

Palm Oil in Sabah: boycott or embrace? A view from outside.

Borneo facts

Today's political borders of Borneo were determined by negotiations between the British and Dutch in the early nineteenth century. By drawing a line eastwards from Singapore, these two colonial powers divided Borneo into two spheres of influence: north of the line, the British could exploit the lands that became today's Brunei, Sabah and Sarawak, south of the line the Dutch could expand into what we now know as Kalimantan. At the same time, Britain acquired Peninsular Malaya, the Dutch acquire Sumatra and the other islands of what Alfred Russell Wallace called the 'Malay Archipelago'. These colonial divisions, like elsewhere in the world, have subsequently influenced the borders of emerging nations following independence: today, Borneo is estimated to be 73% Indonesian (Kalimantan), 26% Malaysian (Sabah and Sarawak) with the remaining 1% forming an independent Brunei.

However, then, little was known of the interior of the island and contact with local people was largely confined to coastal towns such as Pontianak and Brunei. Most of Borneo, an island of 287,000 square miles, was quite unknown to the outside world, with communication with the interior being largely confined to river transport. So, what were the British and Dutch going to exploit? The island was long thought to be 'rich in natural resources', for example wood, but as so much of the land was covered in forest, it was difficult to be certain what else was there. Contrast this with Borneo today, where the natural resource of timber has largely disappeared and has often been replaced with imported agriculture, mainly palm oil plantations, greatly contributing to the wealth of Indonesia and Malaysia and making them the two largest palm oil producers in the world by far.

If we look now at Sabah, Sarawak and Kalimantan, it is clear that the rainforests have been exploited: in fact, largely destroyed, to produce timber for many countries. But ask a typical European citizen today, and they may still be unaware of this, to them Borneo is still a mysterious island, mostly covered with rainforest, where exotic animals such as orang utans and hornbills live. However, a debate is now emerging about the commercial activity that is bringing both huge financial profit as well as further destruction of rainforests: industrial-scale palm oil production. It is clear that the land 'freed up' by the logging of trees for timber is now being utilised on a huge scale for palm oil cultivation. The tragic combination of logging, clearing of indigenous people from the land, forest fires to burn off remaining vegetation and then planting of palm oil trees, has been repeated endlessly and on an industrial scale in Borneo. From a commercial point of view this made absolute sense, a 'no brainer', because palm oil is highly profitable, but when considering the survival of indigenous people and the rich forest ecosystems, often an absolute disaster: perhaps an *irretrievable* disaster.

Logging and palm oil: dangerous bedfellows?

That most of the rainforest destruction and subsequent palm production in Borneo has occurred after independence of Indonesia and Malaysia should not obscure the influence of colonialism. It is a huge irony that the key palm oil tree, *Elaeis guineensis*, is not native to SE Asia, rather it comes from West and South West Africa as its specific name suggests; part of coastal West Africa used to be called the 'the Palm Tree Coast'. The British Empire contained some of the countries where the tree naturally occurs and it is widely thought that it was imported to Peninsular Malaya from West Africa in the 1870s.

Today, the planting of palm oil has reached an industrial scale as huge tracts of land in a friendly climate are utilised in Borneo and Peninsular Malaysia. Prior to palm oil, rubber, again a product of an imported tree (this time from Latin America), was an important export and had required well managed plantations and cheap labour, again, often imported. As the price of rubber dropped, the companies owning the plantations were often able to switch to palm oil production and retrained their labourers. Further logging of rainforest enabled profits to be maintained in the sale of timber whilst freeing up more land for palm oil planting. Often it was British companies established in the days of colonial rule that diversified from rubber into palm oil production. Many, such as today's global giant Sime Darby, are now Malaysian owned; many, too, are huge corporations with diverse portfolios. In addition, independence for Malaysia and the incorporation of Sabah and Sarawak to form East Malaysia enabled government initiatives to resettle people and develop new industries. Key amongst these was the creation of the Federal Land Development Authority (FELDA) that was key to the development of palm oil cultivation, particularly in Peninsular Malaysia. This government agency oversaw the apportioning of land to smallholders and their subsequent production of palm oil. Today, FGV, now a global agricultural corporation, which was formerly FELDA Global Venture Holdings, still manages large areas of palm oil estates and smallholdings both in Malaysia and other countries.

