

Sustainable Development Goals – Benchmark for the Palm Oil Industry

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The Sustainable Development Goals (SDGs) are designed to achieve a better and more sustainable future for mankind. The SDGs focus on the three dimensions of sustainable development: economic prosperity, social inclusion and environmental sustainability. The SDGs aim to eradicate poverty, hunger and inequality; to improve welfare and fulfilment of livelihood; to create peace and social participation; to prevent the planet from environmental degradation and to promote partnership to attain SDGs by 2030. The SDGs encourage countries and the private sector to support and advance these goals. SDGs provide the framework for guiding and gauging a corporation's business action and set benchmarks against which they will be held accountable. The palm oil industry is made up of large, medium and small sized entities. They all have different capabilities to commit to these strict sustainability standards. This paper reviews the sustainable practices of the large oil palm plantations and the palm oil industry matching them against the SDGs with the objective to examine and identify where further advancement can be made by the industry to move forward. Gaps are identified and presented in this paper.

Keywords: UN SDG, palm oil, sustainable development.

The Sustainable Development Goals (SDGs) to transform the world by 2030 was adopted by the 193-member states of the United Nations (UN) on 25 September 2015. The SDGs are built on the Millennium Development Goals (MDGs) agreed by governments in 2000. In the SDGs, dimensions on economic development, infrastructure and environment have been added.

The SDGs' principles entail "Universality", "Integrated" and "No-one left behind". "Universality" means the SDG is implemented by both developed countries and developing countries; "Integrated" means the SDG integrates social, economic and environmental dimension and "No-one left behind" means the SDG benefits all, especially vulnerable ones and involves all stakeholders.

The SDG is action oriented, bridging all three social, environmental and economic dimensions. The SDG is comprised of 17 global goals. The goals focussed on "People" which aims to eradicate poverty, hunger and inequality; on "Planet" which aims to prevent the planet from environmental degradation; on "Prosperity" which aims to improve welfare and fulfilment of livelihood; on "Peace" which aims to create peace and social participation that is free from fear and danger and on "Partnership" which promotes partnership to attain sustainable development goals. The goals are interlinked between them. The Economy-Environmental interlinks are energy efficiency, renewable energy, green technology; the Social-Environmental interlinks are conservation policies, environmental justice, growth, waste

management and the interlinks between Social-Economic aspects are business ethic, fair trade and benefits for workers. There are 169 targets and 241 indicators to measure progress toward reaching the targets (<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>).

All countries are obliged to take ownership and establish a national framework for achieving the 17 Goals. The focus is on development and economic prosperity without damaging the planet and ensuring that all people enjoy peace and prosperity. The SDGs are not legally binding but countries have a crucial responsibility with regard to the progress made in implementing the Goals and targets over the next 12 years.

The Governments play the role in issuance of regulations and implementing national strategies in meeting the SDGs. The Indonesian Government issued three Decrees; the Presidential Decree on achieving the SDG, the Ministerial Decree on coordination, planning, monitoring, evaluation and reporting of the implementation of SDG and the Ministerial Regulation on formation of implementing team, working group and expert team of the SDG 2017-2019. The SDG National Coordinating Team are from government, parliament, civil society organisation and the private sector. The SDGs are grouped under four pillars: The Social Pillar deals with decent life, education, health, equal opportunities, good governance. The Economy Pillar deals with growth and profit, sufficient infrastructure, decent work, research and development. The Environment Pillar deals with prevention of pollution and environmental degradation, conservation of biodiversity. The Justice and Governance Development Pillar deals with the justice and governance development. (Sardjunani, 2018).

The Malaysian government has articulated its commitment to the SDGs through a

Voluntary National Review 2017 (<https://sustainabledevelopment.un.org/content/documents/15881Malaysia.pdf>). Subsequently, the Malaysian Government has announced at the 12th Asia-European Union (EU) Meeting Summit in October, 2018 in Brussels that the “Malaysian Palm Oil Industry is highly regulated, surpasses sustainable development goals” (Azizah, 2018).

