

Assignment

by Barbara Simjak

Submission date: 13-Mar-2020 11:38PM (UTC+0000)

Submission ID: 121965869

File name: 17907_Barbara_Simjak_Assignment_243119_828507808.docx (910.62K)

Word count: 3332

Character count: 18206



Source: own photograph. Petronas Twin Towers in Kuala Lumpur

Barbara Simjak

Student number: 1904930

INVESTIGATION INTO D¹IFFERENTIATION OF CHANGE IN PALM OIL SECTOR IN MALAYSIA.

Futuristic skyscrapers leave no illusions - that's what the future looks like. Kuala Lumpur opens the door to discovering all of Malaysia, a country which hybridize innovations and tradition. This one of ²"Asian tigers" has made an incredible civilization leap in recent decades. The Malaysian economy is described as one of the most dynamic economies in the region of Southeast Asia (Malaysia profile, 2020.) In the Global Competitiveness Report 2019 published in August 2019 by the World Economic Forum, Malaysia was 27th among 141 countries in terms of investment attractiveness. (Schwab, 2020) In the Business 2019 ranking,

developed by the World Bank, Malaysia took 15th place out of 190 indexed countries (up by 9 positions). In November 2019, Moody's rating agency confirmed Malaysia's A3 rating for a stable economy. The biggest contribution to Malaysian budget comes from industrial production (23% of GDP in 2017) (Nathan, 2020), the oil, gas extraction and processing sector (8.4% of GDP in 2017). However, agriculture (8.1% of GDP in 2017) (Department of Statistics Malaysia, 2017)- primarily palm oil production, has a significant impact on the condition of the Malaysian economy. The relationship between oil palms and the Malaysian society is intricate. Oil palm plantations provided job to 429,351 employees (Tang and Al Qahtani, 2019), (Indexmundi, 2020). It helps in improvements to local infrastructure and access to services such as schools and health facilities. However, beyond this data lays a serious issue. Deforestation under palm plantations causes serious global consequences for the environment. The world's demand for palm oil has raised the gross national income at the expense of huge environmental devastation. According to Malaysian government figures, 74% of Malaysia's agricultural land is devoted to palm oil production (Stam, 2020). The fires set with the intention of clearing land for agricultural uses are the main contributors to greenhouse gasses and propelling climate change.



Source: own photograph. National Elephant Conservation Centre in Kuala Gandah.

The increasing temperature of our planet also destroys the habits of elephants, Sumatran tigers, rhinos and orangutans, among others causing rapidly increasing risks for extinction (Lamba, Gupta and Dzever, 2019). Initiatives such as National Elephant Conservation Centre in Kuala Gandah or soon to be open, National Tiger Conservation Centre (NTCC) in Lanchang, Pahang, is the drop in the ocean. Logging to establish new oil plantations ceased to be an issue of the countries of Eastern Asia is ⁷ became a global environmental issue.

Furthermore, the global trend- rising customer awareness about environmental degradation ⁸ forces palm oil producers to change their strategy towards sustainable development.



As stated by the Deloitte report, *Sustainability is a* ⁹ *comprehensive*

approach to management of organizations which is focused on creating and maximizing long-term economic, social and environmental value. It is a response to the

challenges of the modern world facing organizations from the public and private sectors'. (Deloitte, 2019). ¹⁰

The Malaysian Sustainable Palm Oil (MSPO) standard and Roundtable Sustainable Palm Oil (RSPO) are two types of scheme most common in Malaysia. The first one became mandatory for large companies by the end 2019. The other seems to be more seems more desirable and

recognizable in the world. Obtaining the certificate ensures *credible, sustainable and responsible management in order to have a positive social, environmental and economic impact, while minimizing the negative impact, especially on people and the environment.*

(MSPO, 2020),

Recently, the Malaysian government was faced with an additional challenge. At the beginning of 2020, the EU adopted an act on the withdrawal of the palm oil from renewable fuels by 2030 due to concerns about deforestation. While the demand of palm oil used in biodiesel is only a fraction of the global supply, palm oil producers in Malaysia are concerned that the new EU directive is the beginning of restrictions in food regulations of palm oil consumption since the issues of the negative impact on human health of this oil is being raised more frequently.

This journal article will investigate key factors that have an impact on the palm oil industry and for the urgent questions whether Malaysia is really reliant on palm oil production? Shall the Malaysian government focus on diversification of crops or completely turn to other sources of revenue? And if so, what are the alternatives and what impact would that have on the Malaysian economy?

To be able to answer the questions above, both primary and secondary research had to be conducted.

Before the study trip to Malaysia, research based on secondary sources was carried out by looking for Malaysian economic data, especially focused on the Department of Statistics Malaysia, Trading Economics and Statista. During the trip primary research was carried out - personal observation. Just before entering the Sanctuary for elephants, a movie was shown explaining the reasons for establishing the Sanctuary and the procedure for saving the elephants and tigers in the future. In addition, the tour guide was provided with additional data regarding

deforestation. Personal experience of the author of this article didn't bring any particular valuable information to the research.

When referring to the secondary research conducted after the stay in Malaysia, the most noteworthy publications are: economic studies and analyses of Bloomberg and Reuters, IndexMundi which contain detailed country statistics, charts, and maps compiled from multiple sources and the ResearchGate database which has proved to be an invaluable source of information, especially since it consists of a whole range of independent reliable studies.

In the topic of anthropogenic impact on fauna and flora, Forest Research Institute Malaysia and platform Global Forest Watch deserve special attention. These centres promote research results on processes affecting logging of rainforests, their causes and impact analysed from the perspective of economic sciences and forest biology. Promotes multidisciplinary, innovative analytical approaches and research methods.

It is crucial to mention that each research is burdened by the subjectivity. This is inevitable as everyone has their own biases and their own set of values. Nevertheless, it is believed that the conclusions and recommendations presented later in this article are based on the most objective and consistent with the principles of logical reasoning.

During the analysis both quantitative and qualitative research was utilised. Quantitative research is used to explain phenomena by collecting numerical data analysed using mathematical methods, in particular statistics. This data has given insight into the extent of damage caused by anthropogenic activities and the situation on the Malaysian labour market. The economic data on the sale of palm oil were also significant, giving a picture of the scale of the country's dependence on the main source of export. Qualitative research, in turn, aimed to answer the questions about why and how people behave in the way they behave. Information obtained from scientific studies, reports, books and articles in the field of Human Resources,

Marketing and Business Strategy allowed to analyse the main external and internal factors affecting Malaysia's palm oil sector, identify palm oil substitutes and find an alternative direction of changes in agricultural crops.