In fact, the real expansion of palm oil planting has followed the wholesale destruction of forests in Borneo due to the logging in the 1980s and 1990s. Not all of this was legal, with an estimated 40% of logging in Sarawak and Sabah being illegal in the early 1990s. Such activity exceeded the scale of the more highly publicised operations in the Amazon during the same period. Today, it is Kalimantan where most logging in Borneo still occurs, still sometimes illegally.

Because the interior of Borneo has been relatively inaccessible until recently, much of this logging was able to continue undetected by the outside world. Today, however, enhanced satellite images can more reliably show its extent: an estimated 80% of forests in Sabah and Sarawak have been heavily affected by logging. By 2009, only 8% of Sabah was covered by fully *protected* intact forest, which is almost one third of all of its remaining intact forest; in Sarawak, it is far bleaker: only 3% of land remains covered by protected intact forest. And the demand for Bornean timber continues.

The proven detrimental effects of deforestation by logging are now well documented from many tropical countries in Africa, S.E. Asia and Latin America: logged forests have a reduction in species diversity and abundances of species, as their habitats are destroyed; where large trees are felled, usually smaller, surrounding ones and plants are also eliminated, the loss of canopy results in sunlight drying the soil and killing soil bacteria and fungi, leading to soil erosion. There is now an increased risk of fire. Removal of the timber worsens the habitat destruction and breakdown of the forests' ecosystems. Additionally, the loss of canopy means the impact of rainfall on the forest is changed. with moisture being lost more rapidly and so producing changes in the local weather: the bigger the forest loss, the bigger these changes will be. The list goes on.

Following logging, vast areas of degraded forest are ready for plantation. Setting fire to them effectively clears the land and prepares for the planting of palm oil saplings or other commercial trees. Logging required the building of roads to bring in heavy equipment and to remove the felled timber and so some infrastructure is already in place for subsequent palm oil plantation. Because palm oil is so productive, it will be the crop of choice for owners and

both state and national governments seeking to generate rapid and sustainable income. There is strong evidence that timber production and palm oil production has transformed the Malaysian economy, enabling investment in education and health, for example; however what is less clear is how much money generated by these industries has left the country as profit for the major companies involved and how much has gone to government for the relevant investments. Many of these effects are well documented and now not contested by responsible, legal logging companies, enabling the development of realistic planned and managed logging programmes in Sabah.

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Can we learn from history?

The oil palm has long had a place in West African culture. Chinua Achebe is regarded as one of the great African novelists of the 20th century and became famous for the publication of a trilogy in which he describes the impact of British colonialism and Christianity on the traditional values of his country. In the first of the trilogy, *'Things Fall Apart'*, published in 1958, he describes rural Nigeria in the 1930s where village life is dictated by the seasons and people survive as small-holders, producing staple foods such as yam and palm oil, the latter used for cooking oil, palm wine and oil lamps. These villagers were poor but respectful of, and in harmony, with their environment, relying on but not overexploiting it. In the final volume, *'No Longer at Ease'*, we read how later generations from these rural communities are losing connection with their environment, their plants and traditions, as they move to the then capital Lagos to receive a western education and obtain city jobs. Earning a good salary becomes more important, buying a car and house replace upholding traditional beliefs and caring for the environment.

It is interesting to note that now in Eastern Nigeria, in the twenty first century, palm oil industrial-scale production is being promoted by state governments as a means of generating big profits and this has meant the conversion of land of rural communities into large plantations. History repeats itself. Nor is this new palm plantation in West Africa confined to Nigeria: Liberia, for example, has seen major investment in new palm oil plantation, a notable one being from Golden Veroleum Liberia which has major stakeholders from South East Asia. This particular development, encouraged by the Liberian government and begun in 2010, cites Malaysia as a 'good model for palm oil development and the reduction of rural poverty'. The wheel has come full circle: can West Africa learn from the recent histories of Malaysia and Indonesia?

The villagers described in *Things Fall Apart* probably wouldn't recognise the highly productive palm oil tree planted commercially in Malaysia, Indonesia and now in Nigeria, as it is a hybrid, having a thick-shelled seed for protection and a shell-less fruit for easier extraction of oil. Capable of producing oil 30 months after planting and continuing to do so for 20 years or more, modern palm oil trees are the world's most efficient oil-bearing crop: 6 times more efficient than rape, almost 8 times more than sunflower and 8.5 times more than soya.