The Council of Palm Oil Producing Countries (CPOPC) is an intergovernmental organisation for palm oil producing countries. Both, Malaysia and Indonesia, the world’s biggest palm oil producers, are the founding father of the Council. CPOPC endeavours to expedite the achievement of seventeen objectives of UN’s SDGs 2030. The intention is for palm oil to be at the forefront of achieving SDGs within the vegetable oil sector and palm oil can be seen as a benchmark of sustainability approved by UN (Siregar, 2018).

The private sector has to take on a much bigger role to advance these goals in their businesses. The palm oil industry in Malaysia and Indonesia has made good strides on sustainable development in the last 15 years. The SDG provides the framework for guiding and gauging sustainability performances and set benchmarks against which they will be held accountable. Corporations need to translate the SDGs into more accessible and engaging for the audience. That having said, the palm oil industry is made up of large, medium and small sized entities. It is acknowledged that the vast majority of the small and medium sized entities have not been able to demonstrate sustainable practices, and have just focussed on profitability and exploitation. They all have different capabilities to commit to these strict sustainability standards. Large entities are able to make tangible differences across all seventeen Goals. For example, Lord (2018)

organised the SDGs into a “cake stand” with SDG 17 (partnership) being the Base Goal, SDG 12 (responsible consumption and production) being the Pillar Goal and the rest of the SDG forms the Core and Peripheral Goals to support the Pillar Goal. Most medium and small size entities do not have the capabilities to meet these goals and in many instances have to choose the ones that have most relevance. The smallholders require assistance in institutional support including government support to meet these sustainable practices. Notwithstanding these limitations, many plantation companies have met national sustainability certification standards i.e. Indonesian Sustainable Palm Oil (ISPO) in Indonesia and Malaysian Sustainable Palm Oil (MSPO) in Malaysia and voluntary sustainability certification standards such as the Roundtable on Sustainable Palm Oil (RSPO). These plantations are able to demonstrate good practices especially social and environmental sustainability.

This paper reviews the industry’s collective sustainability initiatives and match these against the UN SDGs. The objective is to examine and identify where further advancement can be made and the gaps are identified to move forward. The review outcomes are presented below.

ADVANCING THE SDG IN THE PALM OIL INDUSTRY

Social-economic development goal

Rural development

The palm oil industry is the catalyst of change in rural areas and spurred tremendous developments directly and indirectly in the rural towns and communities and contributes to the eradication of poverty. The crop is amendable

to small scale farming which has motivated smallholders to grow oil palm contributing to about 40 per cent of the world palm oil production (Ramdhani, 2017; Hasan, 2017a). Oil palm development provides jobs to 17 million Indonesians and 3 million Malaysians who make their living either directly or indirectly from the industry (Hasan, 2017b; Azizah, 2018). The opening up of the rural towns and areas has brought in infrastructures and spurs economic activities as well as enable the children to catch up with their urban counterparts through the availability of digital connectivity and other modern facilities (*SDG 1- “No Poverty”, SDG 9 - “Industry, Innovation, and Infrastructure”*).

Economic development

Palm oil is a major export earner in Indonesia and Malaysia, generating tremendous revenues for the country and plays a significant role in the country’s gross domestic product (GDP). For example, in 2017, Indonesia exported 31.05 million tonnes of palm oil which generated USD22.97 billion (Sitanggang, 2018) and 1.7 per cent of Indonesian GDP in 2017 (Hasan, 2018 - per com.). Malaysia exported about 16.56 million tonnes of palm oil generating about USD12.5 billion and 4.8 per cent of GDP in 2017 (<http://bepi.mpob.gov.my/index.php/en/>). Wealth sharing with the local communities are through smallholder oil palm development and CSR projects (*SDG 8 - “Decent Work and Economic Growth”*).