Following the widely used PESTLE tool that analysing changes in the external business environment was established that the greatest impact on the palm oil sector have social and environmental factors however, economical, legal and political determinants are not insignificant (Mindtools.com, 2020) ;(Perera, 2017). Nowadays consumer behaviour is changing. They pay attention not only to whether the product fully meets their needs, but also to what impact the product consumed has on their health and whether the manufacturer conducts business for the benefit of the community and the environment (Deloitte, 2019).

There are more and more researches from independent experts who indicate that palm oil can be harmful. The European Food Safety Authority – EFSA has published the results of a CONTAM panel study that indicate the highest genotoxicity and carcinogenicity of palm oil and palm fat among all vegetable oils and fats. The harmfulness of action increases with the thermal treatment of palm oil. Therefore, its consumption should be controlled by consumers of all ages, while this is not recommended for consumer in young age groups - up to 18 years (European Food Safety Authority, 2016). Furthermore, EFSA also pointed out that further research is needed on the harmful effects of accumulated consumption of palm oil-based products such as cheese substitutes, cocoa, cake additives etc. ¹

Direct consumption, of processed (refined) palm oil contains large amounts of saturated fatty acids (up to 50%), which has possible links to obesity and diabetes (Harvard, 2019). It can also cause an increase in "bad" cholesterol which might pose some risks to cardiovascular function according to American Heart Association (Sacks, Lichtenstein and Wu, 2017). ²

The impact of palm oil consumption on human health is not the only issue influencing the palm oil sector in Malaysia, the changed approach of customers who are conscious of environmental issues seems to be a main external factor.  33 *...A new era of sustainability is rising, and it's touching every corner of the world. Consumers in markets, big and small are increasingly motivated to be more environmentally conscious and are exercising their power and voice through the products they buy.*'' (Nielsen, 2020)

Deforestation linked to habitat loss is one of the greatest threats to biodiversity, specifically in tropical rainforests where over 50%  34 of the world's documented animal and plant species are found. Logging also directly impacts soil and hydrological cycles, as the reduction in tree cover leads to increases in water runoff and soil erosion.  35 Burivalova, Şekercioglu and Koh, 2014). At the macro level, deforestation by logging in Malaysia, mainly by creating new palm oil plantations, results in the reduction of carbon sequestration capacity and has a direct link to climate change.  36

Desertification of land from logging and timber conversion in the tropics accounts for nearly 15% of global greenhouse gas emissions annually (Global Forest Atlas, 2020).

The study shows that a consumer is more likely to buy good quality products, certified with an eco-logo even if they do not have specific knowledge of what this logo exactly means. (Burivalova, Sekercioglu and Koh, 2014).

Unfortunately, only 42 percent of the 5.85 million hectares under palm oil plantations are

In 2016, RSPO suspended certifications for the IOI Group, due to illegal logging in Malaysia and Indonesia by firing, which caused the largest ecological disaster in the region in 2015. (Beekmans, Wakker and Paul, 2016); (RSPO, 2020). The same year, government planter Felda Global Ventures Holding Bhd. (FGV) announced its withdrawal from the certification system for the origin of palm oil in the RSPO (Roundtable on Sustainable Palm Oil) system (after being caught not complying with RSPO regulations). FGV is the largest grower in Malaysia in terms of crop area, as well as the largest producer of crude palm oil in the world (CPO - Crude Palm Oil). The FGV decision was justified by "... certification requirements being too high", which cover both environmental issues as well as remuneration and benefits for employees hired in plantations. (ADNAN, 2020); (Fgvholdings, 2020). In addition, labour exploitation and human rights abuse is an immense problem within the palm oil sector in Malaysia (human trafficking and child's labour), even on certificated plantations (Sutherland, 2020); (Office of the Undersecretary for Civilian Security Democracy and Human Right, 2017). Despite these issues, the recent study showed that RSPO certification provides an indicator to guide customers toward palm oil purchases associated with overall lower recent loss of high tree cover and primary forests, as well as fire incidence (Carlson et al., 2017).

sustainable in the country and have received the Malaysian Sustainable Palm Oil (MSPO) certification (Bernama, 2019); (MSPO Certification Scheme, 2020).

Sustainable certifications aim to confirm that palm oil cultivation has not caused deforestation and that workers' rights have been respected.

However, sometimes certification is only a piece of paper to the producer and they do not stick to the regulations expected (Cazzolla Gatti, Liang, Velichevskaya and Zhou, 2019).

To evaluate the external environment of the palm oil sector in Malaysia elements of Porter's five forces framework were utilised— especially competitive rivalry and threat of substitution (Porter, 2020); (Berg, Pietersma and Assen, 2017). According to Trade Statistics - global palm oil exports in 2018 by value- the biggest Malaysian rival is Indonesia- 54.5% of total palm oil exports, and, what seems surprising, Netherlands (far behind with 3.2% (ITC), 2020).

Indonesia has a competitive advantage over Malaysia. It has a larger, strong presence in the world market. It also has half of the market share and a cheaper labour force, which has a direct impact on the overall lower production costs and price (Statista, 2020). However, having cheap labour can mean an outflow of workers to richer countries. And that is what is happening, most of the plantation labour in Malaysia comes from Indonesia (Raghu, 2020). Furthermore, as

stated by the IOP Conference Series: Materials Science and Engineering Malaysia wins in technological advancement and engineering, human resource skills and superior external support, such as road infrastructure, regulations and research, development by the industry and government. (Tampubolon and Pasaribu, 2017).³

The other biggest competitor is the Netherlands which only has a small fracture of palm oil market share but 89 % of Nederland's oil comes from sustainable plantations and the government is committed to producing 100% sustainable palm oil by the end of this year (Government of Netherlands, 2020). Taking under consideration current trends, it might suggest that the country is gaining the competitive advantage.

In any case, it seems that the Malaysian palm oil sector faces a bigger threat from substitutes side. Rising demand for palm oil substitutes is mainly linked with rising customer awareness of the environmental impacts of palm oil production. It generates pressure on companies in the market which begin using RSPO certified oil. Some companies turn to organic oils, Fair-Trade certified products (For Business - Fair Trade Businesses, 2020) and other substitutes especially soybean oil and rapeseed oil. (Raghu, 2020)

Since 2012 the global soybean oil supply has been witnessing a robust growth of about 5.2 percent annually and demand will be gradually rising. (Ministry of Foreign Affair, 2020) Palm oil hit parity with soybean oil for the first time since nearly 20 years, reducing its appeal versus other oils and prompting buyers to turn to alternatives. (Palm oil's changing fortunes signal brighter outlook in 2020, 2020)

The cost of raw material production per tonne of rapeseed oil is in the range of 1,000 to 1,200 usd/t as far as Eastern Europe is concerned; typical farms in eastern Europe and Australia have to spend roughly 500 to 700 usd/t.

