Asia – Smallholders Certified as Sustainable by RSPO

	Certified area (ha)[1]	Total smallholder area (ha)	Certified (%)
Malaysia[2]	3,800	2,229,436	0.2
Indonesia[3]	181,600	3,078,000	5.9
Thailand[4]	8,900	940,000	0.9
Total	**194,300**	**6,247,000**	**3.1**

Sources:
[1] www.rspo.org, Nov 2017
[2] 2016, including Felda – www.mpob.gov.my
[3] From Corley & Tinker, 2016
[4] JH Clendon, pers. comm., 2017

million tonnes, 8.5% of world production) was actually taken up. Thus it appears that more than half of the CSPO would have incurred all the costs of certification, but had to be sold without earning even the very small price premium.

With certified area static or declining, and less than 10% of world palm oil production actually being sold as certified, the RSPO has not so far been very successful in transforming the market. Many companies have not joined because they see certification as a cost, without corresponding benefits. Costs have been estimated at US$4-10 per tonne of oil, much more than the current price premium. Several companies have claimed to see increased yields and improved profitability as a result of adopting the RSPO 'best practices'. However, these practices could be adopted and the improvements obtained without the costs of membership and certification.

Difficulties for smallholders

Globally some 40% of palm oil comes from smallholders, and smallholder development has been a major contributor to poverty reduction in many countries. The RSPO has developed specific smallholder certification procedures, but these were something of an afterthought to the P&C, and independent smallholders in particular are not well catered for. The RSPO has recognised this, and is working on a simplified standard. Worldwide, a total of 295,000 ha of smallholdings have been certified; the majority are in Southeast Asia but, as Table 1 shows, certified smallholders constitute only 3% of the total smallholder area in this region.

RSPO member-companies involved in 'nucleus estate' schemes are obliged to help the associated smallholders become certified, but many smallholders are not in such schemes. In Malaysia, over 40% are independent. In Thailand, the vast majority of the 300,000 smallholders are independent.

Independent smallholders are supposed to be covered by 'group certification'. This requires the formation of a group or cooperative, with the RSPO specifying that there must be a group manager who is responsible for certification. This adds a significant cost, but the RSPO operates a 'smallholder support fund', and companies buying smallholder fruit may contribute. One study found that independent smallholders in Malaysia were keen to participate in a certification scheme, provided that there was a price premium and the costs were reasonable.

Problems with certification for independent smallholders in Indonesia include lack of land titles, difficulty obtaining good quality seedlings, safe storage and use of pesticides, lack of finance for fertilisers and of knowledge about best use, and inadequate documentation.

The NPP is a significant problem for independent smallholders, as it requires social impact, environmental impact, HCV and GHG assessments. The assumption is that smallholders will be in organised groups or in company schemes, in which case the group manager will arrange the NPP, but not all smallholders are organised in this way.

The NPP must be applied to conversion from other crops (e.g. rubber), as well as from forest. This seems quite unnecessary; any adverse effects of replacing a few hectares of rubber with oil palm will be trivial. An area limit could relieve the majority of individual smallholders of the need to follow the NPP.

The supply chain

There are several ways in which CSPO can be supplied to the end user. Some users insist on 'identity preserved' (IP) or segregated oil, which is kept separate from uncertified oil throughout processing and shipment; this has additional costs. The Palm Oil Innovation Group (POIG) has added a requirement for all fresh fruit bunches to be from traceable sources; this is difficult or impossible for many mills processing smallholder fruit, and some may stop buying from smallholders.

The simplest alternative to IP oil is the 'book and claim' system, in which a producer receives a tradeable certificate for his oil. Palm oil users can buy certificates and can justifiably claim to be supporting sustainable palm oil, while buying oil in the open market; such oil is chemically identical to CSPO. This system would be ideal for smallholders, particularly if individual certificates were to be issued, rather than a single certificate for the group as at present. The individuals could sell their certificates, and buyers would be supporting identifiable smallholders. However, there is a view that describing anything other than IP oil as sustainable is somehow 'cheating', and consumers may favour products from segregated supply chains. Thus the main reason for a company to buy IP oil is public relations.

Criticism of the RSPO

The RSPO has been criticised for being too lenient with member-growers who fail to meet the criteria, and for lacking the ability to monitor its members' behaviour. There is a complaints procedure which allows third parties to object to infringements, and some producers have had their membership

suspended, particularly where land rights have been disputed. Perhaps the most important criticisms are that certification bodies have failed to identify unsustainable practices and that non-compliance by members is widespread, with some CSPO coming from recently deforested land. In some cases, the certifiers appeared to be colluding with plantation companies to disguise violations of the RSPO criteria.

NGOs have criticised the RSPO for being too lax but, conversely, some of the criteria are criticised by growers as misconceived or unnecessary. Even the most committed growers have become disillusioned by apparently senseless decisions, and are frustrated by the bureaucracy. For example, the complete NPP has to be followed even when converting to oil palm from another crop. There is no obvious logic to this; forest biodiversity and carbon stocks have already been lost. Economic sustainability is important, and if a grower considers that conversion to oil palm is in his economic interest, the RSPO should not prevent conversion.

Other certification systems

At least eight different sustainability standards have been applied to palm oil. Of these, the most important are probably the Indonesian and Malaysian certification systems (ISPO and MSPO), the POIG Charter, together with RSPO Next. The RSPO has had the important effect of provoking the development of ISPO and MSPO. ISPO certification is already a legal requirement for plantations in Indonesia, and the MSPO will be mandatory in Malaysia by end 2019.

The RSPO has the most comprehensive Social Impact Assessment requirements and the strongest measures for biodiversity protection. ISPO provides the least stringent protection for biodiversity, but the Indonesian government has imposed a moratorium on the clearance of primary forest. This does not apply to secondary forest, however, and there are claims that large areas of primary forest have been classified as secondary, and thus fall outside the moratorium. The RSPO gives the greatest protection of human rights and community livelihoods, and ISPO the weakest.

These differences will lead to criticism of the MSPO and ISPO, but a combination of compulsory certification and more 'grower friendly' criteria means that the ISPO and MSPO may have a more significant influence on the behaviour of the palm oil industry than the RSPO, whether or not the certification is accepted by NGOs and consumer countries.

A useful distinction can be made between certification systems and supply chain standards. The former are labelling schemes originating outside the supply chain, while a supply chain standard is a procedure that large users require their suppliers to follow. The POIG Charter for retailers, manufacturers and traders is essentially a supply chain standard. The aim is to 'break the links' between palm oil and deforestation, and human, land and labour rights violations. Human, land and labour rights are covered by the RSPO criteria, but the POIG Charter includes additional provisions, including a requirement for independent advice to local communities on the FPIC process.

The so-called link between oil palm and deforestation is actually quite tenuous; a study sponsored by the RSPO found that, in Malaysia, Indonesia and Papua New Guinea, only 4.2% of the expansion between 1990 and 2010 was at the expense of primary forest. There is often an interval of six to 10 years between forest degradation and oil palm planting, indicating that oil palm planting was probably not the initial reason for deforestation. The high conversion percentages from forest to oil palm quoted by some authors do not allow for these problems. Other POIG criteria, such as the prohibition on cultivation of GMOs, bear no relation to the usual definitions of sustainability.

The Sustainable Palm Oil Manifesto (SPOM) was published by five major plantation companies in 2014. Under pressure from NGOs and consumer companies, this included a temporary moratorium on the clearance of 'high carbon stock' (HCS) forest, while a study to establish what constitutes HCS forest was completed. This was supposed to take a year, but the moratorium is still in force.

RSPO Next is a voluntary standard aimed at members who have exceeded the current requirements for certification. A number of criteria are added to the P&C, including commitments to no deforestation and no development on peat. There must be reductions in GHG emissions, including by collection of biogas from effluent. Companies must give training to all smallholders in the supply base. The RSPO CEO has been quoted as confident that, if RSPO Next is successfully implemented, it will only be a matter of time before it becomes the industry norm. This seems unlikely, given the poor adoption of the basic P&C by the industry as a whole.

Much the most important reason for preventing deforestation is to preserve biodiversity, which should be covered by the RSPO's HCV criteria. However, revisions to the RSPO criteria and alternative schemes have placed more

emphasis on carbon stocks and CO_2 emissions, without recognising that CO_2 emitted in one area can be sequestered in another, whereas lost biodiversity is irreplaceable.

The POIG criteria include the exclusion of HCS forest, with high density, low density and young regenerating forest all considered as potential HCS forest. Peat areas are also totally excluded, regardless of soil depth. The RSPO defines low carbon stock areas as those with carbon stocks where the losses on conversion would be no greater than the carbon stock in the new development, over the period of a rotation. The life time-averaged above-ground carbon in an oil palm plantation is between 25 and 50 tonnes/ha.

The SPOM moratorium on forest clearance makes no allowance for the urgent need for economic development in some countries. Thus the situation in Liberia described by Jonathan Porritt has arisen, where the government has approved an oil palm development, a well-established RSPO member-company is willing to invest, and villagers have given FPIC and are desperate for the employment and other benefits that a plantation will bring. However, the land was once forested, so even though most has been logged or cleared for shifting cultivation or charcoal production, the moratorium on forest clearance still prevents development. Porritt showed clearly how socially unacceptable this is.

As POIG and the HCS approach have not defined a carbon stock threshold, the growers should do this. The threshold needs to take into account the local need for development. Thus for countries such as Liberia, a figure of 60 tonnes/ha could be adopted; if the local value for oil palm turns out to be lower than this, any discrepancy is easily justified in terms of the social value of development. In Indonesia or Malaysia, on the other hand, the pressure for development is predominantly financial, not social. A lower value of 30 or 35 tonnes/ha would push companies towards previously deforested land.

A look into the future

Voluntary certification will only be successful if there is a price premium for the product. Successful schemes often cover a very small part of the market; for example only 17% of coffee supplies conform to the Fairtrade standard. A supply chain standard such as the POIG Charter can be enforced by food manufacturers, but is unlikely to be widely effective for a commodity such as palm oil, with many different uses and little consumer recognition. Government-enforced certification schemes such as the ISPO may be influenced by lobby groups and usually lack stringency.