It is widely used: in 2017, for example, 61% of palm oil used was for energy production, especially biofuels, and 39% for food, animal feeds and in chemical industries. It is not surprising, therefore, that the current discussion within the European Union over the phasing out of the use of palm oil in transport fuels is of huge importance to Malaysia; it will now be phased out by 2030 but will this make any difference to worldwide palm oil production and its effects on forests and local people?

The future

Conservationists say that the challenge now for Sarawak and Sabah is to achieve a transition away from logging and plantation-based agriculture that has proved so destructive to wildlife. But is this possible? Must 'Things Fall Apart'? They identify three issues that must be resolved, whilst acknowledging that the clock can't be turned back because the damage that has already occurred can't be easily, or can never be, repaired:

- Displacement of indigenous peoples
- Impact on climate
- Impact on native wildlife

A key question must be: what happens to logged forest? Can this secondary forest be protected whilst it is allowed to regenerate? There is hope here, although in the short term it is difficult to see any economic benefit from the prevention of logged forest being planted with commercial crops. Clear battle lines are drawn in the debate on the future of Borneo's forests and wildlife.

Sabah: the conflict between conservation and exploitation of rainforest

Malaysian palm oil is produced in Peninsular Malaysia and the two states of Eastern Malaysia, Sabah and Sarawak. Since this article is about Sabah, we will concentrate on this state: what reasons can we find for optimism about the future of its forests and wildlife? What is the way forward, given that any future planning must acknowledge that many of the changes to the state's forests are at best only reversible over many years or perhaps are often irreversible? In the first 2 decades of the 21st century, to an increasing number of people in Europe, the image of large areas of Sabah has slowly become one

of large estates with trees planted as far as the eye can see. This certainly is the case if driving by car from Kota Kinabalu to Sandakan but in Malaysia as a whole, we should remember that 40% of these planted areas are owned by smallholders. Contrast these smallholders with one of the giants of Malaysian business: Sime Darby Bhd, its name derived from the two British men who founded the company in 1910 to produce rubber. A hundred years later, in 2011, now Malaysian owned, it was claiming a land holding of 850,000 hectares worldwide and in 2018 owned 208 palm oil estates in Malaysia; these are organised into 63 strategic operating units (SOUs), each one comprising a mill and its supplying estates. It is, then, a major player in the Malaysian and international palm oil market; it is a hugely diversified company and does not even derive its major profits from palm oil. Is it even possible to find common ground between such a company and smallholders when examining ways at ensuring ethical palm oil production? However, it should be remembered that LGV, another palm oil giant, manages large amounts of land on behalf of smallholders and so perhaps there is a way forward here.

The Roundtable for Sustainable Palm Oil (RSPO) is an international body established in 2004 to develop sustainable and ethical palm oil production; currently, it is claimed that 19% of worldwide palm oil production is by companies certified by the RSPO as having ethical production, amounting to 12.2 million tonnes, of which 42% is from Malaysia and 51% from Indonesia. The RSPO certification scheme seeks to assess each applying company's policies for both enhancing biodiversity, e.g. how it is affecting surrounding natural forests or rivers, *and* its approach to the welfare of employees and surrounding communities. The first of Sime Darby's SOUs was RSPO-certified in 2008 and, in 2018, they reported that 36 out of 63 SOUs are RSPO-certified. Impressive progress perhaps, but this still leaves 43% uncertified and illustrates

a key point: the majority of Malaysian palm oil is still produced from uncertified plantations, small and large. To put it into figures, in 2018, it is predicted that worldwide production of palm oil will be 65,000,000 tonnes. Malaysia alone will produce an estimated 30% of this: approximately 20,000,000 tonnes per year. Since the RSPO reports that, in total, only 19% will be from certified producers, a simple calculation shows us that most Malaysian palm oil production is still not RSPO certified. Nonetheless, there is an argument that working with companies is better than just criticising the industry as a whole. Sime Darby, for example, can point to its progress with certification.