Health and wellbeing

Palm oil is the largest vegetable oil crop consumed in the world. It currently stands at 33 per cent of the world vegetable oil production (FAOSTAT, 2014). Palm oil is not a genetically modified organism (GMO) and is therefore safe in feeding the world. Palm oil is consumed in many countries as vegetable oil which is a rich

source of pro-vitamin A in the form of carotenoids. Refined red palm oil is used for the treatment and prevention of vitamin A deficiency in many countries. Palm oil is rich in antioxidants in the form of carotenoids and vitamin E. Palm oil is a balance oil containing 50 per cent saturated (mainly palmitic acid), 40 per cent monounsaturated (mainly oleic acid) and 10 per cent polyunsaturated. Palmitic acid, though saturated, is neutral and does not raise blood cholesterol level. The polyunsaturated fatty acid contents in palm oil is linoleic acid [C18.2 (n-6)] which is essential in human nutrition. Like all vegetable oils, palm oil is cholesterol-free. Palm oil contains no trans-fat (www.palmoilworld.org/nutrition.html) (*SDG 2 - “Zero Hunger”, SDG 3 - “Good Health and Well-Being for People”*).

Environmental - economic development goal

Sustainable production

Oil palm is the most productive crop in terms of land use as compared to other vegetable oils due to its high productivity (FAOSTAT, 2014). To produce enough vegetable oil to meet the world demand in 2025, palm oil is a more sustainable choice as it would require smaller area as compared with the temperate oil seeds (Fry, 2015) (*SDG 2 - “Zero Hunger”, SDG 3 - “Good Health and Well-Being for People”*). Oil palm is the most energy efficient crop. The oil palm energy balance in terms of the ratio of output to input is 9.6 compared with 2.5 in soybean and 3.0 in rapeseed grown commercially (Wood & Corley, 1993; El Bassam, 2010). Energy generation in oil palm plantation is from renewable sources from mill by-products such as empty fruit fibres and empty shells. The electricity generated from these by-products are supplied to workers’

housing and office complexes. Where methane generated from the palm oil mill effluent ponds are captured, the surplus electricity generated from the biogas are connected to national grid for the local communities (*SDG 7 - “Affordable and Clean Energy”, SDG 8 - “Decent Work and Economic Growth”*).

Commercial planting of oil palm in Malaysia and Indonesia has existed and thrived for over a hundred years and has proven that it is the most competitive oilseed crop. Innovation has been the cornerstone of the palm oil industry, maximising productivity, improving production efficiency and quality, and increasing value creation by expanding the palm oil value chain. New technologies, initiatives and extensive research in the past and the continuing research in the area of oil palm agronomy as well as improvement in planting materials has led to a four-fold yield increase from 1950 to 1991. This has made palm oil the most cost-efficient vegetable oil crop (Davidson, 1993). Palm oil is relatively cheaper to produce than other vegetable oils (Gan & Ho, 1994; Fry, 1996). Research and development (R&D) on yield improvement through shorter palms for ease of harvesting the fruits and breeding of drought and disease resistant with increased yields are continuing. Technological development in genome innovation aimed for breakthrough in oil palm yields, reducing the need for more land will make palm oil production more efficient and sustainable. Palm oil has a range of unique characteristics (Corley & Tinker, 2003). Innovative research in the mid and downstream has widened palm oil utilisation in food, industrial, personal care and energy sectors making palm oil the most versatile vegetable oil (*SDG 8- “Decent Work and Economic Growth”, SDG 9 - “Industry, Innovation, and Infrastructure”*).

Implementation of sustainable agriculture

in palm oil production includes planting of N-fixing leguminous cover crops to enrich the soil, elevating soil organic matters by recycling of palm biomass within the field, recycling of palm oil mill by-products such as treated palm oil mill effluent, empty fruit bunches, decanter solids through land application. Integrated pest management by planting of beneficial plants to promote natural predators for leaf-eating pests and breeding of barn owls for control of rodents to minimise pesticide usage. Cultural practice such as zero-burning to preserve the soil and reduce air pollution. Adoption of zero-burning policy in new and replanting and partnership with local communities in zero-burning reduce release of carbon dioxide into the atmosphere and avoid formation of haze (*SDG 12 - "Responsible Consumption and Production"*).