A crucial question is whether we want as much of the industry as possible committed to the RSPO, or a limited part of the industry producing oil which meets the highest possible standards. In my opinion, the former is more important, but it seems clear that many producers are reluctant to join the RSPO, seeing certification as a cost, with little return in terms of price premium.

The profusion of different standards seems likely to undermine the RSPO. Thus we have the MSPO and ISPO introducing more grower-friendly versions of the original RSPO P&C, while RSPO Next and the POIG Charter aim to raise standards. One must wonder for how long major plantation companies will accept the limitations on new developments imposed by RSPO Next and the POIG Charter, when certified oil constitutes such a small percentage of

total palm oil sales. The limitations on development risk destroying the historic role that oil palm cultivation has played in poverty alleviation. It must be recognised that agricultural expansion is the only viable route to economic development in some countries.

If the RSPO continues as at present, the future seems clear: CSPO will become more and more of a niche product. Responsibility for this lies mainly with those NGOs and food manufacturers who have pushed for ever higher standards, rather than encouraging the rest of the industry to come on board. The use of a niche product may be a selling point for some palm oil users, of course, so perhaps the users have a different objective from the NGOs.

To avoid this outcome, it is essential that uptake of CSPO is increased. There is an obligation under the RSPO Code of Conduct for palm oil processors, traders and users to give active support to growers but, far from supporting the CSPO market, some manufacturers who are members are advertising products as 'palm oil free'. This is clearly against the spirit of the RSPO, even if the Code of Conduct does not explicitly forbid it.

Consumer demand for sustainability comes mainly from Europe and North America; in 2016, those two regions imported 11.6 million tonnes of palm oil. Thus the maximum demand for CSPO may be no more than the current certified volume. However, many palm oil users are multinationals with worldwide sales. Perhaps user members should be obliged to publish, and be audited against, time-bound plans to move to 100% CSPO, just as producers are audited on time-bound plans for all their production to be certified. Some members have published plans, but these have been voluntary and are not a requirement of membership. If all the CSPO is taken up and there is further unmet demand, the price premium should increase, and the plantation industry might start to see that there is an advantage to RSPO membership.

At the same time, RSPO and NGO members should strongly emphasise and publicise the validity of the 'book and claim' supply chain, so that users can obtain CSPO without the unnecessary additional costs of segregation. If the RSPO succeeds in making CSPO 'the norm', the price premium would disappear, but uncertified oil would probably become saleable only at a discount to CSPO, giving the same net result.

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'Avoid Perils of Faulty Navigation'

In his closing speech at the 16th meeting of the Roundtable on Sustainable Palm Oil (RSPO), held in Sabah on Nov 15, Co-Chair Dato' Carl Bek-Nielsen issued a call to industry to rise to the challenge of bringing about market transformation.

"Just over 300 years ago, on a foggy night in 1707, English naval officer Admiral Cloudesley Shovell grounded four British warships on the rocks of Scilly. Two thousand lives were lost – they had fallen victim to faulty navigation.

Legend has it that a sailor had warned the Admiral earlier that day that his fleet was dangerously off course. Shovell hanged the sailor on the spot for mutiny. A few hours later, the ships ran aground and Shovell and his men perished in the cold waters. The incident was recorded as one of the greatest maritime disasters in British history.

However, this tragedy inspired a tremendous leap forward in terms of innovation. Just seven years later, it resulted in solving the conundrum of longitude. So, from 1714, both longitude and latitude could be determined, thus minimising the risk of faulty navigation.

Many of us who have come together here in Sabah see the RSPO as a journey of innovation by 'sustainabilising' an important commodity.

When consumers, NGOs and public opinion turned to the palm oil industry and said 'your navigation is faulty – you are off course!', we could have closed our eyes, blocked our ears and looked the other way. Or like Admiral Shovell, we could have hanged those who spoke up. However, those behind the formation of the RSPO acted differently – they listened.

They took the first difficult steps to acknowledge that change was not just required, it was necessary. Status quo was no longer tolerable. The rest is history, as they say, and here we are 14 years later, with more than 4,000 members committed to this multi-stakeholder approach.

But the RSPO must continue to evolve if it is to remain relevant and achieve market transformation, all the while stimulating the spirit of inclusivity and continuous improvement. With this in mind, I want to touch on the recent Principles & Criteria (P&C) review.

First, a vote of congratulations to all stakeholders who have been involved in this process, for much work, time and effort has gone into this – 18 face-to-face events in 13 countries, six physical Task Force meetings and over 11,500 individual stakeholder comments received.

What's the net result?

Halting deforestation, protecting and conserving peatland, mitigating greenhouse gas emissions, strengthening human rights, labour rights and obtaining of free, prior and informed consent – these are just some of the key improvements implemented in the draft P&C 2018.

However, much more needs to be done. To be credible and remain relevant, we must also be realistic and not shy away from the fact that we still have a long way to go if we're to achieve market transformation.

For a moment I therefore wish to be the 'canary in the coal mine', so to say – and, like the sailor on Admiral Shovell's ship, warn all on board this 'RSPO ship' that there are signs of us falling victim to faulty navigation.

Action expected of RSPO

In this connection, I wish to highlight that we are not just off course, but dangerously off course when it comes to the following points.

Firstly, the RSPO and its members must work much, much harder in our commitments towards improving the uptake of RSPO certified palm oil. Right now there is a huge gap between supply and demand. Uptake is only 65% of all the palm oil certified. This is as disappointing as wet gunpowder and it sends a discouraging, hypocritical message of 'do as I say, but not as I do'.

And I will be clear: The growers expect action. While the grower fraternity has just shown a willingness to change, to innovate, to now halt deforestation, to now stop any new plantings on peat soils, they also expect the NGOs, consumer goods manufacturers and retailers – and the Secretariat of the RSPO – to direct just as much attention and energy towards improving uptake and not just pursuing higher standards for the growers. The growers now demand that this principle of shared responsibility or commensurate effort is applied and is no longer ignored.

The time has come where RSPO members should be obliged to put forward and be audited against time-bound plans to move towards 100% certified palm oil. The practice of shifting the goal-posts when voluntary targets approach must come to an immediate end. It must stop.

Should the grower base observe that the supply of RSPO palm oil continues to outstrip uptake, well, I fear that – and would fully understand if – the growers decide not to participate in any future reviews of the P&C.

Secondly, I wish to mention the smallholders who make up 40% of Malaysia's, 50% of Indonesia's and 80% of Thailand's

production of palm oil today. Let it be clear that the smallholder fraternity by and large finds that RSPO standards are simply too steep a mountain for them to climb.

Less than 3.5% of the world's smallholders have been RSPO-certified. In Malaysia and Thailand, less than 1% have been certified. We cannot turn our backs on smallholders and ignore their plight of just wanting to improve their livelihood.

Indeed, we must do our best to ensure that the smallholder fraternity is not left behind. I am pleased to note the tremendous work undertaken by the Smallholder Interim Group, as well as the development of the new Smallholder Standard, currently underway.

As Winston Churchill once said: "It is good to have a strategy, but occasionally you need to see results." The time for results has arrived, and we need to show these.

The final word of caution to the RSPO and its members concerns the shared objective of fulfilling the United Nations Sustainable Development Goals (SDGs). Please be reminded that the UN's key objective and goal is leaving no one behind – I repeat, leaving no one behind – in its pursuit of fulfilling the SDGs, especially the less privileged members of our fraternity who find making a living difficult.

The RSPO must do its best to support the SDGs but, in doing so, we must be cautious not to let an egalitarian – or shall I say, an elitist mentality – rule the RSPO, thereby putting the cart in front of the horse.

What do I specifically mean by this? I mean that, by pursuing the strictest environmental and social standards within the commodity sector today, we now seriously risk eliminating 60-70% of the world's palm oil producers from ever being able to live up to the RSPO's standards. They see the standards as being too demanding, too expensive and too difficult to reach; but, above all else, as a hindrance and an obstacle that ultimately goes against the SDGs.

The RSPO therefore risks becoming a niche certification – a certification for the few, for the resource strong. And while RSPO certification is beyond doubt the Gold standard of sustainability, it will never become the norm. We all need to wake up to this reality.

Edward Demming, a leader in corporate change once said: "It is not necessary to change, survival is not mandatory." But he also said: "It is not enough to do your best; first, you need to know what do to – and then you need to do your best."

The RSPO, like the SDGs, is about partnership. We therefore need to see greater smallholder inclusion; a considerable increase in certified sustainable palm oil (CSPO) uptake; and that stakeholders do not shy away from what has been produced.

If these points are addressed, and combined with a concerted effort from all links in the supply chain, we can adjust our course for increased CSPO production, demand and uptake. This will put us firmly on the path towards market transformation, and thereby avoid falling victim to faulty navigation."

This is an edited version of the speech.

EU Seeks to Cap Trans Fats in Food

Proposal in draft regulation

On Oct 4, 2018, the European Commission (EC) published a draft Commission Regulation amending Annex III to Regulation (EC) No 1925/2006 of the European Parliament and of the Council with regard to trans fats, other than trans fats naturally occurring in animal fat, in foods intended for the final consumer. Stakeholders were invited to submit their comments.

The Draft Regulation proposes a maximum limit of trans fats, other than those naturally occurring in animal fat, in food which is intended for the final consumer, of 2g per 100g of fat. Food which does not comply may continue to be placed on the market until April 1, 2021

Trans fats are a particular type of unsaturated fatty acids. In Regulation (EU) No 1169/2011 they are defined as 'fatty acids with at least one non-conjugated (namely interrupted by at least one methylene group) carbon-carbon double bond in the trans configuration'.