In soybeans respective costs vary between 400 usd/t in Argentina and Brazil and 800 usd/t in the US. Compared to the results in palm oil, where the typical plantation exhibits cost of production of about 380 usd/t the majority of other crops and production systems are rather expensive (Zimmer, 2010).

Currently, soybean oil is the second most consumed vegetable oil after palm oil in the world, driven by US and Asian demand but also recovery in the biodiesel demand.

Given the increase in demand for soybean and rapeseed oil, it would seem a logical alternative to diversify crops.

However, it was found that *palm oil has the lowest carbon loss and species richness loss per-tonne-oil but has a larger*

impact on range-restricted species than sunflower  46 *rapeseed oil* (Beyer, Durán and Rademacher, 2020) In addition, palm oil is ten times more productive than soy, so nine times less land is needed to produce a ton of oil (Campbell, 2020). The rapeseed oil situation looks similar.

The global rapeseed oil market size was valued at USD 34  47 *billion* in 2018. As the Millennials generation are more focused on health and well-being (Bean, 2020) the product is expected to gain popularity as it is a source of antioxidant vitamin E and monounsaturated fats. Thus, rapeseed oil is expected to act as a key functional ingredient in the formulation of various food products and cosmetic goods on account of its benefits in maintaining personal hygiene and nutritional enrichment (CBI, 2020).

Rapeseed oil is expected to emerge as a prominent oilseed, as it has a much lower saturated fat content compared to palm and soybean oils. It is promoted as an oil that has positive impacts on human health.  48

These oils are used in biodiesel too such as algae oil (Global Industry Analysis, 2019).⁴

The global algae oil market size is expected to reach USD \$2.09 billion by 2025, according to a new report at a CAGR of 4.3% by Grand View Research (GVR, 2020). Oil made of algae has similar properties to palm oil. It is stable, oxidises slowly, is resistant to high temperature

and is healthier. It is rich in omega-3 fatty acids widely known for their health properties and antioxidants. They grow 20–30 times faster than food crops, contain up to 30 times more fuel than equivalent amounts of other biofuel sources such as soybean and palm oil. (Ullah et al., 2014). It seems possible that one day it could replace palm oil. ⁵

There are many determinants affecting production, demand and supply in the palm sector in Malaysia. As stated in the International Journal of Business and Management the key internal factors influencing palm oil are the local control variables such as export prices, exchange rates (Kai Seng and Ahmad, 2017) and government incentives.

Last year, the price of the most consumed cooking oil fell due to high stocks and lower demands caused mostly by environmental issues. In October 2019, Finance Minister Lim Guan Eng announced that tax will amount to 3 percent for exports in the range of 2250-2400 ringgits per ton compared to 4.5 percent at that time. Tax on exports in the range of 2401-2500 ringgits will increase to 4.5 percent, and in subsequent ranges it will grow by 0.5 points up to 8% when the price exceeds 3450 ringgits per ton (Bloomberg, 2019). This reduced palm oil price.

2019 was not a good year for the Malaysian Ringgit either, experienced frequent fluctuation (Malaysian Ringgit | 1992-2020 Data | 2021-2022 Forecast | Quote | Chart | Historical, 2020). Forecasts by Fitch Solutions Macro Research group say that the Ringgit is expected to weaken to RM4.25 to 1 US Dollar in 2020, before rebounding in 2021 (Fitchsolutions, 2020).⁶

If the domestic currency depreciates, this means that domestic currency devalues, and the exchange rate is more beneficial for a buyer. (Reuters, 2020) Thus, this stimulates export and leads to a positive quantity effect on the balance. In effect, by the end of 2019 the export will plummet. However, due to shrinking palm oil reserves, caused by dry weather and a lack of

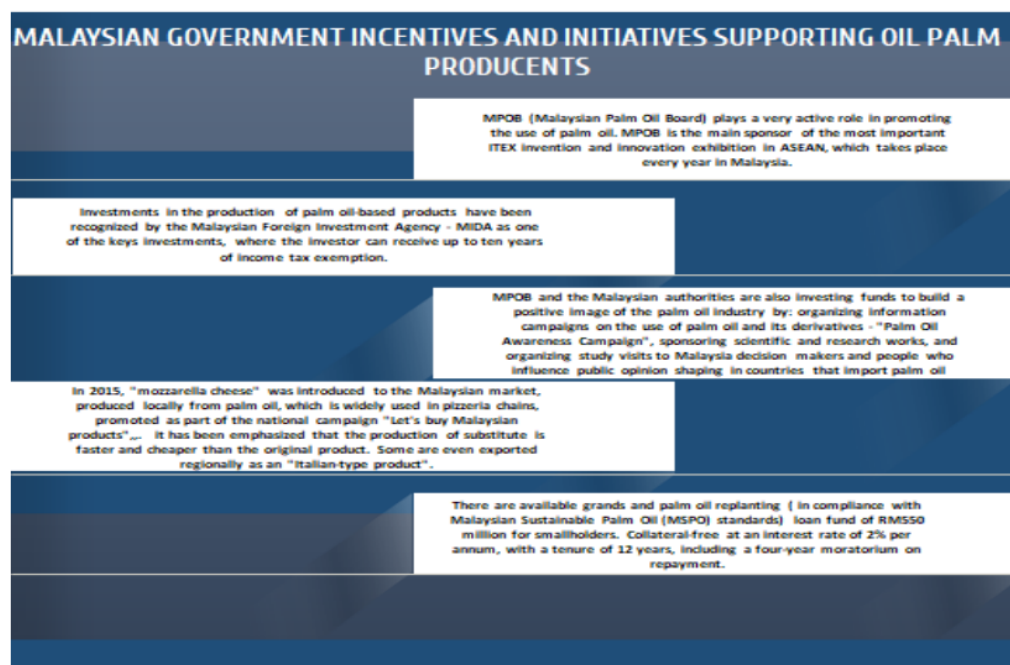
fertilizer application spilling into 2020 palm oil prices rose and the export value decreased at the beginning of 2020.

54

The Malaysian government supports the main product export by countless initiatives and programs supporting the development of palm plantations, especially in the direction of maintaining stringent conditions in the requirements of sustainable management (requirements of certificates).