Identification and estimation of the potential sources of greenhouse gas (GHG) emission and sinks of carbon from existing oil palm operation and new plantation enables identification of the potential hotspots. This is now integral part of oil palm management in certified plantations (Gan & Henry, 2016 a&b). In addition, a number of companies are disclosing their carbon footprint on company wide and mitigation measures through disclosure in the Carbon Disclosure Project (CDP) initiated by industry members and concerned stakeholders (<https://www.cdp.net/>). Designing of new oil palm development in minimising net GHG emissions has been implemented. Commitments on no deforestation, no peat planting in new oil palm planting and eliminating leakages on deforestation, peat land development in the supply chain to reduce vulnerability against the effects of climate change is an on-going process. Methane capture enables reduction of GHG emission in oil palm cultivation (*SDG 13 - "Climate Action"*).

Water footprint is calculated using the water consumption model developed by Hoekstra *et al.* (2011). The amount of water consumed by oil palm from rain (green water), the amount of surface and groundwater consumed in the plantation activities and milling process (blue water) and the amount of freshwater that is required to assimilate the contaminants' load (grey water) have been calculated. Both direct and indirect water footprint are included. The water footprint information will help companies to identify the hotspots in water consumption and take steps to minimise the impact on its water footprint (Gan & Cai, 2018) (*SDG 6 - "Clean Water and Sanitation"*).

Best agronomic practices such as soil and water conservation practices, frond placement and training of workers on safety and to avoid agrochemical run-off and leaching are implemented. Mill processing implement zero discharge by recycling solid and liquid wastes to land application as nutrients for the oil palm. River water quality tests are carried out regularly by accredited laboratories and reporting to the authorities. Engagement programmes with local communities on water stewardship and corporate social responsibility (CSR) projects on sanitation and water supplies are implemented in partnership with the local communities (*SDG 6 - "Clean Water and Sanitation"*). Keeping the rivers which run across the plantation healthy is a precursor to conservation of marine biodiversity. Protection and conservation of aquatic ecosystem such as wetlands within the plantation enhances aqua biodiversity and hydrological services (*SDG 6 - "Clean Water and Sanitation", SDG 14 - "Life Below Water"*).

Riparian reserves and buffer zones are conserved and protected. Riparian buffers are vital elements of watersheds, primarily due to their protection of surface and groundwater

quality from impacts related to human land use. Many plant and animal species depend on the distinctive habitat of riparian buffers. Protecting riparian reserves and buffer zones enhances aquatic biodiversity in the rivers in the oil palm plantations (Giam & Wilcove, 2015). Forested buffers improve habitat quality by providing shade that cools water temperatures, thereby elevating the dissolved oxygen content that is necessary for many species of fish and aquatic insects. If large enough, buffers also provide corridors essential for terrestrial wildlife movement. Implementing soil and water conservation practices, minimising run-off, prevent soil erosion and training of workers in pesticides spraying, timely fertiliser application and zero discharge from palm oil mills helps to minimise water pollution and silting of rivers. Responsible management of domestic waste and proper waste disposal are essential for keeping the health of rivers (*SDG 6 - "Clean Water and Sanitation"*, *SDG 13 - "Climate Action"*, *SDG 14 - "Life Below Water"*).

Responsible production

Environmental responsibility and conservation of natural resources and biodiversity in oil palm plantations has been established in addition to the sustainable agronomic practices in the production of palm oil. Implementation of biodiversity-friendly management practices in oil palm agriculture by identifying and preserving habitats of high conservation value to minimise losses in natural habitats and biodiversity from oil palm agriculture is an integral part of the plantation operations. The plantation ecosystem does harbour a variety of wildlife and plants. The prevalence of epiphytes on palm trees and amount of ground vegetation cover have positive effects on the diversity of birds in oil palm plantations (Koh & Gan, 2007a&b). Stewardship on environmental responsibility and conservation

of natural resources and biodiversity has become more apparent in many oil palm plantations since the advent of the RSPO sustainable standards in 2004 (<http://www.rspo.org/>). This is in addition to the sustainable agronomic practices that have been implemented in the last many decades (*SDG 12 - "Responsible Consumption and Production"*, *SDG 13 - "Climate Action"*).