Some trans fats are produced industrially. The primary dietary source of industrial trans fats is partially hydrogenated oils. These generally contain saturated and unsaturated fats, among them trans fats in variable proportions (ranging up to more than 50%), according to the production technology used. Trans fats can also be naturally present in food products derived from ruminant animals, such as dairy products or meat from cattle, sheep or goat.

Timeline and details

1. In accordance with Regulation (EC) No 1925/2006, the EC may, on its own initiative, take a decision to include a substance, other than a vitamin or mineral, or an ingredient containing such substance in Annex III to that Regulation, listing the substances whose use in foods is prohibited, restricted or under Union scrutiny, if that substance is associated with a potential risk to consumers as provided for in Article 8(1) of that Regulation.

2. On Dec 4, 2009, the European Food Safety Authority (EFSA) adopted a scientific opinion concluding that the intake of trans fats should be as low as possible within the context of a nutritionally adequate diet.

3. On Dec 3, 2015, the EC adopted a report on trans fats in foods and in the overall diet of the Union population. The report recalled that coronary heart disease is the leading cause of death in the Union and a high intake of trans fats seriously increases the risk of heart disease, more than any other nutrient on a per calorie basis.

4. The report concluded that establishing a legal limit for industrial trans fats in food appears to be the most effective measure in terms of public health, consumer protection and compatibility with the internal market.

5. On April 30, 2018, the EC asked the EFSA to compile the outcomes of scientific advice already provided by the EFSA on the health effects of trans fats, in particular on nutrition and health claims, dietary reference values and food additives; and to inform the EC on how such scientific advice relates to current goals and recommendations on the intake of trans fats to maintain health.

6. On June 19, 2018, the EFSA provided its conclusion in the form of scientific and technical assistance. It concluded, based on review of available scientific evidence, that according to the latest national and international recommendations, dietary intake of trans fats should be as low as possible.

7. On May 15, 2018, the World Health Organisation called for the elimination of industrially-produced trans fats from the global food supply.

8. Trans fats are a substance other than vitamins and minerals for which harmful effects on health have been identified. The substance should therefore be placed in Part B of Annex III to Regulation (EC) No 1925/2006 and its addition to foods or its use in the manufacture of foods should only be allowed under the conditions specified in that Annex, in view of the current state of scientific and technical knowledge.

9. Regulation (EC) No 1925/2006 should therefore be amended accordingly.

10. The definitions of 'fat' and of 'trans fats' set out in Annex I to Regulation (EC) No 1169/2011 of Oct 25, 2011 of the European Parliament and of the Council should apply to the relevant terms in Part B of Annex III to Regulation (EC) No 1925/2006.

11. In order to enable food business operators to adapt to the new requirements which will result from this Regulation, appropriate transitional measures should be adopted.

12. The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed.

Article 1

The following conditions shall apply:

- The content of trans fats, other than trans fats naturally occurring in animal fat, in food which is intended for the final consumer, shall not exceed 2g per 100g of fat.

- The definitions of 'fat' and of 'trans fats' set out respectively in points (2) and (4) of Annex I to Regulation (EC) No 1169/2011 shall apply.

Article 2

- This Regulation shall enter into force on the 20th day following that of its publication in the *Official Journal of the European Union.*

- Food which does not comply with this Regulation may continue to be placed on the market until April 1, 2021.

- This Regulation shall be binding in its entirety and directly applicable in all member-states.

This edited article combines information from the EC website (https://ec.europa.eu) and the Draft Regulation. The Draft has not been adopted or endorsed by the EC. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the EC.

Palm Oil Boycott – The Deception Continues

Two more food-based examples

With the debate on biofuels recently having taken centre stage, the continued discrimination and denigration of palm oil in retail and by food business operators has shifted a bit out of the focus. It does not mean, however, that the issues have gone away.

In April, Iceland Foods Ltd, the UK's leading frozen food company and retailer, announced that it would stop using palm oil as an ingredient in its own label food by the end of this year. Iceland linked this to a 'collapse in *orang utan* population' claim. Palm oil has already been removed from 50% of Iceland's own label range and 130 products are to be reformulated by the end of 2018.

Iceland's simplistic and deceptive view falls short of addressing the many environmental questions that undoubtedly must be addressed on a global level. Singling out and discriminating against palm oil alone appears to be a marketing stunt, diverting attention from the real issues and based on a number of misleading assumptions.

Earlier this year, Iceland's decision was immediately criticised by researchers from the Durrell Institute of Conservation and Biology (DICE) of the University of Kent. The researchers underlined that banning palm oil from products was actually a step backwards in the effort to prevent deforestation and to promote sustainability.

The researchers at DICE are working with palm oil certification bodies and companies to improve the way in which oil palm cultivation interacts with the environment. The work at DICE aims at demonstrating the advantages of connecting high-quality rainforest patches in oil palm plantations to allow wildlife to move freely. If the sustainability certification of palm oil became more widespread, this would benefit the environment more than switching to other vegetable oils.

According to the researchers, Iceland should work with the industry to find sustainably sourced solutions, highlighting that 'environmentally conscious consumers should demand palm oil from certified sources, but avoiding it altogether runs the risk of putting pressure on other crops that are equally to blame for the world's environmental problems', such as soybean.

Source: idilia Foods, http://www.idilia.es/en/marca/nocilla/

In principle, businesses are free to decide which kind of raw materials they use in their products, and are also free to choose whether or not to use palm oil. However, waging denigrating marketing campaigns and attaching unauthorised labels to food products arguably violates EU law, in particular the Food Information Regulation.

Chocolate spread in Spain

In July, idilia Foods – producer of *Nocilla*, available in the Spanish market since 1968 and more popular than Ferrero's *Nutella* – launched a new recipe that replaced palm oil in all products with sunflower oil and cocoa butter. *Nocilla* jars now carry a green 'palm oil-free' ('*sin aceite de palma*') claim.

Highlighting a new recipe is one thing, but choosing to denigrate palm oil for marketing purposes is another. idilia Foods argues that the reformulation of the different varieties of *Nocilla* supposes a reduction of more than 40% in saturated fats in the nutritional profile of the product. This leads to two key questions:

1. If the intention is to replace palm oil with high oleic sunflower oil in order to reduce saturated fats, could a 'low saturated fats' claim be used instead of a 'palm oil-free' claim?

2. Are saturated fats *per se* unhealthy?

Annex I of the EU's Regulation on nutrition and health claims made on foods allows claims for products that are 'low saturated fats' and for those that are 'saturated fats-free'. A claim that a food is low in saturated fats, and any claim likely to have the same meaning for the consumer, may only be made if the total of saturated fatty acids and trans fats in the product does not exceed 1.5g per 100g for solids; and the sum of saturated fatty acids and trans fats must not provide more than 10% of energy.

The original *Nocilla* had 11g saturated fats per 100g. A 40% reduction leaves the saturated fats content of the 'palm oil-free' *Nocilla* at 6.4g per 100g! This is still more than four times above the 1.5g required by law to make the 'low saturated fats' claim.

Most importantly, the list of permitted claims under the Regulation is a closed list. There is no claim for only a reduced saturated fats content. And even if the saturated fats content were reduced to 1.5g per 100g, *Nocilla*'s overall nutrient profile would, arguably, not permit making such a nutrition claim.

In simple terms, the so-called nutrient profiles are generally intended to determine whether foods are, based on their nutrient composition, eligible to bear claims. Nutrient profiles must ensure that foods high in sugar, fat or salt, for example, do not carry a nutrition or health claim.

Are saturated fats *per se* unhealthy? Because of their complex nature, the World Health Organisation (WHO) has made few recommendations as to the category of fat that should be consumed. The WHO suggests that consumers replace some saturated fats with unsaturated fats, and recommends that consumers avoid trans fats. Trans fats are, *inter alia*, present in fats that have been industrially processed to artificially solidify them through hydrogenation (i.e. treated with hydrogen). The WHO does not recommend banning specific types of vegetable oils.

Palm oil could actually play an important role in replacing trans fats, as the different natural oils and fats (or fractions) that it contains can be either solid or liquid at

room temperature. Palm oil contains all three main types of fat: 49% saturates (mainly palmitic acid), 37% monounsaturates (mainly omega-9 oleic acid) and 9% polyunsaturates (mainly omega-6 linoleic acid).

Other vegetable oils that are high in monounsaturates include olive and rapeseed oils. Maize, sesame, soybean and sunflower oils are higher in polyunsaturates. Most nutritionists believe that more monounsaturates should be consumed.

It is not the first time that idilia Foods is 'in trouble' because of its nutrition claims on *Nocilla*. In February, the Spanish Consumer Organisation OCU filed a complaint with the Directorate of Consumption of the Generalitat Valenciana for breach of misleading food information provided to the consumer. In that case, the OCU alleged that idilia Foods was illegally making nutrition claims about the milk and calcium content of *Nocilla*.

Making a permitted claim for 'low saturated fats' is not an option, considering the actual saturated fats content. The intention of idilia Foods is clearly to give the new *Nocilla* a 'healthier' image to the detriment of palm oil, circumventing the EU's Regulation on nutrition and health claims.

Voluntary commitments

Other food business operators do not pursue this denigrating path. Instead, they use sustainable palm oil, often developing their very own mechanisms to ensure the sustainability of their products and to improve the situation on the ground.

For example, Ferrero has established the Ferrero Palm Oil Charter, which is intended to address the most important causes of deforestation and achieve the best balance between conservation of the environment, community needs and economic benefit and viability, going beyond the requirements of the Roundtable on Sustainable Palm Oil.

Similarly, in 2015, *Pepsico* had launched its Palm Oil Action Plan, committing to help advance palm oil sustainability in the industry and publishing annually its Progress Reports. There is clearly a market for products containing sustainably sourced palm oil.

In parallel, a number of EU palm oil-using countries launched more responsible initiatives, such as the Amsterdam Commitments' 2020 deadline for 100% sustainable sourcing of deforestation-free commodities and for a fully sustainable palm oil supply chain by 2020.