55

To produce the accurate infographic presented below an array of sources was used: (Mageswari, 2020); (Chan, 2020); (Ahmad, 2020); (Muda, 2020); (2020 Budget: Soft loans for oil palm replanting incentives, 2020).



56

Affordable loans and government grants are particularly important for farmers who are in the process of turning plantations into sustainable ones or fighting high levels of oil pollution. Such initiatives seem to be requisite as Malaysia has officially committed to sustainable

development. In addition, Under the Paris Climate Agreement, Malaysia has pledged to reduce the greenhouse gas (GHG) emission intensity of GDP by 45% by 2030. To achieve this target, Malaysia's economic development path must to become less carbon intensive (OEDC, 2020). To achieve that, Malaysia must take into account all available options.⁷

Paraphrasing the words of Abraham Lincoln, *as we live in turbulent times, we must think anew and act anew*'' (Coutu, 2020). Global trends are constantly changing the world around us affecting every sector on the market regardless of the industry. The ability to adapt to these changes has an impact on the country's level of international competitiveness. Social and environmental factors have the greatest impact on the palm oil sector in Malaysia however, economical, legal and political determinants are certainly not insignificant. Environmental degradation due to palm oil production has taken on catastrophic proportions. Today's customer is different. It requires the palm oil sector to conduct business in accordance with the principles of sustainable development.⁵⁹

The eco logo on packaging often determines the choice of the consumer. Sustainable certifications help to confirm that palm oil cultivation has not caused deforestation and that workers' rights have been respected. Independent research shows that palm oil can have a negative impact on human health which decreases demand for it.⁶⁰

Power of competition is quite high, especially Indonesia due to its stable position and its share of market share. However, the highest power is in the hands of the substitute producers – demand for soybean and rapeseed oil is consistently increasing recently and interest in algae oil is increasing too.⁶¹

Internal factors influencing the palm oil sector are frequent fluctuations of the ringgit currency and palm oil stock. Government incentives and initiatives supporting palm oil manufacturers

which support sustainable development of palm oil plantations have an enormous impact on that sector.

In 1922 H. Weihrich proposed utilising the TOWS framework to establish strategic choices. (West, Ford, Abraham, 2010). The TOWS analyse with proposed strategy was conducted for palm oil sector in Malaysia based on previous key finding found in the SWOT (Speth and Probert, 2018) framework (which is part of TOWS), as can be seen below:

OPPORTUNITIES: • Strong position on the palm oil market. • Rising prices of vegetables and fruit • Potential entrance into a niche market – algae oil – allowing for high profits	STRENGTHS: • Relatively stable economy of the country • Advancement in technology, research, engineering and human resource skills • Well maintained road infrastructure, regulations and research. • Wide range of government incentives and initiatives supporting oil palm products	WEAKNESSES: • Negative impact of palm oil plantations- water pollution, soil erosion and extinction of wildlife. • High cost of adapting lands to what expected by sustainability certifications • Decreased profit caused by increased labour wages • Violations of human rights due to the uses of child labour etc
THREATS: • Frequent fluctuations of the ringgit currency on the financial market • An increasing number of independent studies demonstrating the harmful effects of palm on human health • Rising consumer awareness of palm oil production environmental negative impacts • Rising demand for palm oil substitutes such as soybean, rapeseed and algae oil • Stronger position of Indonesia on the market (around 50 percent of the market share) • EU withdrawal act of the palm oil from renewable fuels by 2030	SO: Investing in algae oil efficient and profitable production through utilising research and technology resources.	WO: Focus on diversification crops by growing profitable vegetables and fruit on existing palm plantations.
	ST: Focus on different vegetable oil utilising in renewable fuels production.	WT: Environmentally focus marketing emphasising rising number of oil palm plantation with RSPO certificates.

Upon the completion of the TOWS framework it was established that Malaysia is not reliant on palm oil production. The proposed strategic recommendations are to combine diversification of crops by growing profitable vegetables and fruit on existing palm plantations and investing in research and technology which enables efficient and profitable production of

algae oil in the future. The investment might be costly at first but in the long term profitable.

These strategic options are in accordance with the principles of sustainable development.

64

At the same time, Malaysia should concentrate on research on different vegetable oils which can be utilised as renewable fuels. Focus on testing a variety of different vegetables oils could result in finding other potential alternatives to palm oil since they could bring great profits.

Implementing marketing focus on emphasising the rising number of palm oil plantations with RSPO certificates would help promote Malaysian business.

65

¹At the same time, experiments carried out at the University of Refrigeration Technologies in St. Petersburg have shown that the melting temperature of palm oil is higher than the temperature of the human body, so it is not absorbed and excreted from the body. Moreover, the studies conducted with children have shown that palmitic acid, together with calcium, forms an insoluble compound in the intestines, which, when removed from the body, causes significant deficiencies in this element, which is crucial for growth and development. (Wojsiat, 2020)

² However, this statement stays in conflict with studies published two years earlier by World Journal of Cardiology that palm oil consumed as a part of a healthy balanced diet does not have incremental risk for cardiovascular disease (Odia, 2015). Thus, it seems to indicate that the previous study missed a human factor – the problem with retaining dietary balance.

³ It may suggest that Malaysia as the fastest developing country in southeast Asia has a chance to finally become a leader in the palm oil market.

⁴ This could lead to the conclusion that concentrating on optimizing existing plantations and future growing areas in accordance with the requirements of sustainable production, would be more effective in reducing the future environmental impact of vegetable oil production rather than replacing one crop with another. However, optimisation of production very often is linked with using genetically changed seeds (GMO) what can be discouraging for people focus on well- being.

⁵ According to the test results algae oil quality is suitable for biofuel production as microalgae ethylic biodiesel has properties similar to other common biodiesels derived from vegetable oils. Furthermore, microalgae are beneficial as they can be produced all year round. Coproducts which stay after oil extraction (such as proteins and residual biomass) can be utilized as feed, fertilizer or can be fermented to produce ethanol or methane. (Adeniyi, Azimov and Burluka, 2018). Besides, they grow in aqueous media and therefore need less water than terrestrial crops (Dismukes et al., 2008). What is interesting, microalgae can efficiently remove the toxic components from water, so could be used as wastewater treatment which makes them suitable to be grown on a large scale. (Kligerman and Bouwer, 2015); However, since, they grow in water, the production would require building artificial water reservoirs, which is associated with large financial outlays, although it would be profitable in the long term. Producing low-cost microalgal biodiesel requires a new technology as well and improvements to algal biology through genetic and metabolic engineering (Paul Abishek, Patel and Prem Rajan, 2014). which is costly and time consuming but can be very profitable eventually.