The palm oil industry has made efforts in their sustainability appraisal and practices adhering to both the nationally obligatory sustainability certification standards (<http://www.ispo-org.or.id/>, <http://mpocc.org.my/>) as well as global voluntary sustainability certification standards (<https://www.rspo.org>, <https://www.iscc-system.org>) with compliance verification by certification bodies and assessors (Gan, 2009; Ibrahim, 2014; Simon, 2014; Tang, 2014). As of October 2018, 14.5 million tonnes of certified sustainable palm oil has been consumed worldwide (Nevertheless, this constituted about 50 per cent of the certified sustainable palm oil produced). In the Roundtable Meeting (RT 15), RSPO reported that new development land use plans between January 2015 and August 2016 and has managed to avoid 1.4 million tonnes CO₂ e which would have been emitted if those new developments had proceeded without following RSPO P&C (<http://www.rspo.org>). Efforts are also ongoing to assist smallholders and to collaborate with them to adopt sustainable practices (Hasan, 2017 a&b) (*SDG 12 - "Responsible Consumption and Production"*, *SDG 13 - "Climate Action"*).

Social – environmental development goal

Transparent production

More progressive players in the palm oil industry making commitment on NDPE (no

deforestation, no peat and no exploitation) and to plant oil palm only in low carbon stock areas (<https://www.musimmas.com/>, <https://www.wilmar-international.com/>, <https://goldenagri.com.sg/id/>). Since 9 November 2018, the RSPO member companies are obliged to comply with the NDPE requirements as the revised Principle and Criteria has included these elements (www.rspo.org). The palm oil industry is also encouraged to adopt the Palm Oil Innovation Group sustainability criteria (Noleppa & Carlsburg, 2016). Palm oil companies' sustainable practices are monitored *via* score cards developed by the civil society and NGOs (non-governmental organisations). The score cards are indicators and measures to gauge how companies fare both in their public commitment and practiced implementation on delinking their production and supply chain from deforestation, peat land development and worker exploitation. Scores are used to compare comparative performances of various companies to ensure high standards are maintained (*SDG 12 - "Responsible Consumption and Production"*).

Protect people's well-being

Enhancing workers' rights and safeguarding communities' livelihood and food security is an essential part of the sustainable practices. Recognition of human rights, empowerment of women and provision of children's health care and welfare and to promote inclusivity are imminent (*SDG 16 - "Peace, Justice and Strong Institutions"*). Large oil palm plantations provide workers' and their families' essential needs such as clean and safe water, housing, hygienic sanitation and waste facilities. In most plantations, treated water are supplied to the housing complexes. Training and provision of education on hygiene, clean and safe water consumption and sanitation are

provided. Responsible agrochemical and domestic waste management and disposal procedures are adhered to (*SDG 6 - "Clean Water and Sanitation"*). Workers within the plantation are provided land to grow horticultural crops such as leafy and fruit vegetables, fruit trees in the workers' housing complex. For the local communities, corporate social responsibility projects include smallholder oil palm development, poultry livestock, ruminants and aquaculture and village development projects. Oil palm companies also provide leadership on best agricultural practices and zero-burning techniques to the local communities in growing crops thereby increasing productivity and preserving soil health for sustainable agriculture (*SDG 2 - "Zero Hunger"*).

Health care and education

Children in the plantations are provided health care. Children's medical and health care coverage include access to essential medicines and vaccines, immunisation, child care nutrition improvement and children care centres (*SDG 3 - "Good Health and Well-Being for People"*). Oil palm companies provide children of plantation workers and nearby communities access to free quality education and learning facilities provision in classrooms. Computer learning, sports, farming, sustainability education, musical bands, cultural activities etc. form part of the extra curriculum. Scholarships and corporate social responsibility educational projects for the communities' children are also provided (*SDG 4 - "Quality Education"*).