The claims against palm oil and steps taken by companies like Iceland and idilia Foods are misleading consumers on the environmental and nutritional benefits of palm oil and other vegetable oils. The EU and its member-states should finally take action against misleading 'free from' claims, including and most importantly, 'palm oil-free' claims. The practice of presenting certain foods as healthier than others because of certain characteristics that they do not have, instead of what they really contain, is deceptive and illegal under EU law.

FratiniVergano
European Lawyers

New Leads for Oil Palm Investment

Ideas for Malaysia

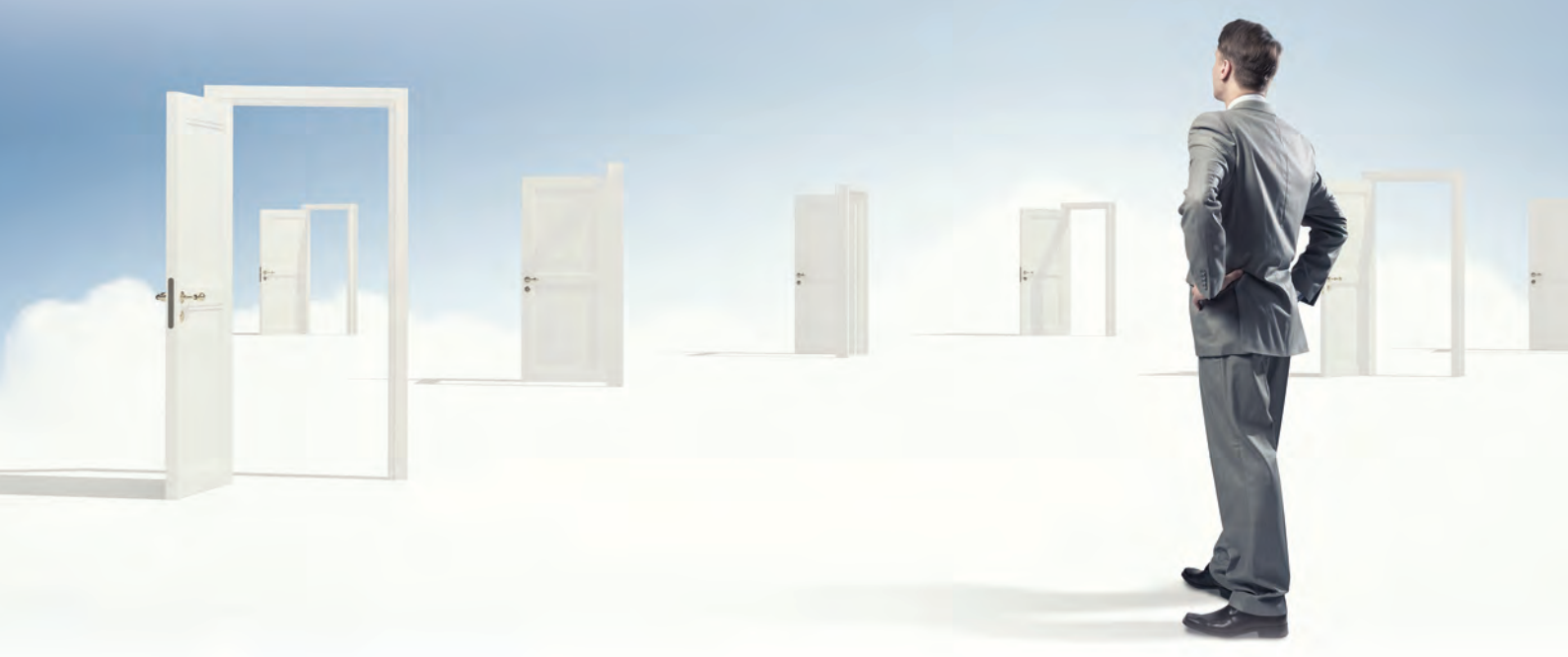
From the 1960s, Malaysia's oil palm plantations commenced planting with higher-yielding *Tenera* palms which yielded up to 30% more palm oil per planted ha. At the same time, a new domestic industry sprang up – production of palm oil mill machinery.

By 1974, a further advance had emerged by licensing in-house palm oil refining, fractionating and bleaching. In the 1980s, technology had been developed to transform palm oil mill liquid waste from a costly effluent to a profitable feedstock to generate electrical energy. Production research took a further leap forward by the multiplication of selected palms through clonal technology in the 1990s.

Table 1: Comparison of Malaysia's Forest Area with Selected Nations

	Land area (mil km2)	Land area, 2015 (% under agriculture)*	Land area, 2015 (% under forest)**
Bangladesh	130	70.6	11.0
China	9,338	56.2	22.2
Indonesia	1,812	31.46	50.2
India	2,973	37.8	23.8
Malaysia	329	23.86	67.6
Pakistan	711	47.0	1.9
Philippines	298	41.0	27.0
Thailand	511	43.3	32.1
UK	242	70.8	13.0
USA	9,147	44.4	33.9
Vietnam	310	37.8	47.6
Australia	7,682	47.6	16.2
France	548	52.5	31.0
Germany	350	48.0	32.7

Sources:
** https://data.world bank.org/indicator/AG.LND.AGRI.ZS,2015*
*** https://world bank.org/indicator/AG/LND.FRST.ZS,2015*



Forest cover

Indonesia, as at 2017, has maintained 50.2% of its land area under forest cover. Malaysia appears to have maintained 67.6% natural forest cover (World Bank data, 2015). Currently, 17.6% of Malaysia's landmass, or 5.7 million ha, remains undeveloped – less than the existing oil palm planted area of 5.8 million ha (MPOB, Dec 31, 2017).

A Malaysian national policy to preserve 50% (16.4 million ha) of natural forest cover would allow licensing of 11.4 million ha (35% of the landmass) for oil palm plantations, while preserving status quo with Indonesia in relation to Malaysia's 1992 Earth Summit pledge of 50% forest cover. Malaysia's all-important plantation economy has consistently emphasised its commitment to reducing carbon emissions and maintaining biodiversity.

The developed world (with some notable exceptions) records about a third of its land area devoted to forestry; the developing world in Southeast Asia records up to half of its land area devoted to forestry. The exception is Malaysia where, in 2015, 67.6% of its land area was shown to be under forest. Have Malaysian land-use policies been targeted by foreign NGOs financed or subsidised by nations which prop up domestic production of oilseeds?

CPO consumption

Halting the 1981-2018 'oil palm fever' has refocused national priorities from plantation investment to maximising the fresh fruit bunch (FFB) and crude palm oil (CPO) production per planted ha, with strong emphasis on product quality and marketing. It marks the end of a 37-year bull run which has seen palm oil increase from 7.8% of worldwide supplies of edible oils in 1980 to 35% in 2017.

CPO consumption/caput/annum was 101kg/caput in Malaysia, 38kg/caput in Indonesia and 13kg/caput in EU-27 in 2017 (Table 2). These figures contrast sharply with the average annual consumption (7.2kg/CPO/caput for the rest of Southeast Asia).

Table 2: Consumption of CPO/caput in Asia Compared to EU-27, 2017

	Population* (bn)	Land Area (mil km2)	CPO Produced** (mil tonnes)	CPO Consumed*** (mil tonnes)	CPO Exports**** (mil tonnes)	CPO Imports***** (mil tonnes)
China	1.415	9.388	-	5.250	-	5.250
Vietnam	0.096	0.310	-	0.837	-	0.840
Philippines	0.107	0.298	0.090	1.320	0.020	1.200
Thailand	0.067	0.511	2.900	2.590	0.300	-
Malaysia	0.032	0.328	21.000	3.245	17.900	0.700
Indonesia	0.266	1.811	40.500	10.130	29.500	-
India	1.354	2.973	0.200	11.820	-	11.600
Pakistan	0.201	0.771	-	3.245	-	3.250
Bangladesh	0.166	0.130	-	1.625	-	1.650
EU-27	0.512 (6.65%)	4.423	-	6.450	-	6.500

Sources:

** www.worldometeters.info/world-population/population-by-country, 2017*

*** www.indexmundi.com/agriculture/?commodity=palmoil&graph=production, 2017*

**** www.indexmundi.com/agriculture/?commodity=palmoil&graph=consumption, 2017*

***** www.indexmundi.com/agriculture/?commodity=palmoil&graph=exports, 2017*

****** www.indexmundi.com/agriculture/?commodity=palmoil&graph=imports, 2017*

Small-scale electricity production

Malaysia's plantations and CPO mills are managed by domestic public companies and also privately owned companies, each of which has potential to generate electricity from biogas or biofuel. At 45 tonnes FFB/hr, CPO mills may generate 2.5GW from biogas; at 60 tonnes FFB/hr, 4GW can be obtained.

Malaysia has 30GW installed generating capacity, as at 2017. As at 2018, less than half of its CPO mills generate electricity from biogas. A number of different processes range in productivity from 2.5 Mw to 4 Mw per CPO mill of 60 tonnes FFB/hr throughput.

Twenty percent of the CPO mills lie within 2km of the National Grid, offering these mills a choice – to sell power to the National Grid; use it at the CPO mill for additional electrical demand (personnel vehicle transport; FFB transport; CPO/PK transport to port;

manufacture of biomass); to charge batteries to sell to the public; or to generate hydrogen and oxygen for remote power production.

Waste oil and dried biomass

CPO mills produce wastewater from six sources, four of which yield recoverable waste oil. Four of these – when passed over a desander tank, are reheated and allowed to decant for two hours in a heated shallow tank – yield 0.3%/FFB waste oil.

Twenty-two hours' operation of a 60-tonne FFB/hr CPO mill may yield at least 4 tonnes of waste oil daily. If 352,000 tonnes FFB are processed annually, a CPO mill may recover 1,056 tonnes of waste oil, enough to cover a CPO mill's annual wage bill. Up to half the waste oil is recovered from the empty bunch press drain; mills without this facility may require additional power generated by biogas/methane.