⁶ The reasons given by him were in particular: the trade tensions between USA and China, upcoming US Presidential elections, ethnic tensions and strives within the government.

⁷ It seems that the Malaysian government is open to suggestions. In an interview with The Straits Times, Agriculture and Agro-based Industry Minister Salahuddin Ayub said that he

takes into account diversification of crops into food crops such as papaya, jackfruit, vegetables, chillies etc. as these product prices are rising. (The Star, 2019). There are some disadvantages of that as it would require changing the sales structure, but it seems to be a small cost in comparison to the potential profit.

References

(Itc), i., 2020. *Trade map - trade statistics for international business development*. [online] trademap.org. Available at: <<https://www.trademap.org/index.aspx>> [accessed 7 march 2020].

2020. *Sime darby. Annual report 2017. From strength to strength..* [online] kuala lumpur: sime darby berhard, pp.20-22. Available at: <http://www.simedarby.com/sites/default/files/annualreport-pdf/sdiar_2017_annual_report.pdf> [accessed 7 march 2020].

2020. *Soybean oil market - global industry size, market share, trends, analysis, and forecast 2016 - 2023*. [online] transparency market research, p.12. Available at: <<https://www.transparencymarketresearch.com/soybean-oil-market.html>> [accessed 8 march 2020].

Abishek, m., patel, j. And rajan, a., 2014. Algae oil: a sustainable renewable fuel of future. [online] available at: <<https://www.ncbi.nlm.nih.gov/pmc/articles/pmc4026879/>> [accessed 4 march 2020].

Adeniyi, o., azimov, u. And burluka, a., 2018. Algae biofuel: current status and future applications. *Renewable and sustainable energy reviews*, 90, pp.316-335.

Adeniyi, o., azimov, u. And burluka, a., 2018. Algae biofuel: current status and future applications. *Renewable and sustainable energy reviews*, 90, pp.316-335.

Adnan, h., 2020. *Fgv sets precedent with withdrawal from rspo cert.* [online] the star online. Available at: <<https://www.thestar.com.my/business/business-news/2016/05/09/fgv-sets-precedent-with-withdrawal-from-rspo/>> [accessed 5 march 2020].

Ahm,ad, k., 2020. *Palm-based mozzarella cheese as pizza topping.* [online] palmoilis.mpob.gov.my. Available at: <<http://palmoilis.mpob.gov.my/publications/tot/tt-252.pdf>> [accessed 7 march 2020].

B.a.m,h.,shahida, s. And fuad, s., 2018. Sustainability certifications and financial profitability: an analysis on palm oil companies in malaysia. *Jurnal pengurusan*, [online] 54, pp.143-154. Available at: <https://www.researchgate.net/publication/333451770_sustainability_certifications_and_financial_profitability_an_analysis_on_palm_oil_companies_in_malaysia> [accessed 1 march 2020].

Bbc news. 2020. *Malaysia profile.* [online] available at: <<https://www.bbc.co.uk/news/world-asia-pacific-15356257>> [accessed 13 march 2020].

Bean, s., 2020. *Work-life balance is especially important to millennials, finds us study - workplace insight.* [online] workplace insight. Available at: <<https://workplaceinsight.net/work-life-balance-is-especially-crucial-to-millennials-finds-us-study/>> [accessed 4 march 2020].

Beekmans, a., wakker, e. And paul, s., 2016. Ioi corporation: rspo suspension? Rspo complaint financially material. [online] pp.2-5. Available at: <<https://chainreactionresearch.com/wp-content/uploads/2016/05/crr-ioi-suspension-analysis-final-revised-may-2-2016.pdf>> [accessed 6 march 2020].

Berg, g., pietersma, p. And assen, m., 2017. *Key management models. The 75+ models every manager needs to know.* 3rd ed. Financial times.

Bernama, 2019. *Kok: only 42 percent of m'sian oil palm achieved msipo certification*. [online] available at: <<https://www.malaysiakini.com/news/487477>> [accessed 11 march 2020].

Beyer, r., durán, a. And rademacher, t., 2020. *The environmental impacts of palm oil and its alternatives*. [ebook] cold spring harbor laboratory. Available at: <<https://www.biorxiv.org/content/10.1101/2020.02.16.951301v1.full.pdf>> [accessed 8 march 2020].

Burivalova, z., sekercioglu, c. And koh, l., 2014. Thresholds of logging intensity to maintain tropical forest biodiversity. [online] pp.16-18. Available at: <https://www.researchgate.net/publication/263089895_thresholds_of_logging_intensity_to_maintain_tropical_forest_biodiversity> [accessed 11 march 2020].

Burivalova, z., şekerciöğlü, ç. And koh, l., 2014. Thresholds of logging intensity to maintain tropical forest biodiversity. *Current biology*, 24(16), pp.1893-1898.

Campbell, r., 2020. *How green are vegetable and rapeseed oils?*. [online] the ecologist, the journal for the post - industrial age. Available at: <<https://theecologist.org/2012/may/16/how-green-are-vegetable-and-rape-seed-oils>> [accessed 11 march 2020].

Carlson, k., heilmayr, r., gibbs, h., noojipady, p., burns, d., morton, d., walker, n., paoli, g. And kremen, c., 2017. Effect of oil palm sustainability certification on deforestation and fire in indonesia. *Proceedings of the national academy of sciences*, [online] 115(1), pp.121-126. Available at: <<https://www.pnas.org/content/115/1/121>> [accessed 6 march 2020].

Cazzolla gatti, r., liang, j., velichevskaya, a. And zhou, m., 2019. Sustainable palm oil may not be so sustainable. *Science of the total environment*, [online] 652, pp.48-51. Available at: <https://www.researchgate.net/publication/328321599_sustainable_palm_oil_may_not_be_so_sustainable>.

Cbi, 2020. *Exporting palm oil alternatives to europe | cbi - centre for the promotion of imports from developing countries*. [online] cbi.eu. Available at: <<https://www.cbi.eu/market-information/natural-ingredients-cosmetics/palm-oil-alternatives/>> [accessed 6 march 2020].

Chan, t., 2020. *Here are the winners and losers from malaysia's 2020 budget*. [online] <https://www.bloomberg.com>. Available at: <<https://www.bloomberg.com/news/articles/2019-10-11/here-are-the-winners-and-losers-from-malaysia-s-2020-budget>> [accessed 8 march 2020].