Furthermore, in Malaysia, the Malaysian Palm Oil Certification Council (MPOCC) offers a further, *national* scheme for monitoring industry standards by monitoring and certifying producers. Again, this scheme aims to promote sustainable management of palm oil throughout the country. Malaysian companies that are RSPO- certified must also be MSPO-certified by the end of December 2018. In its annual report of 2016, the MPOCC indicates that uptake of the scheme has been 'gradual' so that the problems with gaining industry-wide acceptance for this scheme would seem to mirror the international situation with the RSPO initiative. The impression is that whilst some larger and more enlightened companies, with a commitment to sustainable development, are able to complete the certification processes of both MPOC and RSPO, it is more difficult for smallholders, without the necessary resources, to engage with and/or to complete the certification processes. However, in 2017, Sabah went it alone: working with RSPO to produce a state-wide programme aimed at replacing MSPO certification with its own: Sabah Jurisdictional Certified Sustainable Palm Oil (CSPO).

Key questions need answering:

1. Does certification, whether recognised internationally, nationally or at state level, ensure ethical palm oil production?
2. How can the engagement of non-participants, whether companies or smallholders, be achieved?
3. Do local people from all backgrounds understand the impact of the palm oil industry?

The last point is worth considering since it does not seem to be addressed in the certification processes indicated above. Does the RSPO consider education of Sabah's population to the potential benefits and risks of industrial palm oil plantation? Key to such education is surely the involvement of young people, both at school and in further and higher education. Are there initiatives for this? Addressing local issues such as elephant and orang utan displacement and even killing, often reported by local media, could be a key starting point.

The boycotting of palm oil

The movement to boycott the use of palm oil in the manufacture of a wide range of domestic products, including food and cosmetics, and use in biofuels and animal feed has gained a limited momentum in the first two decades of this century, largely because of emerging publicity on the connection between the sheer scale of the palm oil industry in Malaysia and Indonesia and the loss of rainforest in these countries. Although, between them, they share 99% of Borneo, palm oil is also grown in plantations of Peninsular Malaysia and other islands of Indonesia, for example Sumatra. Make no mistake, any boycott would be largely aimed at Malaysian and Indonesian companies; any effects would be on their profits and the economies of these countries.

Boycotting by individuals and perhaps the small companies they control can, perhaps, be summarised as follows *‘having visited Borneo and seen how rainforest has been replaced by palm oil plantations on an enormous scale, I no longer wish to use palm oil in any way. Since such forests are the major habitat of wildlife such as orang utans, I hold the palm oil companies directly responsible for such animals now being endangered.’*

However, some well-known companies have developed ethical approaches to palm oil use: Lush and Body Shop, for example.

Body Shop promotes certified palm oil on its website, and supports this with a 5min WWF video on palm oil in Sumatra, urging people only to buy RSPO certified PO products. Lush goes further, attempting to develop palm oil-free soaps. Its website is hugely informative on the challenges they have faced when developing products that are 100% guaranteed to be free of palm oil. They are also openly critical of the RSPO, for example, that:

- The RSPO is dominated by industry with only 6.7% of members being conservation or social-development groups
- Palm oil producers can become members of the RSPO but do not have to immediately obtain RSPO certification
- World demand for RSPO-certified palm oil is low, with China and India being the biggest users of palm oil without showing significant interest in buying certified palm oil, largely because it is 8-15% more expensive

And so boycotting palm oil is not easy, nor has it really been effective. Palm oil is so often the cheap ingredient in huge array of widely used products bought by people in every country of the world. Its products are in so many everyday goods: from many types of bread, crisps, biscuits, chocolates and instant noodles to many soaps, shampoos and detergents. And let’s not forget pet

foods. Also on the list: the huge 'fast food' chains such as KFC and Pizza Hut (with the same owner, Yum! Brands), McDonalds and Burger King. Next up: fizzy drinks, for example Coca Cola and Pepsi Cola. Boycott all of these? You're joking!

Add to this the importance of palm oil in biofuels, especially biodiesel, and it becomes obvious that boycotting its use, especially in the short term, is unrealistic. Although ethanol, currently, is more widely used, especially in US and Brazil, adding palm oil to diesel to produce biodiesel, is important, for example, in Germany, Europe's largest economy.

Looking at all these uses, it seems obvious that Lush is in a minority when attempting to eradicate palm oil from products. However, some people do actively avoid palm oil and do shop at companies like Lush but often, they are better off financially and so able to buy alternative products and avoid fast foods and fizzy drinks. Poorer people are more likely to buy cheaper food and other products and these will be likely to contain the cheaper ingredients such as palm oil. But it isn't just an economic argument. Multinational companies such as Coca Cola, Yum! Brands and McDonalds have huge budgets for advertising: in the World Cup in Russia 2018, Coca Cola was a World Cup Partner, McDonalds was an Official Sponsor; in both cases the large sums of money they invested are part of sustained, global campaigns to promote positive and healthy images of the companies, helping to counteract criticisms of the effects of their products on global health. It is not just these concerns that they must counteract, but also people's increasing realisation that such companies have huge impacts on the environment, for example rainforests, because of the way they are sourcing their ingredients.