Biomass arises from three sources. Directors of CPO mills often prefer to recycle empty fruit bunches (EFB) in the plantation as untreated organic mulch. All CPO mills separate sterilised loose fruit from their bunch stalks at a bunch thresher. EFB stalks may amount to ±22 %/FFB of slightly oily EFB containing ±65% moisture which may be further treated by:

- Retting or shredding to shorten and separate all bunch stalk fibres (and lose 5% moisture)

- Reheating to 90°C pressing shredded fibre, from which the press liquid (±5% FFB) contains 0.15%/FFB waste oil – the pressed, partly dried EFB fibre, reduced to ±40% moisture/EFB may be packaged into units of 1.35kg to be marketed as dried biomass 1kg bricks

- Partly dried, bundled, future bricks being placed on pallets and air-dried down to 15% moisture (as for commercial timber) at a ground level forced air-drying facility for three weeks, or 18+3 days.

Several products can be put to commercial use:

- Biomass bricks for domestic heating
Each 1.35kg wet biomass brick (40% moisture) reduces to a 1kg brick (15% moisture) over 21 days' drying, ready for marketing, wrapped, 10 per bundle, for distribution to buyers by container. A 1kg brick measuring 20 x 8 x 8cm (±1,280 cm2), with 15% moisture content and mass density of 0.78 is convenient for marketing as an energy source for domestic fireplaces and commercial space heaters. EFB biomass may be shredded to achieve the average fibre length required by the customer. A total of 1,320 tonnes of FFB reduces (after 21 days' drying) to 145 tonnes of dried biomass.

- Substitute for coal in cement manufacture
Cement plants feed limestone and clay (usually four separate minerals) into a long rotating tube in powder or liquid slurry form, heat this to ±1,400°C by coal and add 3-5% powdered gypsum, its hardening agent. The cooled clinker is pulverised to make Portland cement. Dry powders require ±22% coal to attain process temperature. Coal may be substituted by (15% moisture) biomass. Large cement factories produce 5,000 tonnes/day; a 1,000 tonne/day plant needs between 220-260 tonnes of biomass.

- Potting medium for nurseries/garden centres
  Powdered (15%) biomass to which is added 4 parts water becomes cocopeat. This is mixed with equal volumes of soil and coarse sand containing 20% vermiculite. The ready-to-use garden potting medium – 33% cocopeat; 33% garden soil; 27% sand; 7% vermiculite – may be bagged for ready use. Equally, cocopeat may be used as a garden mulch.

- Golf course dressing for greens
  Powdered (15%) biomass may be ground more finely and spread without further treatment directly onto golf course greens several times per year. The rate of application varies from 1kg per 10-30m2 depending on the type of turf greens.

Issues for the oil palm industry

Endemic insect and fungal parasites, including the rhinoceros beetle and Basal Stem Rot disease, threaten the future of Malaysian oil palm. An industry-wide organisation is recommended to focus on single issues, funded and managed by a consortium of major growers (as was the case previously for *Elaedobius*), with the commercial results of the consortium to remain the sole property of its 'underwriters' and the Ministry of Primary Industries.

- Malaysia's first unselected oil palms were imported as a result of private initiative

- Industry-sponsored *Elaeis* research demonstrated hybridisation of *Dura* and *Pisifera* oil palm varieties (Congopalm/Yangambi/NIFOR, 1955)

- Trial-and-error industry research led to commercial DxP hybrids by 1960

- Dr Brian Gray developed and popularised artificially assisted oil palm pollination by 1965

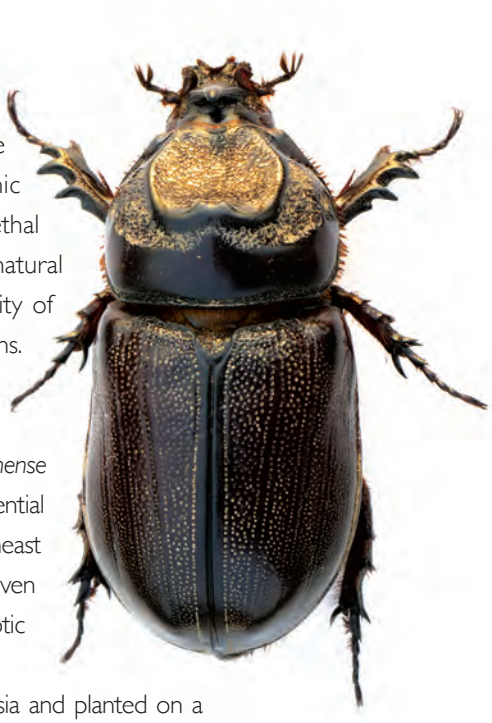
- Private consortium research led to vegetative propagation of elite individual palms (1965-1990)

- Private consortium research led to the introduction of *Elaedobius* from Cameroon (1981)

Today's situation calls for a Malaysian Growers' Association to resolve a number of issues.

Basal Stem Rot

A number of indigenous species of palms suffer from vascular disease or fungal stem rot(s) of varying debility. No cultivated palms have yet suffered epidemic threats – defined as lethal infestations resistant to natural controls within the majority of established palm populations.



Basal Stem Rot disease caused by *Ganoderma boninense* does today represent a potential devastating threat to Southeast Asian palm populations, given that both *Elaeis spp.* are exotic species. *E. oleifera*, recently introduced to Southeast Asia and planted on a small scale only to date, has not shown advance warning of an epidemic. Removal of diseased palms and infected biomass represent the currently most effective control. A disaster lies in wait if *Ganoderma* is allowed to ramify throughout existing and replanted populations.

Rhinoceros beetle

The species *Oryctes rhinoceros* is long domesticated in Southeast Asia and in uncontrolled populations causes large losses of growth and yield, and even death of the palms. By coincidence, *Oryctes* larvae thrive under field conditions – i.e with huge biomass left in the fields as a result of burning of biomass not being allowed – similar to those favouring multiplication of *Ganoderma boninense*. In *Oryctes*, only the egg, larval and pupal phases are static; its larval instars (aged between several months to 2 years) may represent a window of opportunity to introduce control measures.

Funding and research facilities need to be prioritised to study the major *Oryctes* and *Ganoderma* problems, and also removal or reduction of the old palm/plant biomass left on land cleared for planting oil palm.

Mechanisation

A fully documented review to reduce labour dependence on everyday field operations, particularly using modern machinery, is long overdue. Today's successful oil palm industry has exacerbated Malaysia's already very frail labour market, which is heavily dependent on foreign workers.

Planting material

A carefully edited presentation is needed to show data on a level playing field, comparing yields of individual hybrids, clones and clonal seed plantings grown in Malaysia for at least 10 years. The up-to-date data would be exclusively for reference by members of the Malaysian Growers' Association.

Alternative tree crops

Tree crops might replace the oil palm as a source of edible oil. Coconuts remain the primary contender in the event of an unforeseen commercial disaster. Many years ago, extensive research was conducted to initiate tissue culture of elite coconut individuals, but subsequent multiplication (not in Malaysia) failed.

A new attempt to review the latest tissue culture technology is long overdue. If successfully cloned out to plantation level, a best individual coconut production of +-2.9 tonnes/ha (not in Malaysia) expeller coconut oil, 3.2 tonnes expeller meal and an unknown quantity of biomass/ha represent a future source.

Even this elite individual coconut, as yet uncloned, represents only 32% of a best individual oil palm potential (not in Malaysia) of 9.1 tonnes CPO/ha. Commercially available MAYTAG hybrid copra yields of 7 tonnes/ha, equivalent to 4.4 tonnes/ha coconut oil, are reported; however, the planting material availability and costs remain formidable.

Clearly, coconuts have a bright future amply justified by substantially lower labour demand and oil production costs. Malaysia's current CPO/ha/annum average of 4.1 tonnes/ha is believed attributable to plantation labour shortage in the face of the limited best Malaysian commercial CPO yield/ha of 6 tonnes.

The labour requirement of coconuts under-farmed by cattle is reported outside Malaysia at 17 ha/employee/year compared with Malaysia's current oil palm labour requirement, widely reported at <10.5 ha/employee/year. Fifty years after initial (failed) clonal research, urgent impartial research may now be due for reconsideration by a Malaysian Growers' Association.

An invisible commodity?

Today's world calls for an invisible commodity – kilowatts, preferably in the form of energy which can be supplied and transported on demand. Can today's tree crops rise to this challenge?

CPO mills already contribute to the 'kilowatt fever'. Plate boilers/steam turbines or methane-powered rotary alternators provide AC 3 ph 50cycle for vehicles; or DC power for vehicles; '24-hour' back-up comes via batteries.

The real issue lies in the expense of transmitting electrical power from source to consumer. More than half of the potential output of Sarawak's Bakun Dam is still awaiting reliable methods of DC transmission to potential consumers in Johor Bahru and Singapore. A convenient method is by onsite generation of hydrogen and oxygen (delivered to where required before conversion to electricity by rotary engine), but insurance companies are wary of accepting risk to the public.

Today's world calls for ever-larger sources of energy. Hydrocarbon-powered rotary engines are replaced by electromotors. Oil palm plantations and CPO mills demand transport for personnel, FFB, CPO, PK and in due course, biomass. Storage batteries or accumulators become more affordable and practical by the day. In the foreseeable future, storage battery capacity will double, allowing 1,000km journeys between recharge.

Hydrocarbons are not readily homegrown, allowing national governments to impose sales taxes on both hydrocarbon producers and outlets. The future of homegrown kilowatts, less accessible to taxation, beckons.

Moray K Graham
Retired Planter

Hungary Targets Self-sufficiency

Reinventing its economy

Hungary, with a population of 10 million, is a landlocked country in central Europe. Nearly one-fifth of the population lives in Budapest, the capital city.