Coutu, d., 2020. Leadership lessons from abraham lincoln. [online] (april 2009). Available at: <<https://hbr.org/2009/04/leadership-lessons-from-abraham-lincoln>> [accessed 7 march 2020].

Daybreak asia, 2019. *Malaysia finance minister on budget , 1mdb, bond insurance*. [video] available at: <<https://www.bloomberg.com/news/videos/2019-10-14/malaysia-finance-minister-on-budget-1mdb-bond-issuance-video>> [accessed 12 march 2020].

Deloitte, 2019. Sustainability and corporate social responsibility (csr) response to the challenges of the modern world. *Deloitte*, [online] available at: <<https://www2.deloitte.com/ru/en/pages/risk/solutions/sustainability-and-csr.html>> [accessed 7 march 2020].

Department of statistics malaysia, 2017. *Press release selected agricultural indicators, malaysia, 2017*. Department of statistics malaysia, p.1.

Dismukes, g., carrieri, d., bennette, n., ananyev, g. And posewitz, m., 2008. Aquatic phototrophs: efficient alternatives to land-based crops for biofuels. *Current opinion in biotechnology*, [online] 19(3), pp.235-240. Available at: <<https://www.ncbi.nlm.nih.gov/pmc/articles/pmc4026879/>> [accessed 5 march 2020].

European food safety authority, 2016. *Process contaminants in vegetable oils and foods*. Efta.

Fair trade certified. 2020. *For business - fair trade businesses*. [online] available at: <https://www.fairtradecertified.org/business?gclid=cj0kcqjw3qzzbrdnarisaecmryqrjusiboicyxfbbuirm7ck_soubnfasgj8u2hnapaxou54zzq_hdsaarenealw_wcb> [accessed 13 march 2020].

Fgvholdings, 2020. *Fgv withdraws rspo certificate*. [online] fgvholdings.com. Available at: <https://www.fgvholdings.com/press_release/fgv-withdraws-rspo-certificate/?print=pdf> [accessed 7 march 2020].

Fitchsolutions, 2020. *Global dovish turn to benefit malaysian ringgit*. [online] fitchsolutions.com. Available at: <<https://www.fitchsolutions.com/country-risk-sovereigns/economics/global-dovish-turn-benefit-malaysian-ringgit-29-03-2019>> [accessed 6 march 2020].

Globalforestatlas.yale.edu. 2020. *Logging | global forest atlas*. [online] available at: <<https://globalforestatlas.yale.edu/forest-use-logging/logging>> [accessed 11 march 2020].

Government of netherlands, 2020. *The netherlands committed to 100% sustainable palm oil in europe*. Government of netherlands, p.1.

Gvr, 2020. *Algae oil market size worth \$2.09 billion by 2025 | cagr: 4.3%*. [online] grandviewresearch.com. Available at: <<https://www.grandviewresearch.com/press-release/global-algae-oil-market>> [accessed 13 march 2020].

Hedstrom, g., poltorzycki, s. And stroh, p., 2019. *Sustainable development: the next generation of business opportunity*. [ebook] arthur d. Little. Available at: <<https://www.greenbiz.com/sites/default/files/document/o16f4954.pdf>> [accessed 9 march 2020].

Hirschmann, r., 2020. *Topic: palm oil industry in malaysia*. [online] www.statista.com. Available at: <<https://www.statista.com/topics/5814/palm-oil-industry-in-malaysia/>> [accessed 11 march 2020].

<https://www.mpocc.org.my/mspo-certification-scheme>. 2020. *Mspo certification scheme*. [online] available at: <<https://www.mpocc.org.my/mspo-certification-scheme>> [accessed 11 march 2020].

Indexmundi, 2020. *Malaysia economy - overview - economy*. [online] indexmundi.com. Available at: <https://www.indexmundi.com/malaysia/economy_overview.html> [accessed 13 march 2020].

Kai seng, k. And ahmad, m., 2017. Factors influencing malaysian palm oil export demand in long-run and short run. *International journal of business and management*, [online] (2590-3721), pp.204-205. Available at:

<<https://www.ijbmjournal.com/uploads/2/6/8/1/26810285/031-ijbm-204-210.pdf>> [accessed 11 march 2020].

Kligerman, d. And bouwer, e., 2015. Prospects for biodiesel production from algae-based wastewater treatment in brazil: a review. *Renewable and sustainable energy reviews*, 52, pp.1834-1846.

Lamba, j., gupta, b. And dzever, s., 2019. *Industrialization and global warming (a brief case analysis of palm oil production : indonesia)*. [online] hal, pp.1,7. Available at: <<https://hal.archives-ouvertes.fr/hal-02265821>> [accessed 13 march 2020].

Mageswari, m., 2020. *Palm oil awareness starts with malaysians*. [online] the star online. Available at: <<https://www.thestar.com.my/news/nation/2019/01/09/palm-oil-awareness-starts-with-msians>> [accessed 7 march 2020].

Mindtools.com. 2020. *Pest analysis: identifying big picture opportunities and threats*. [online] available at: <https://www.mindtools.com/pages/article/newtmc_09.htm> [accessed 7 march 2020].

Mindtools.com. 2020. *Porter's five forces: - understanding competitive forces to maximize profitability*. [online] available at: <https://www.mindtools.com/pages/article/newtmc_08.htm> [accessed 6 march 2020].

Ministry of foreign affair, 2020. *Exporting palm oil alternatives to europe*. Cbi, pp.5-8;10-12.

Mspo, 2020. *Mspo - malaysia sustainable palm oil*. [online] certifications. Available at: <<https://certifications.controlunion.com/en/certification-programs/certification-programs/mspo-malaysia-sustainable-palm-oil>> [accessed 7 march 2020].

Muda, m., 2020. *Nvestment opportunities in food technology industry in malaysia*. [ebook] food technology & sustainable resources division malaysian investment development authority. Available at: <<https://www.mida.gov.my/env3/uploads/events/jan2015/mida.pdf>> [accessed 7 march 2020].

Muli, w., 2020. Soybeans 2020 outlook: bullish prices to be expected. *Market outlook*, [online] available at: <<https://seekingalpha.com/article/4325186-soybeans-2020-outlook-bullish-prices-to-be-expected>> [accessed 9 march 2020].

Nathan, l., 2020. *Manufacturing sector looks positive in 2018*. [online] the malaysian reserve. Available at: <<https://themalaysianreserve.com/2018/03/13/manufacturing-sector-looks-positive-in-2018/>> [accessed 13 march 2020].