RSPO revisited

It is clear then that many large companies, whether they are palm oil producers, in food services where they are offering food containing palm oil or are manufacturers using palm oil as a component, have no intention of giving up palm oil. It is just too readily available and affordable. Many, therefore, have turned to RSPO certification: there are now over 2000 members of the roundtable, the vast majority being from one of these industries, the small minority being conservation and similar organisations. Coca Cola, for example, became an RSPO member in 2015.

The RSPO has been in existence for 14 years and so it is a good time to attempt to evaluate its successes and failures. There seems now to be an acceptance that certification is the gold standard for the palm oil industry, that having achieved this, a company can be viewed as ethical in its approach to the environment and the human populations, whether employees or people affected by plantation expansion and operation.

The aim of RSPO certification is clear: it is to provide assurance to buyers, manufacturers and consumers that the standard of palm oil production is sustainable, by auditing both production of palm oil and then the distribution of the product along the supply chain. Certified palm oil may be deemed *identity preserved* (palm oil from a single source) or *segregated* (palm oil from different sources) but in either category, they must be kept separate from non-certified oil throughout the supply chain. In contrast, *mass balance* indicates that mixing of certified and non-certified product occurs in a documented process. It starts to sound complicated but of course this reflects the complexity of supply chains in a huge industry composed of both large and

small companies and also smallholders, who will be working with a company and using their facilities, for example milling.

The scheme itself essentially involves the auditing of the applicant by an RSPO-accredited *certification body*; the RSPO lists 27 approved bodies on its website, distributed worldwide. The audit itself involves extensive paperwork by which the certification body determines whether the applicant reaches the RSPO 'standard', which has 8 components (*principles and criteria*) including transparency, compliance to relevant laws + regulations, environmental responsibility + conservation and responsible consideration of employees + local people. Commitment to economic planning and continuous improvement is also audited. If successful, the certification is for 5 years, subject to an annual review. There is some cynicism and criticism of certification: this is surely inevitable when RSPO is so heavily dominated by members from industry, giving the impression of 'self-regulation' that might lack objectivity and obscure bad practice.

On paper, it seems a rigorous process but it is not difficult to predict that large, well-resourced companies with appropriately skilled staff are far better placed to undertake certification than a smallholder, for example, who inevitably will have fewer resources to devote to it. It is also not difficult to predict that by setting and insisting on industry-based standards the RSPO will cause the price of the certified product to be higher than 'ordinary' palm oil. This higher price, together with the demands and rigour of the certification process, might explain why certified oil still only comprises 19% (2017) of palm oil sold worldwide.

Of course, another reason for this low uptake of RSPO certification might be that producers can still sell their palm oil without it being certified. Why bother

with the certification process when it results in a more expensive product and so lower profits? The 81% non-certified palm oil sold annually indicates the huge task facing the RSPO; some would say, it illustrates its failure. To increase certification will obviously require 'consumer pressure' from retailers, food service companies and manufacturers to force producers down the road of certification. Such stakeholders, in turn, must themselves be monitored. The World Wildlife Fund (WWF) has offered one way that these 'users' of palm oil product can be audited to ensure their use of certified product.

In 2015, the WWF assessed 137 companies that together accounted for about 10% of global palm oil use; these were retailing, manufacturing or food service companies and were often the 'economic giants' of their sectors; some were members of the RSPO. It was a relatively crude assessment in which each company was marked out of 9 on a scorecard using criteria in 4 areas relating to their palm oil purchase and usage:

- RSPO membership and annual progress report submission
- Time bound commitment to Certified Sustainable Palm Oil (CSPO)
- Disclosure and knowledge of how much palm oil they used
- How much CSPO they actually used

The last criterion was most heavily weighted as it gave a true indication of how much CSPO was used rather than a company was claiming to be using. The scorecards were based on voluntary questionnaires sent out to the 137. The results can be viewed at www.palmoilscorecard.org and the findings make interesting reading. For example:

- Some big retailers, e.g. Woolworths (Australia) and Walmart (US) scored maximum 9s whilst Safeway (US) didn't reply, which was disappointing as it is an RSPO member