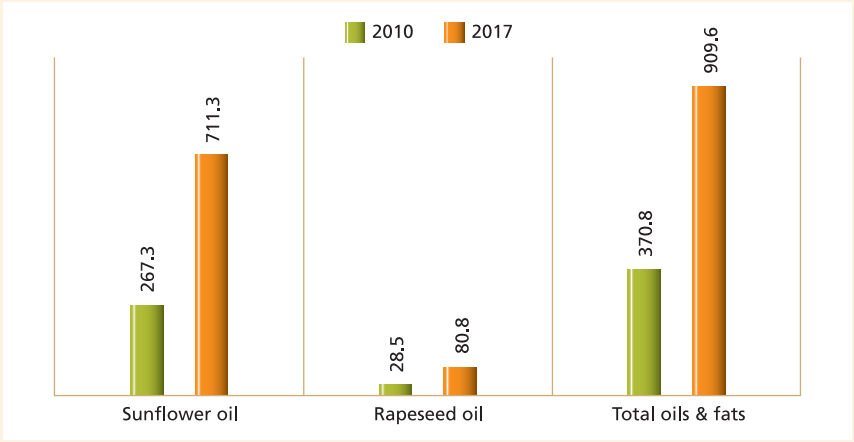
A few years after Hungary joined the European Union (EU) in 2004, declining exports, reduced consumption and fixed asset accumulation hit its economy hard. During the 2008 financial crisis, the country entered a severe recession, with its economy shrinking by 6.4% – one of the worst contractions in its history.

A downward spiral set in. Banks gave out fewer loans and investment activity plummeted. This, along with growing price sensitivity of the consumer, caused a decline in consumption, resulting in job losses and further reduction of economic activity. Inflation did not rise significantly, but real wages dropped.

After the 2010 election, the economy began to recover with a big boost from exports, especially to Germany. In 2011, a growth rate of about 1.7% was achieved. At the end of the year, the government turned to the International Monetary Fund (IMF) and the EU for financial support, to refinance its foreign currency debt and future bond obligations. When Hungary rejected the economic policy recommendations favoured by the EU and IMF, talks broke down in late 2012.

In 2016, the Hungarian economy grew by 2%. The government is pursuing two goals in its economic policy: the creation of one million new jobs over the next 10 years; and the transformation of the legal framework to make Hungary 'the most competitive economy in Europe'.

Figure 1: Hungary – oils and fats production, 2010 & 2017 (thousand tonnes)



Source: Oil World

Pushing on

Of Hungary's production of oils and fats in 2016, 75% comprised sunflower oil. It is interesting to note that domestic production, in general, has been growing significantly in recent years (Figure 1).

In line with the political goals to push the economy forward, exports have seen impressive growth since 2010. Oils and fats exports more than doubled during this period (Figure 2), carried mainly by sunflower oil.

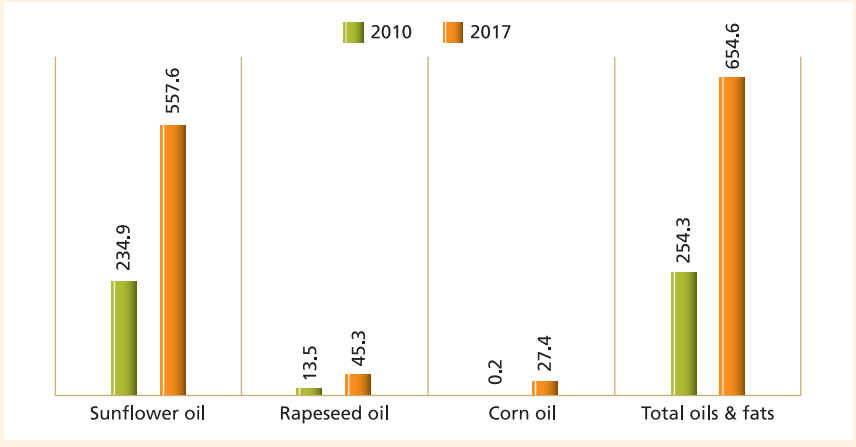
Imports are moving at a much lower level. Intake of rapeseed oil and sunflower oil has fallen in the long-term trend (Figure 3). Only palm oil imports have grown over the last couple of years, with finished products topping the list (Figure 4).

Hungary's economic policy appears to be aimed at supporting export industries and substituting imports where possible. At the same time, there is an effort to attract foreign direct investment to grow the employment base.

This approach is manifested in the oils and fats sector as well – domestic production and exports have expanded, while imports have remained relatively lacklustre. With Hungary trying to shape itself into an export base for the EU and eastern European neighbours, there may be a role for palm oil in supplying inputs to processing industries.

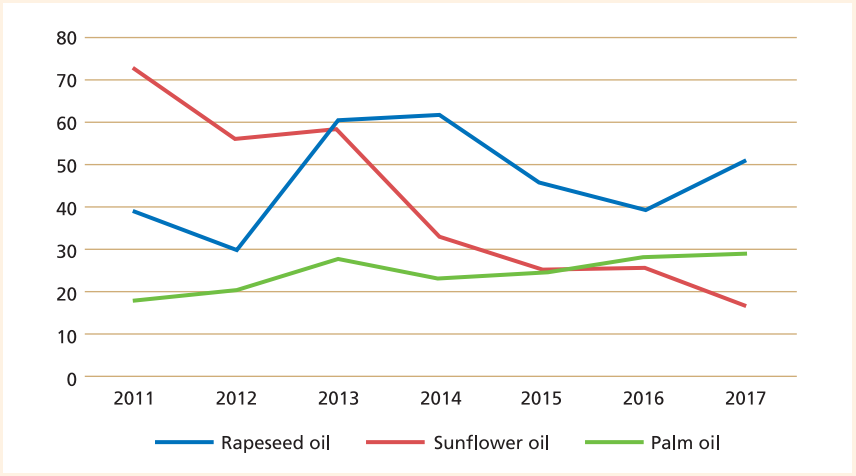
MPOC Brussels

Figure 2: Hungary – oils and fats exports, 2010 & 2017 (thousand tonnes)



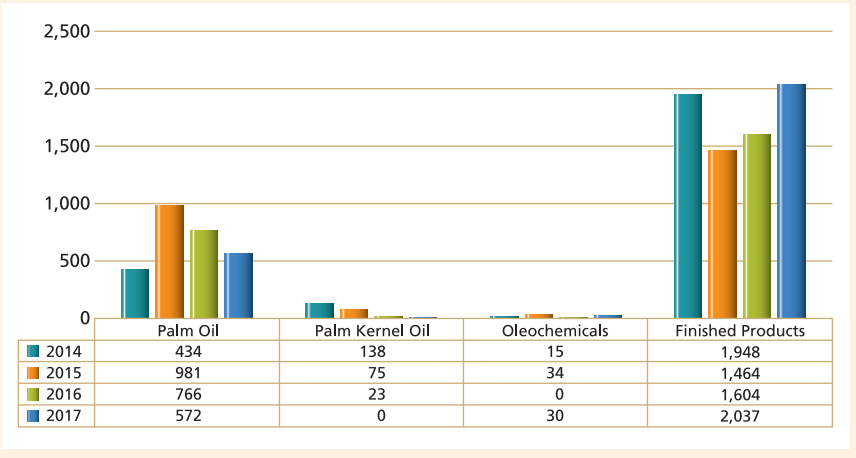
Source: Oil World

Figure 3: Hungary – vegetable oil imports, 2011-17 (thousand tonnes)



Source: Oil World

Figure 4: Hungary – import of Malaysian palm oil products, 2014-17 (tonnes)



	Palm Oil	Palm Kernel Oil	Oleochemicals	Finished Products
2014	434	138	15	1,948
2015	981	75	34	1,464
2016	766	23	0	1,604
2017	572	0	30	2,037

Source: MPOB

Greek Economy Still in the Doldrums

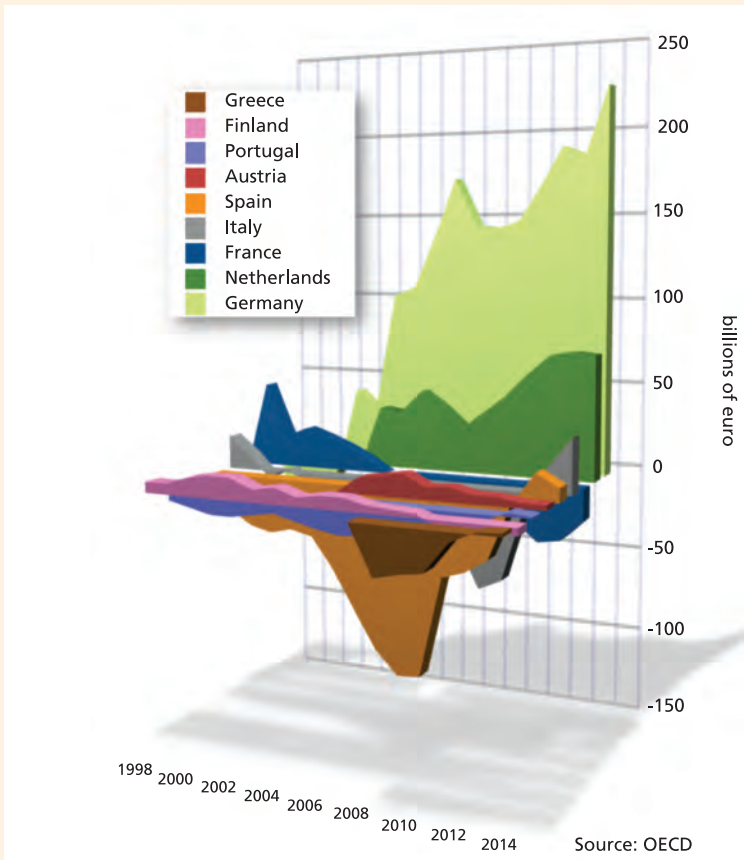
Painful recovery

In the wake of the financial crisis in 2008, it emerged that the Greek economy was in much worse shape than anyone had thought. Foreign debt that was out of control, plenty of red tape and profligate spending on welfare, alongside poor tax collection, were the factors behind this.

From 2009 to 2016, the gross domestic product (GDP) declined by over 25%. Unemployment remains above a painful 20%, but has been falling slowly since 2014. Youth unemployment is sky-high at around 45%.