Nielsen, 2018. *The evolution of the sustainability mindset*. [online] nielsen, pp.1-3. Available at: <<https://www.nielsen.com/us/en/insights/report/2018/the-education-of-the-sustainable-mindset/>> [accessed 4 march 2020].

Nielsen.com. 2020. *Global consumers seek companies that care about environmental issues*. [online] available at: <<https://www.nielsen.com/eu/en/insights/article/2018/global-consumers-seek-companies-that-care-about-environmental-issues/>> [accessed 11 march 2020].

Nst online. 2020. *Moody's cuts global sovereign rating outlook to 'negative' for 2020; msia to face economic slowdown*. [online] available at: <<https://www.nst.com.my/business/2019/11/537707/moodys-cuts-global-sovereign-rating-outlook-negative-2020-msia-face-economic>> [accessed 13 march 2020].

Nst online. 2020. *2020 budget: soft loans for oil palm replanting incentives*. [online] available at: <<https://www.nst.com.my/news/government-public-policy/2019/10/528973/2020-budget-soft-loans-oil-palm-replanting-incentives>> [accessed 13 march 2020].

Odia, o., 2015. Palm oil and the heart: a review. *World journal of cardiology*, 7(3), p.144.

Oecd, 2020. *Oecd economic surveys malaysia july 2019 overview*. Oecd, p.51.

Office of the undersecretary for civilian security democracy and human right, 2017. *Trafficking in persons report 2017 by office of the undersecretary for civilian*. 1st ed. Government printing office, p.211.

Paul abishek, m., patel, j. And prem rajan, a., 2014. Algae oil: a sustainable renewable fuel of future. *Biotechnology research international*, 2014, pp.1-8.

Perera, r., 2017. *The pestle analysis*. 1st ed. Nerdynaut, pp.9 -11.

Porter, m., 2020. *Competitive strategy: techniques for analyzing industries and competitors*. 3rd ed. Createspace independent publishing platform, pp.15-18.

Preusser, s., 2015. *Correlating economic and financial viability with sustainability for palm oil plantations*. [online] kuala lumpur: rspo, pp.3;35-36. Available at: <<http://file:///c:/users/barbara%20simjak/downloads/correlating%20economic%20and%20financial%20viability%20with%20sustainability%20for%20palm%20oil%20plantations%20report%20-%20english.pdf>> [accessed 4 march 2020].

Publishing, h., 2019. *By the way, doctor: is palm oil good for you? - harvard health*. [online] harvard medical school. Available at: <https://www.health.harvard.edu/staying-healthy/by_the_way_doctor_is_palm_oil_good_for_you> [accessed 11 march 2020].

Raghu, a., 2020. *Labour crunch hurts malaysian palm oil growers as indonesians stay home*. [online] u.k. available at: <<https://uk.reuters.com/article/us-palmoil-labour/labour-crunch-hurts-malaysian-palm-oil-growers-as-indonesians-stay-home-idukbrea3q0p320140427>> [accessed 7 march 2020].

Reuters, 2020. *Vegoils-palm on track for second day of gain as ringgit weakens*. [online] in. Available at: <<https://in.reuters.com/article/asia-vegoils/vegoils-palm-on-track-for-second-day-of-gain-as-ringgit-weakens-idinl4n22q1gd>> [accessed 7 march 2020].

Rspo, 2020. *Notice to rspo members on the suspension of ioi group's certification | articles*. [online] rspo - roundtable on sustainable palm oil. Available at: <<https://rspo.org/news-and-events/announcements/notice-to-rspo-members-on-the-suspension-of-ioi-groups-certification>> [accessed 12 march 2020].

Sacks, f., lichtenstein, a. And wu, j., 2017. Correction to: dietary fats and cardiovascular disease: a presidential advisory from the american heart association. *Circulation*, [online] 136(10). Available at: <<https://www.ahajournals.org/doi/10.1161/cir.0000000000000510>>.

Sacks, f., lichtenstein, a., wu, j., appel, l., creager, m., kris-etherton, p., miller, m., rimm, e., rudel, l., robinson, j., stone, n. And van horn, l., 2017. Dietary fats and cardiovascular disease:

a presidential advisory from the american heart association. *Circulation*, [online] 136(3). Available at: <<https://www.ahajournals.org/doi/10.1161/cir.0000000000000510>> [accessed 11 march 2020].

Schwab, k., 2020. *Insight report,the global competitiveness report 2019*. Geneva: insight report, world economic forum, p.15.

Speth, c. And probert, c., 2018. *The swot analysis*. 3rd ed. Pearson, pp.10-17.

Stam, c., 2020. *Malaysia relies on sustainable palm oil to keep entry into european market*. [online] www.euractiv.com. Available at: <<https://www.euractiv.com/section/agriculture-food/news/trashed-61/>> [accessed 4 march 2020].

Statista, 2020. *Indonesia: share of palm oil plantations by administration 2018 | statista*. [online] statista. Available at: <<https://www.statista.com/statistics/1082374/indonesia-share-of-palm-oil-plantations-by-administration-type/>> [accessed 13 march 2020].

Sutherlin, l., 2020. *Labor exploitation and human rights abuses within the palm oil sector - rainforest action network*. [online] rainforest action network. Available at: <https://www.ran.org/press-releases/labor_exploitation_and_human_rights_abuses_within_the_palm_oil_sector/> [accessed 5 march 2020].

Tampubolon, n. And pasaribu, m., 2017. The role of oil palm companies in indonesia as a nation's competitive advantage. *Iop conference series: materials science and engineering*, [online] 237, p.012036. Available at: <<https://iopscience.iop.org/article/10.1088/1757-899x/237/1/012036/meta>> [accessed 6 march 2020].

Tang, k. And al qahtani, h., 2019. Sustainability of oil palm plantations in malaysia. *Environment, development and sustainability*,.

The economic times. 2020. *Palm oil's changing fortunes signal brighter outlook in 2020*. [online] available at: <<https://economictimes.indiatimes.com/markets/commodities/news/palm-oils-changing->

fortunes-signal-brighter-outlook-in-2020/articleshow/72864165.cms> [accessed 6 march 2020].

The star online. 2019. *Malaysia turning to food crops as palm oil price falls*. [online] available at: <<https://www.thestar.com.my/business/business-news/2019/09/10/malaysia-turning-to-food-crops-as-palm-oil-price-falls>> [accessed 11 march 2020].

Tradingeconomics.com. 2020. *Malaysian ringgit | 1992-2020 data | 2021-2022 forecast | quote | chart | historical*. [online] available at: <<https://tradingeconomics.com/malaysia/currency>> [accessed 13 march 2020].