- Many other retailers didn't reply
- Many food manufacturers scored 9s, for example Unilever (Dutch) whereas others, e.g. Nestle (Swiss) (6) and Campbells (US) 2 did not
- In Food Services, there was a range of scores from McDonalds (US) (9) to the Dunkin Brands (US) (1)

The WWF published these results in 2016 but since have not followed up with a repeated the survey. Of course, there may be many reasons for the different scores and it is just a snapshot that is now 4 years old but it does perhaps suggest that there are indicate big inconsistencies in the approach of some of our most familiar food companies. It was interesting to see that RPSO membership didn't guarantee that the company would even return a completed questionnaire, surely an embarrassment to both the company and the RSPO.

Some land is already protected

The future of Sabah's rainforests with their important and often unique species doesn't just rely on control of logging and palm oil production. It should not be forgotten that currently, an impressive 26% of Sabah's landmass is made up of protected forests, equivalent to 1.9 million hectares of land. In 2017, a memorandum of understanding (this is really only a statement of intent between prospective partners) was signed between the *Sabah Forestry Department* and the *South East Asia Rainforest Research Partnership* to increase this to 30% by 2025. To achieve this, requires the identification and protection of a substantial area of land in a country with an expanding population and transport infrastructure. This initiative will involve active management of forested areas so as to achieve:

- a) Expansion of protected forest that will take into account the needs of existing forest-dependent communities
- b) The sustainable logging of protected forest in order to support Sabah's timber industry
- c) Tree planting that will be part of the process of generating new but high yielding forest plantations

It is clear, therefore, that in the state's view forest protection must take into account timber production: a trade-off between logging for profit and environmental protection. The 2017 memorandum of understanding would appear to be the first step of a genuine attempt to develop an integrated approach to forest conservation in Sabah.

At this point, it might be worth examining the already protected areas that make up the existing 26%. Some are designated as *National Parks* and administered by *Sabah Parks*: there 9, of which 6 are marine and so only the remaining 3 are directly relevant here: *Kinabalu*, *Crocker Range* and *Tawau Hills Parks*. These account for 2.6% of Sabah's landmass (265,749 hectares) and are fully protected, aiming to generate income from ecotourism. There are three further categories of protected areas designated by the *Sabah Wildlife Department*:

Conservation areas, e.g. *Danum Valley* and *Maliau Basin*, for the protection of wildlife

'Other Nature Reserves and Sanctuaries, e.g. *Kinabatangan Wildlife Sanctuary* and *Tabin Wildlife Reserve*, which represent 'a strongest conservation category for habitat, flora and fauna'.

Wildlife Hunting Areas that allow regulated hunting but sustainably manage animal populations.

The forests of Sabah are divided into 7 classes:

Class 1: fully protected e.g. Danum Valley

Class 11: commercial: 2,685,119 hectares

Class 111: domestic

Class 1V: amenity

Class V: mangroves

Class V1: virgin jungle forests: small, undisturbed areas

Class V11: Wildlife reserves: as mentioned above

The expansion of protected forest area from 26% to 30% of Sabah's landmass presumably will involve the utilization of some *Class 11*, in some cases converting it to fully Class 1 status (as seen, for example in *The Borneo Project* of 2012 where forest bordering Danum Valley was reclassified as *Class 1* from *Class 11*).

The way forward in Sabah

Conservation in Sabah is complex, as it is everywhere in the world, involving many stakeholders. There is an inevitable tension between protecting an important but fragile environment and the need to provide employment, housing, leisure activities and transport for an expanding and increasingly sophisticated population. It is important to grasp that initiatives aiming to reduce palm oil production may reduce plantation sizes, and so also reduce employment opportunities for local communities. People losing employment may need to be supported by state government and there is a risk that they

might turn to other activities such as illegal logging or hunting to generate income. In addition, what happens to palm oil plantations when no longer productive? Rainforest regeneration on this land may take decades or more, planting of native trees is labour intensive and would need to be followed by protective measures as they grow.

The state and national government have key roles in ensuring that important industries, especially palm oil, timber and tourist can exploit natural resources in an ethical way to ensure opportunities for conservation are maximised. The smallholders and companies in these industries should have a responsibility to work with those in conservation to achieve this and if they fail to do so, there should be effective legislation in place that can be speedily implemented. The officials and departments concerned should be monitored and held to account. All this is easy to write but far more difficult to implement.