Figure 1 sheds light on the malaise suffered by Greece and other southern European countries. Their current account (trade) imbalance has been massive. And while Spain and Italy have been able in recent years to correct this somewhat, Greece remains steadfastly in negative territory.

Figure 1: Current account imbalances in selected European countries



Source: https://commons.wikimedia.org/wiki/File%3ACurrent_account_imbalances_EN_(3D).svg

As at early 2018, Greece had made slow progress toward fixing its economy. However, public debt is at over 311 billion EUR, equivalent to 177% of GDP. In other words, the country is not out of the woods yet.

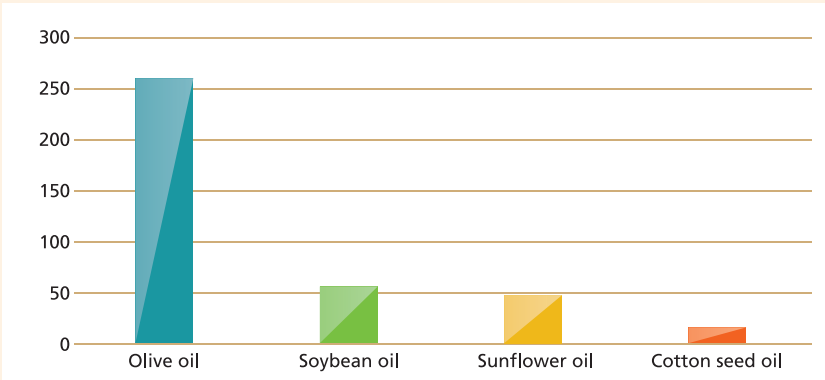
Oils and fats market

Olive oil dominates the domestic vegetable oil sector (Figure 2). Aside from being a staple of the traditional diet, it is an important export commodity. The Greek soybean and sunflower oil volumes are a mere fraction of the 320,000 tonnes of olive oil produced.

Greece imported 313,200 tonnes of oils and fats in 2017, up from 275,800 tonnes the previous year (Figure 3). In 2017, palm oil's share of the total was a respectable 31%, although growth of sunflower oil imports was stronger.

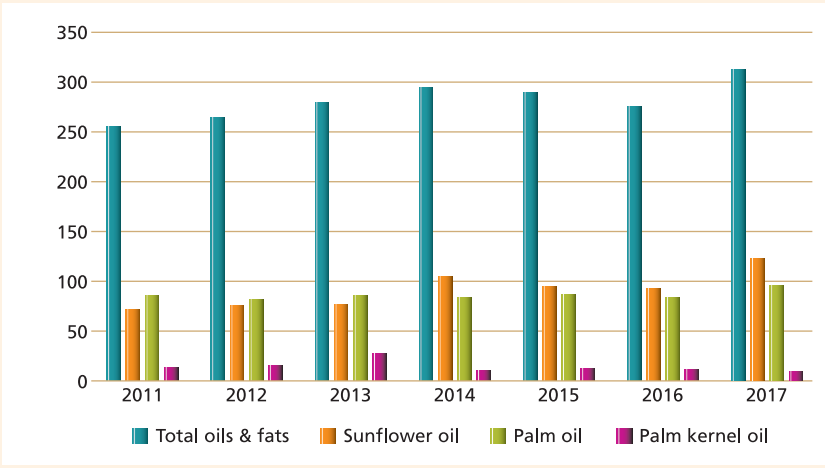
About 95% of the palm oil is of Asian origin (Figure 4). Indonesia sells more palm oil, as well as palm kernel oil, to Greece

Figure 2: Greece – production of vegetable oils, 2017 (thousand tonnes)



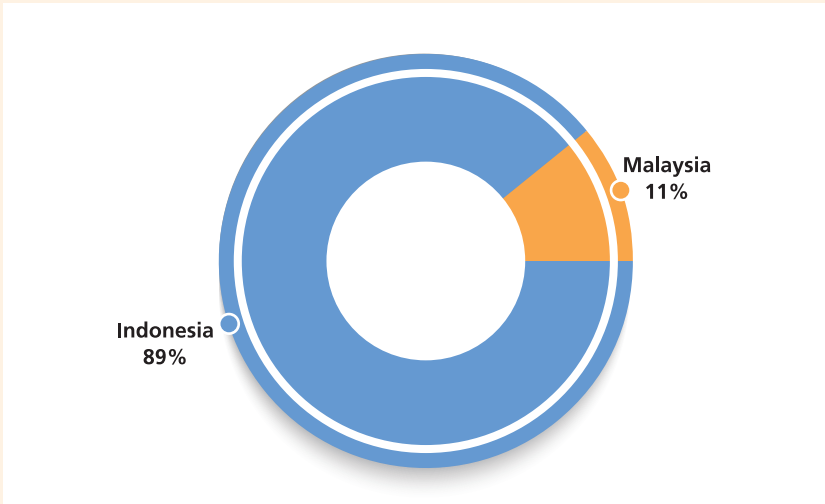
Source: Oil World

Figure 3: Greece – oils and fats imports, 2011-17 (thousand tonnes)



Source: Oil World

Figure 4: Greece – palm oil imports by source country, 2017

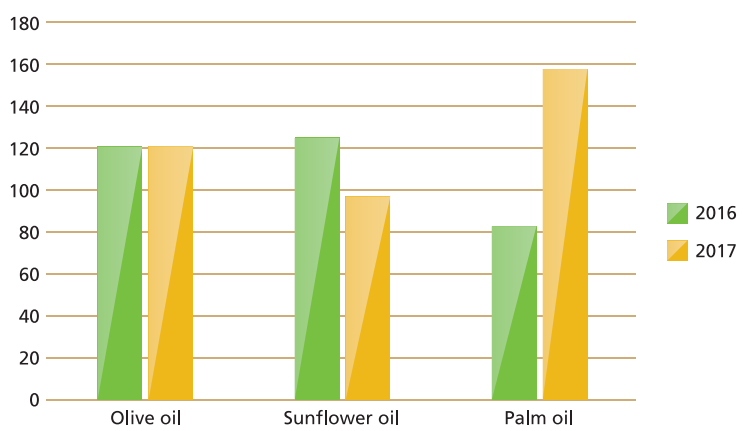


Source: Oil World

Figure 5: Greece - palm kernel oil imports by source country, 2017

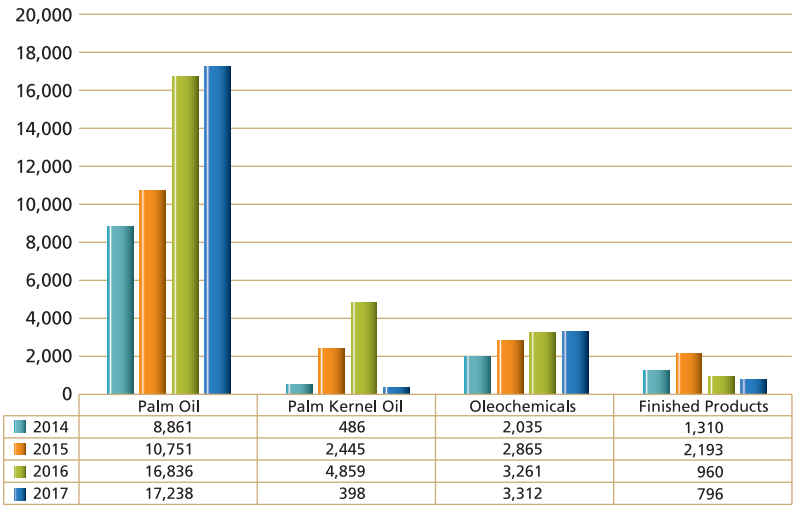
Source: Oil World

Figure 6: Greece – vegetable oil consumption, 2016 & 2017 (thousand tonnes)



Source: Oil World

Figure 7: Greece – import of Malaysian palm oil products, 2014-17 (tonnes)



	Palm Oil	Palm Kernel Oil	Oleochemicals	Finished Products
2014	8,861	486	2,035	1,310
2015	10,751	2,445	2,865	2,193
2016	16,836	4,859	3,261	960
2017	17,238	398	3,312	796

Source: MPOB

than Malaysia (Figure 5). The three most consumed vegetable oils are sunflower oil, olive oil and palm oil (Figure 6).

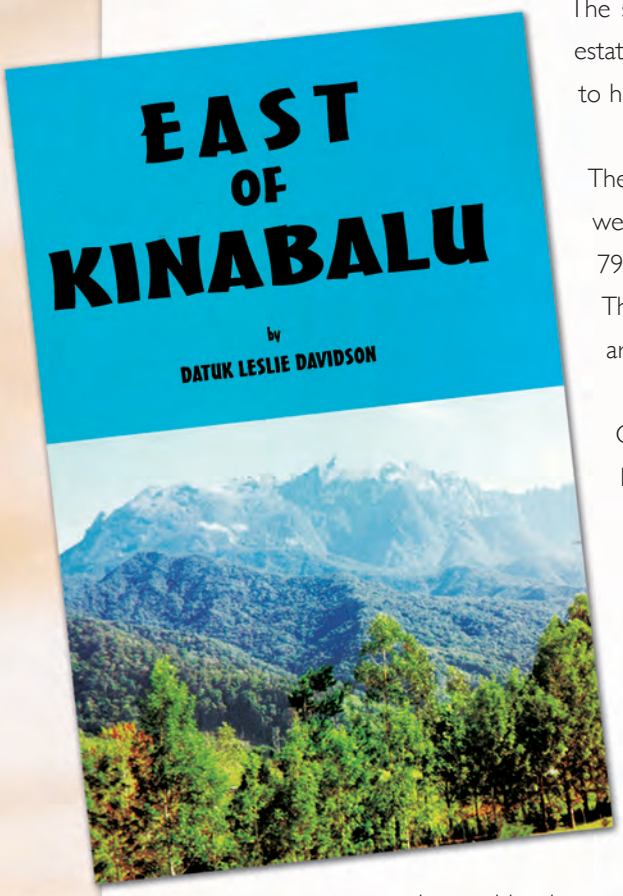
Statistics compiled by the Malaysian Palm Oil Board show a mixed picture (Figure 7). The traded palm oil volume more than doubled between 2014 and 2017. Palm kernel oil exported to Greece saw erratic changes. After growing tenfold between 2014 and 2016, the volume plunged in 2017. Oleochemicals experienced steady growth over the four-year period.