Transparencymarketresearch.com. 2019. *Rapeseed oil market - global industry analysis, size, share 2016 - 2024*. [online] available at: <<https://www.transparencymarketresearch.com/rapeseed-market.html>> [accessed 4 march 2020].

Ullah, k., ahmad, m., sofia, sharma, v., lu, p., harvey, a., zafar, m., sultana, s. And anyanwu, c., 2014. Algal biomass as a global source of transport fuels: overview and development perspectives. *Progress in natural science: materials international*, [online] 24(4), pp.329-339. Available at: <<https://www.sciencedirect.com/science/article/pii/S1002007114000860>> [accessed 3 march 2020].

Wilton, 2019. *Consumer purchase habits change to favor environmentally conscious brands*. *toluna 2019 sustainability report: consumers hold brands responsible*. [online] <https://uk.toluna.com/#/>, p.12. Available at: <<https://www.businesswire.com/news/home/20191104005034/en/>> [accessed 5 march 2020].

Wojsiat, j., 2020. Olej palmowy na celowniku. *Kwartalnik portalu biotechnologia 1/2017*, [online] (1/2017). Available at: <<https://biotechnologia.pl/informacje/olej-palmowy-na-celowniku,16762>> [accessed 7 march 2020].

Zimmer, y., 2010. Cost effectiveness of palm oil in comparison to other oils and fats in the country with special emphasis on lower income group. *Journal of oilseed brassica*, [online] p.7. Available at: <<https://www.ufop.de/files/6313/9290/2452/m-competitiveness-yz-2010.pdf>> [accessed 5 march 2020].

Assignment

GRADEMARK REPORT

FINAL GRADE

/100

GENERAL COMMENTS

Instructor

An interesting topic which has great potential. Initially the article becomes journalistic in style which you must be careful of as this is an academic article and not a news article. Unfortunately your work needs proofing through out and references needs attention.

Despite this there is some good research and consideration of the issues in order to reach clear conclusions and recommendations. You could however have developed fully issues of sustainability through out.

ACADEMIC CRITERIA FEEDBACK

1. RESEARCH INFORMED LIT

A mass of detailed research and consideration of studies and statistical evidence. It is however a great shame that it is let down by some referencing needing some attention.

11/20

2.KNOWLEDGE & UNDERSTANDING

A very good knowledge and understanding of the topic is demonstrated although you could have further developed this using more detailed sustainability considerations and models.

12/20

3. ANALYSIS

Good discussion of the issues and the problems caused by the industry in order to reach clear conclusions and strategic recs

11/20

4. PRACTICAL APPLICATION & DEPLOYMENT

Some good use of concepts and frame works but this

could be further developed especially following on from the sustainability focus of the VC at IUMW

11/20

5. SKILLS FOR PROFESSIONAL PRACTICE

Discussion was developed but your work would benefit from greater structure and synthesis. The use of images could be expanded upon to develop the impacts of the article with regard to sustainability impacts and most importantly to improve your grade you need to ensure you proof read your work so all referencing is Harvard style for all sources.

Please read through all my detailed comments designed to help you = Most importantly proof reading, structuring, developing underpinning theories and synthesis will improve your grade.

Referencing needs attention

11/20

Provisional Grade subject to moderation and exam board 56%

Moderation

Mark agreed.

The work just meets the criteria for a pass at Masters, but going forward the student needs to be conscious of her writing style, the robust underpinning of her work with appropriate literature and the utilisation of criticality.

I think the topic was quite unusual and challenging. However, I would have liked to have seen more critical discussion/evaluation over the issues with Malaysian palm oil, both refined and crude, and the two most obvious and interlinked reasons are claims of deforestation and unsustainability.



Comment 1

title needs proofing



Comment 2

proof



Comment 3

mass of info - need to stay focused and start with intro to scene set and then develop issues in depth



Comment 4

do not start sentences with however and use paragraphs to break up your discussions and create structure and synthesis



Comment 5

needs paragraph - structure



Comment 6

lang



Comment 7

and



Comment 8

confused - needs proof reading



Comment 9

evidence and discussion needed



Comment 10

date



Comment 11

define sustainability and how this relates to economy and tourism



Comment 12

referencing needs further attention to follow Harvard style



Comment 13

relate this to Dr Tang's presentation on the trip regarding sustainability and his publications



Comment 14

fraction?



Comment 15

discuss in order to draw conclusions



Comment 16

or do you mean agriculture industry, need to consider the amount of state control



Comment 17

discuss



Comment 18

develop this academically

PAGE 5



Comment 19

Dr Tang presentation at IUMW was relevant too



Comment 20

did not - need to be independent



Comment 21

relate to dates and sources and need full referencing if you are referring to specific studies



Comment 22

their?



Comment 23

need to create independence and non bias to ensure the research is reliable and valid



Comment 24

did you collect numerical data or did you analyse secondary numerical data?



Comment 25

secondary

PAGE 6



Comment 26

?



Comment 27

to offer strategic recs



Comment 28

needs proofing



Comment 29

keep it academic



Comment 30

evidence and presume you mean research



Comment 31

dates



Comment 32

don't start sentence with therefore

PAGE 7



Comment 33

References need attention and to be indented



Comment 34

source



Comment 35

you need to proof check references and punctuation



Comment 36

evidence needed for this

PAGE 8



Comment 37

define and discuss



Comment 38

discuss



Comment 39

do not start sentences with however



Comment 40

proof read



Comment 41

need to use the evidence for this



Comment 42

do not start sentences with and

PAGE 9



Comment 43

spell check



Comment 44

could Malaysia do this?



Comment 45

good discussion

PAGE 10



Comment 46

referencing needs attention



Comment 47

source?



Comment 48

could Malaysia switch?

PAGE 11



Comment 49

date



Comment 50

no comment



Comment 51

relate this to £ or \$ so it has meaning



Comment 52

Tables needed to be used to consider this fully and the same with the palm oil price



Comment 53

but brings in less money per unit - need to apply macro and micro economic theory

PAGE 12



Comment 54

overall - or +?



Comment 55

evidence



Comment 56

good - but evaluate this further

PAGE 13



Comment 57

date



Comment 58

sustainability or marketing theory would underpin this well



Comment 59

There is strong research that consumers are now influenced by sustainable practices



Comment 60

from who and by who?



Comment 61

relate this back to the source

PAGE 14



Comment 62

no comment



Comment 63

spell check



Comment 64

good concs and recs



Comment 65

foot notes needed to be related to the discussions and included in the findings t develop issues where relevant