The Roundtable for Sustainable Palm Oil and the new Sabah-based certification scheme represent attempts to regulate a powerful and wealthy industry but their success seems limited and slow. Can smaller groups and NGOs achieve more rapid and focused responses to current environmental issues in Borneo?

Local conservation initiatives

Conservationists from within Borneo and from other countries are choosing to develop local initiatives. They may be working in Sabah or elsewhere in Borneo and aim to offer real opportunities for interested people both within and from outside Borneo to become involved with conservation initiatives that address local issues such as: can the 26% (and later 30%) of land covered by protected forest be more effectively utilised for conservation? Can NGOs and other conservationists work effectively with organisations such as the Sabah Wildlife

and Forestry Departments, the tourist industry or the palm oil producers themselves? Here are some examples of local initiatives within Borneo:

1. ***Sabah Environmental Trust***

Promoting and funding for education and conservation activities in Sabah. In 2017 it established an initiative to train patrols in the use of camera traps to monitor illegal activities in Danum Valley and Maliau Basin conservation areas.

2. ***1stopBorneo Wildlife***

Involved in a range of conservation activities: wildlife rescue services e.g. slow loris, *Plant4Borneo*, involving tree planting to establish 13 km wildlife corridor and camera trapping and survey in Tawau Hills; publishing a guide book and boosting wildlife tourism in the Park.

3. ***Planet Indonesia***

Developing village-led partnerships in West Kalimantan: to provide alternative livelihoods for local hunters, helmeted hornbill conservation, education for promoting equality within communities and improving local agricultural productivity.

4. ***HUTAN***

Based in Kinabatangan, East Sabah. In collaboration with *Sabah Wildlife Department*, established *Kinabatangan Orang Utan Conservation Project (KOCP)* for orang utan research with a conservation centre in Kinabatangan wetlands at Sukau.

5. ***PONGO (Palm Oil & NGO Alliance)***

Living Landscapes for Orang utans, People and Oil Palm. An alliance of plantation owners and NGOs that seeks compatibility between the palm oil industry and conservation of orang utans. Working with state government and local people.

6. *Danau Girang Field Centre*

Collaboration between the Sabah Wildlife Department and University of Cardiff for research and training in long-term conservation projects in the Danau Girang area. For example, field work on Malay civets, crocodiles and primates in Lower Kinabatangan Wildlife Sanctuary.

7. *Wild.Cru.org*

Danum Valley, Sabah and Sabangau Forest, Kalimantan. Conservation of the 5 species of Bornean wild cat, especially the Clouded Leopard as a flagship species. Promoting local awareness of threats to Bornean wild cats and job creation in ethical tourism.

8. *The Society of Wilderness Sabah (SOW Sabah)*

An NGO focusing on public education and the promotion of conservation awareness. In particular working with Chinese- speaking communities in Sabah.

9. *Brunei Nature Society*

A well-established environmental organisation in Brunei, raising general awareness of conservation issues both in Brunei and its neighbouring countries.

This is not a complete list of organisations, nor is each synopsis shown here a complete one. However, the 9 listed do share common themes of cooperation with state organisations, involvement with local communities and protection of the local environment. However, NGOs like these are dwarfed by the major palm oil producers and, irrespective of the benefits of their smaller initiatives, it seems obvious that meaningful dialogue and cooperation with palm oil giants such as Sime Darby must become a priority. Some (but by no means all) of the palm oil producers are developing an enlightened approach to cultivation, using certification to demonstrate their commitment to sustainable practices. Given their profits and history of damage to the environment and communities, they should see this as the beginning of their contributions to conservation, rather than the endpoint.

Postscript

In case this article is interpreted as an attempt to take the ‘moral high ground’ in conservation, I point out that I am from UK, where, along with some other European countries, most of our forests were almost entirely destroyed 1000s of years ago by the agricultural activities of our ancestors. In the UK, we now have only 4 areas that could be described as substantial forests.

Currently, large areas of our cleared agricultural land are given over to cultivation of monocultures of food plants such as rapeseed (our palm oil equivalent), barley, sugar beet and wheat. In consequence, many species of animals, including birds, small mammals, amphibians and insects, are seeing well documented and dramatic population declines. Widespread use of pesticides and fertilisers by farmers are now affecting a huge range of our native plants and animals.