While consumers and the manufacturing sector are still reeling from the debt crisis, there are signs that economic activity is picking up, albeit slowly. Palm oil, due to its competitive price, provides an attractive option within this scenario.

MPOC Brussels

The Flood, Part 2

Drama all round



The storm which for a couple of weeks had been centred over the estate now moved inland, following up the course of the Labuk River to hurtle itself against the rocky face of Mount Kinabalu.

The United Nations Survey Party who had been working near Telupid were washed out. We heard later that they recorded an unbelievable 79 inches of rain in three days, and that the river had risen by 50 feet. They were forced to move to Sandakan until the dry weather arrived.

On their way downstream, they picked up my friend George Lyall who was employed by the mining group Naylor Benson, prospecting for bauxite. George was in a bad way. He had not expected the river to rise to the level it did. His workers, after trying to persuade him to move out, had fled, leaving him on his own for several days. His entire camp had been washed away.

The UN team brought him down to us with nothing more than the wet clothes he stood up in. I could not believe the change in George since I had last seen him. He was emaciated and haggard, but he wanted to get back upstream to sort out his lost equipment. He asked if he could borrow dry clothes and stay in our rest house for a day or two until the flood level dropped.

Since the estate office and the temporary management houses were on the tidal reaches of the Labuk, we did not expect the flood levels to be as dramatic as they had been on the Tungud. However, for the next couple of days, the level of the Labuk continued to rise steadily. Eventually it came over the floor of the office, which we had built only 4 feet above ground.

We organised a team of workers to build a huge raft and transferred our office furniture, files and equipment to it. The rising water swamped our central stores. Lengths of timber and empty oil drums were bobbing around the office padang and sweeping down the river. We rushed round trying to rescue anything we could and transferred it to the management hill.

Our germination shed, with its valuable stock of seeds for future plantings, was at the nursery site on the highest point in the planted area, a few hundred yards back from the river. Eventually even this was submerged. Kenganathan with a team of workers battled manfully to get all the seeds to a place of safety. There was nothing we could do about the nursery palms, but we did not think they would suffer unduly by being submerged for a few days.

In the late afternoon of Jan 25, I was quite exhausted when I got back to my house. My driver's wife Norlini had just been delivered of a healthy baby girl, and there was much rejoicing amongst the Cocos Islanders in the servants' quarters. The level of the Labuk River continued to rise inexorably. It was now only a few inches below the floorboards and was creeping higher. I thought it wise to call for the *Puyoh* to be brought down and tied up near to the house in case it was needed.

The flood had now covered the opposite bank, and the current – cutting off the corner upstream – was hurtling straight at us. This was quite different from the placid flooding from the Tungud River. There was a constant roaring noise. Huge trees and debris were sweeping past, sometimes missing us by a few feet.

Looking out from the verandah, there was now nothing but water except for the tops of a few trees, as far as the eye could see. A small hut bobbed past and was swept off downstream. Wait a minute, I thought, that looked like our garage! I called my driver, Benchiron.

Yes, he confirmed, it was indeed our garage. It seemed there was a counter-current swirling past the back of the house. It must have carried the garage up and round into the main stream and it was now on its way to the Sulu Sea… But hang on! Surely our new Land Rover was still in it!

Benchiron dashed to the back of the house and poked into the murky water with a long pole. "Don't worry Tuan," he said reassuringly, "it's still down here. I can feel it." Mahid joined us silently. "I think Tuan you had better go across to the rest house. My son Attan is very worried about Tuan Lyall."

A long night

I suddenly remembered that, dashing around frantically as I had been, I had not clapped eyes on George since he arrived. It was getting dark when I got into our canoe and paddled across to the rest house. It was a foot or two lower than my house, and the water was already over the floor-boards.

I was met by a rather bizarre scene. George, dressed in a sarong and one of my shirts, was sitting quietly smoking a cigarette and reading by the light of a kerosene lamp. The water was rushing past his ankles. As I waded towards him, a side table at his elbow floated away. He did not even glance at it. Attan waded through and put the side table on top of the billiard table; the green baize surface was piled high with boxes, bed linen, dishes and kitchen items.

I asked George how he was feeling. "Ravenously hungry," he replied rather unexpectedly. "I have not had a bite to eat since I arrived here." I spoke to Attan, who was indignant: "Yesterday he had three big meals. Today I cooked a leg of lamb for his lunch, with beans and potatoes. He ate nearly the whole leg, and an hour later, he asked why I had not given him any lunch."

I collected a couple of glasses and a bottle of *Royal Lochnagar*, George's favourite malt, and sat down in a cane chair opposite him. We chatted companionably for some time. As usual, the darkness fell swiftly. Attan pumped up the kerosene lamp. The water continued to rise until it was just below the seats of our chairs. I was beginning to get quite worried about the situation.

George seemed to be getting agitated. He lit cigarette after cigarette and tossed them into the water when they were half-smoked. He was talking more and more wildly, as the level went down in our bottle. It was a surreal situation. The lamp cast a small circle of yellow light on the two of us sitting on our cane chairs with glasses in our hands and our feet in the black flood-water which was sweeping past us. The scene has remained etched in my memory.

It was time, however, that we evacuated the rest house. Attan had already been paddling the canoe to and fro transferring his belongings across. You won't be safe here," I told George. "We must go over to my house. The piles are longer, and we will be a bit higher out of the flood."

George protested feebly as Attan and I half dragged him into the canoe and we paddled the few yards across to my house. The rain had stopped. The storm clouds were clearing away and the moon was beginning to appear. However, the water level was still rising and it was now coming well over our floor-boards.

I did not think that we would have to evacuate the house. No matter how much rain came down the river, I reasoned, the level of the Sulu Sea was not going to rise. The tide was due to turn sometime in the early hours and by tomorrow morning, I thought, the flood level would probably have dropped. Mahid produced an impromptu meal which George ate ravenously.

Whilst we were eating, a large log hurtled out of the night and crashed into our veranda. The whole house shook on its piles. We all rushed to the front rail with long poles. With some difficulty, we pushed the log away and watched it disappear into the darkness.

This I realised was now the greatest danger. Obviously, logs from the timber camps upstream were breaking free. If a pile of logs was allowed to accumulate against the house, the posts holding it up would be under immense pressure. At least two men must be on duty the whole time. There were six in the house – Mahid, his sons Thaib and Attan, my driver Benchiron, George and myself.

It was going to be a long night. I drew up an impromptu duty roster. George had quietened down and was behaving quite normally again. I decided that he and I would take the first watch. The others went off to the servants' quarters to comfort the women and children and to try to snatch some sleep.

Log after log was hurtling down the river. We kept a powerful torch trained on the black current. When we spotted a log coming towards us, we stopped it with our poles, guided it along the front of the veranda and it was snatched away downstream by the fierce current.

It was not difficult but it was exhausting work, and we could not relax for an instant. By the time Attan and Benchiron came through to relieve us at 1am, I was almost dead on my feet. George went through to the spare bedroom. I flung myself fully clothed on my bed and dropped off to sleep instantly.

Something woke me. The flood had now come up to the level of the bed. A torch flashed in my face. George was standing beside me. He was shouting furiously and waving a parang. "I'm going to kill you, you bastard. You have drowned my dog." I rolled off the other side of the bed swiftly and backed away. "You haven't got a dog, George."

Attan and Benchiron splashed through with a kerosene lamp to see what the commotion was about. George's mood changed abruptly. He sat down on my bed with his head in his hands and started to sob. "You've drowned my lovely dog. You've killed it." I tried to comfort him. He handed over the parang without any protest.

George seemed almost unable to walk. We half carried him back to the lounge against the current, with the water up to our thighs. We gave a gasp of dismay. While we had been occupied with George, a huge uprooted forest tree had floated into the house. We all pushed at it, but it could not be dislodged. Within minutes, more and more trees and logs piled up behind it.

This was what I had been afraid of. The speed of the current was now terrifying and the roaring noise got so loud we had to shout to be heard. Suddenly there was a loud crack and the house shuddered. We did not need telling that one of the piles had snapped under the weight of the logs.

Lai had by now tied the *Puyoh* in the trees about 30 yards upstream of us, in order to keep it out of the current. With some difficulty he and Tundah managed to manoeuvre it back to the house. Mahid's family piled on to it. His wife Emah and daughters Nordi, Silah, and Norlini, with the new baby wrapped in her arms, were all taken down to the cabin and made comfortable.

As we were collecting a few last-minute items, there were more loud cracks, as post after post snapped under the water. One side of the house started to sink. It was dangerous to keep the boat tied to the steps. We all climbed aboard. Lai cast off and the *Puyoh* battled back against the current to its mooring in the trees.

The moon briefly emerged from a bank of clouds. We stood on the deck, watching silently. There were a few more loud cracks. One side of the house rose high in the air, then it swung round, righted itself, sank a few feet deeper into the water. Then, very slowly at first, it floated majestically off down the river.

Datuk Leslie Davidson
Author, *East of Kinabalu*
Former Chairman, Unilever Plantations International

This is the second part of an edited chapter from the book published in 2007. It can be purchased from the Incorporated Society of Planters; email: isph@tm.net.my

100 facts on Malaysian Palm Oil

PALM VITAMIN E TOCOTRIENOLS

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Malaysian Palm Oil

Malaysian Palm Oil **DOES NOT** require hydrogenation.

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BOOSTS THE HUMAN IMMUNE SYSTEM WITH ITS POWERFUL ANTIOXIDANTS, CAROTENES & TOCOTRIENOLS

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