Protect women's rights

Policies for gender equality in the plantations include assurances that women receive all the rights and benefits provided under the country's laws and benefits afforded by the International

Labour Organisation (ILO) Conventions as well as provided for in the respective countries' laws and regulations. Entitlement includes menstrual leave, non-discriminatory pregnancy tests, light work replacement during pregnancy, respect for women's right to maternal leave, breastfeeding corners and child care facilities. Access to grievance mechanism, policy on prevention on sexual harassment and establishment of the gender committee to discuss and address issues pertaining to women's grievances e.g. menstruation leave, breastfeeding policy, sexual assaults and domestic abuses. Eradication of child labour forms an integral part of plantation operations (*SDG 5 - "Gender Equality"*).

Equal opportunities

Non-discrimination policy and equal opportunities regardless of sex, race, ethnicity, religion and origin are in place and implemented in oil palm plantations. Ensuring legal minimum wages are paid to reduce inequalities of income and adequate living wages are implemented. Freedom of association and bipartite negotiations with workers' representatives on collective agreements on working conditions and remunerations ensures amicable employer-employee relationship. Grievance procedures and bipartite meetings and engagement are accessible to the workers. Job opportunities are well advertised in the villages and vocational training opportunities opened to school leavers from the villages (*SDG 10 - "Reducing Inequalities"*). Employer-employee's responsibilities to ensure occupational health and safety in the workplace are emphasised. Training and education are provided on safe handling of hazardous chemicals and prevention of air, water and soil pollution and contamination (*SDG 3 - "Good Health and Well-Being for People"*, *SDG 6*

- *"Clean Water and Sanitation"*).

Partnership and collaboration

The industry has made significant progress through several platforms for discussion of problems and identifying solutions for collaboration and partnership such as RSPO, High Carbon Stock Approach (HCSA), Palm Oil and NGO Alliance (PONGO Alliance) and Palm Oil Innovation Group (POIG). Industry members have collaborated intensive research on sustainable initiatives with reputable universities and institutions as well as with international stakeholders (*SDG 17 - "Partnerships for the Goals"*). Companies have provided assistance to and worked in partnership with smallholders to improve their sustainable practices and increase their productivity. Motivational programmes with local communities on fire-free villages to curtail open burning have also been implemented. This is particularly so in Indonesia where the Fire Free Alliance participation by several companies have seen successful engagement and education on no-open burning. Engagement with local communities on conservation and water stewardship on landscape level partnership is becoming a norm (*SDG 11 - "Sustainable Cities and Communities"*). Efforts are ongoing to assist smallholders and to collaborate with companies to adopt sustainable practices and developing more social standards with stakeholders. Companies are disclosing their carbon footprint and mitigation measures through disclosure in the CDP initiated by industry members and concerned stakeholders (<https://www.cdp.net/>). At country level, the CPOPC seeks to increase productivity and welfare of millions of smallholders as well as to reset global narratives to promote the image of palm oil to be at the

forefront of achieving SDGs within the vegetable oil sector so that palm oil can be seen as a benchmark of sustainability approved by the UN (Siregar, 2018) (*SDG 17 – “Partnerships for the Goals”*).

DISCUSSION AND CONCLUSION

Responsible production of palm oil

The palm oil industry in Malaysia and Indonesia has made good strides on sustainable development in the last 15 years. A number of oil palm companies have been certified under global sustainability standards and complied with the nationally obligatory sustainability certification standards. Going beyond certification, companies have made public commitments and are working in partnership and/or collaborated with stakeholders to fulfil the NDPE to strengthen their sustainability commitments. The industry has also put in concerted efforts in social responsibilities and partnership with the local communities to maintain social harmony and wealth sharing. Partnership and collaborative efforts have also been made to elevate the productivities of the smallholders as well as to assist them in adopting sustainable practices. Concerted efforts in eliminating leakages in deforestation, planting on peat, illegal farming and exploitation of local communities and workers in the supply chain are being made. Within these contexts, the palm oil industry can be regarded to be in a strong position in advancing the UN SDGs. That leaves the way open for businesses to take on a much bigger role, the SDGs provide the perfect framework for guiding and gauging a company's purpose. Oil palm companies have built alliance and are actively involved in multiple platforms and collaborations with stakeholders and other growers. Companies have been

involved in managing expectations of the customers, investors, finance houses, social NGOs and environmental NGOs and communicate on the commitments and reporting of progress of the SDG targets (Lord, 2018).

Shortfall of the palm oil industry

Notwithstanding, there are still gaps highlighted by media and NGO reports, and the cases tackled by the RSPO Complaints System (Delgado, 2018). There is a strong call for more commitments on fulfilment of human rights and to ensure that the rights of workers and of local and indigenous communities impacted by the production of palm oil are not violated. If embraced by all, strictly implemented, and supported by the right structures and mechanisms (for monitoring, verification, reporting and continuous improvement), this could be transformational for the palm oil industry (Delgado, 2018).

Deforestation-free palm oil production will be key for achieving the ambitious global targets related to halting deforestation in the SDG and the United Nations Global Forest Goals (Muller, 2018). Intensifying smallholder production will help meet a strong growing demand for palm oil without further deforestation. Participatory and integrated land use planning is essential. The principle of Free Prior Informed Consent (FPIC), the Voluntary Guidelines for Responsible Governance of Tenure of Land etc. should be applied. Harmonising the existing certification standards and supporting the access of smallholders to certification schemes would help further promote sustainability of palm oil production (Muller, 2018).

Consumer companies, traders and producers of palm oil have committed to NDPE. If properly enforced, they will help to

reduce climate change and tackle the regional haze crisis. Urgent priorities are transparency on landholdings, so companies can prove that they are not involved in rainforest destruction (Taufik, 2018).

The popular perceptions of palm oil have been sensationalised by media where bad news on palm oil erases all the good that the industry has done. The palm oil today has a unique opportunity to tell its stories through the certification schemes and sustainable practices. The industry has to adopt a global approach where palm oil becomes an answer to the need for vegetable oils and green energy (Hii, 2018).

Advancing SDG in palm oil production

In conclusion, sustainable agriculture is considered key to mitigate climate change and its impact, protect the natural resources and ecosystem services supply, conserve biodiversity, and contribute to better livelihoods for rural communities. Sustainable agriculture programmes and initiatives can be a major driver of change within the food chain systems and further contribute to the sustainable development worldwide (<https://theconversation.com/explainer-the-worlds-new-sustainable-development-goals-47262>). In this context, the palm oil industry is a force for positive change and has a significant role in advancing these sustainable development goals, a new benchmark for the palm oil industry to demonstrate measurable outcomes of the industry's sustainable practices. The palm oil industry is very diverse in reality. On one end of the spectrum there are large multinationals with hundreds of thousands of hectares of land with financial and capable resources; on the other end of the spectrum there are smallholders each with about 2 ha of land who are lacking financial and technical know-how. Between them exist thousands of small to

medium size holdings. They all have different capacities to commit to these strict sustainability standards. Large multinationals are able to tangibly make a difference across all seventeen Goals. Medium size plantations have to choose the ones that have most relevance for their business. National and governmental assistance to provide institutional support and policy to assist the small players. Jurisdictional approaches by provincial and state governments have been initiated and this should set the framework for others to follow. What is necessary is for the individual palm oil industry players to advance the SDGs further focusing on the targets and indicators which are relevant to their business and capability and use these as baselines for measurement of their sustainable performances.

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This review collated published information and information on field and management practices from the communication platforms of companies, from media and from companies' sustainability reports. The sustainable practices are common across the companies and are general compliance to the certification standards, hence no references were made on this source of information in this review. The author wishes to acknowledge with gratitude and thanks to these companies as well as to the numerous authors of the literatures cited in this review.

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