CONTRIBUTIONS OF THE MALAYSIAN PALM OIL INDUSTRY TOWARDS THE UN SDGS

THE 17 UNITED NATION SUSTAINABLE DEVELOPMENT GOALS ARE ADOPTED TO AIM TOWARDS A BETTER FUTURE FOR EVERYONE.

Decent Work and Economic Growth

SGD 8 B DECENT WORK AND 8 DECENT WORK AND

Decent Work & Economic Growth

MPO is one of the strongest national economic resource & it can attract foreign investments and trades to increase exports.

Entrepreneurial opportunities are widely available and all these leads to the strengthening of the economy.

Job opportunities for both local and foreign worker will drastically increase which can help to *alleviate poverty*. (Constant engagement between authorities must be carried out to ensure sustainability and workers' welfare.)

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Climate Action



Climate Action

Waste POME residues can be processed and used as fertilizers which can help to decrease GHG (CO2 and N2O) emissions.



B20 - A *biodiesel fuel* with a 20% palm oil content is planned to be implemented in Malaysia which shows a drastic *decrease in GHG* emissions from cars.

HOW CAN MPO FURTHER CONTRIBUTE TOWARDS THE SDGS?

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

SGD12 Responsible Consumption & Production



A rainwater harvesting system can be utilized for watering of the palm tree plantation instead of clean water usage which can serve other needs.

With a single species plantation over a wide area it will eliminate forest biodiversity. To prevent the severity of the damages, the *plantation can be strategically positioned* in selected regions of an area to maintain biodiversity. Large-scale deforestation will usually be require for a plantation. However, it will cause an imbalance to the ecosystem of forest. To prevent this, the *usage of an exmining land* can be used for plantation instead.

In Malaysia, numerous of ex-mining land are yet to be developed and are left barren. This will be a sustainable way to make use of it.

IPOSC INTERNATIONAL PALM OIL SUSTAINABILITY CONFERENCE 2022

Palm Oil Processing Special Interest Group



CHIAW KHER AI/ NG JIANG LE CHEMICAL/MECHANICAL MONASH University Engineering



Palm Oil is Gree

: Achieving environmental sustainability in MPC

Background

The palm oil industry has been constantly accused as the main culprit of environmental issues. However, the global demand on palm oil cultivation grows higher, e.g., OP plantations grew by 5.06Mha at an estimated growth rate of 83.5 % between 2010 and 2018.^[1]

In aspiring to be 'green', the Malaysian Palm Oil (MPO) industry is well-aware that their longterm achievement relies highly on the sustainability of natural resources and so the MPO industry has made significant commitments towards accomplishing the UN Sustainable **Development Goals (SDGs).**

What has MPO industry contributed ??



MSPO Certification

- Has developed a circular economy by creating a selfregenerative system
- · Is mandatory for OP plantations, independent smallholdings, and PO processing facilities
- · Comprises 7 governing principles as guidelines for mitigating OP agricultural impacts
 - "No deforestation. No peat. No exploitation"



-to reduce soil erosion and minimize nutrient loss through runoff -such as Mucuna bracteata (deep rooting system)

To balance the carbon released into and removed from the atmosphere

Net Zero Policy

Methane capture - by capturing and converting the biogases produced into renewable energy



Electrostatic Precipitators (ESP) - by filtering and removing harmful particulate matter from waste gas

PROSPER: Expected to limit the total particulate emission to below 150 mg/Nm3.^[5]

Filter Belt Press (FBP) - by applying pressure to remove organic solid matters form Palm Oil Mill Effluent (POME)

582.18 mt 68.37% GHG nission/mt savings CPO *compared to fossil fuel

Forest Reservation & Reforestation



Collab with BORA on wildlife habitat restoration project

9,314 Conserve hectares diversity protection

SDGs achieved **CLEAN WATER** AND SANITATION

AFFORDABLE AND CLEAN ENERGY









Terraced planting

39%

uction of

runoff

hectare

 to minimize surface runoff. which greatly reduces soil erosion

• Protection of Riparian Buffer Zone which is the vegetated areas near to streams

preserve water -to entering quality the waterways bu intercepting chemical residuals runoff





- A practice of land clearing without burning to remove the oil palm tree residue in order to conserve the environment and to ensure PO sustainability

[9]

Zero Burning Technique

- Replanting oil palm to oil palm
 - Felling, shredding and stacking
 - Extensive pulverization
 - Windrowing without shredding of palms
 - Planting of young palms on residue piles



- Nutrient retention and recycling
- Soil preservation
- Moisture conservation



biodiversity Funding conservation studies in MPO industry



Achieved 55.3% Malaysia's forest cover rate with an area of 18.27 million hectares ! ^[8]

How can MPO industry contribute ??



Monitoring forest cover loss in certified plantations regularly and implementing sanctions against members who do not follow the MSPO standards

Channeling funds collected from MSPO into ecosystem conservative actions around the plantations, e.g., biobanking and land sparing scheme



Reducing the usage of pesticides by using biological pest control agents, i.e., Integrated Pest Management (IPM)

FUND



for

Reforestation of Tinbarap Conservation Area (TCA)





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The contributions of MPO industry towards Malaysia's SDGs

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SUSTAINABILITY CONFERENCE

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SDG 7

SDG

SDG 1

&

SDG 2

The oil palm planted area 10%, the poverty rate 10%Oil palm planted area in 2019 is **5.90 million** hectares. [12] helpful to no Crude palm oil production in 2019 **19.86 million** tonnes. [12] zero hungry. The poverty rate fell from 49.3 % in 1970 to 5.6% in 2019. [10]





How the MPO

NI-SCOPS—Netherlands

WHAT YOU NEED TO

PALM OIL INDUSTRY?

ABOUT MALAYSIA'S

CONTRIBUTIONS OF THE MPO TOWARDS THE UN SDGS

SDG 1: **NO POVERTY**



National Initiatives for Sustainable **Climate Smart Oil Palm Smallholders** (NI-SCOPS)

- The PO industry employs approximately 2.3 million people with *well-paying jobs* in Malaysia [1].
- Helped tens of thousands of small-scale farmers *acquire* land in Malaysia [1].
- Produce landscapes that are more *economically robust* and socially just [2]. • Improve the livelihoods of smallholder farmers and workers to *alleviate poverty* [2].





SDG 8: DECENT **WORK AND ECONOMIC GROWTH**



Malaysian Sustainable Palm Oil (MSPO)



- FACTS 34.3% 65.7% MALAYSIA IS ONE OF THE WORLD'S Malaysia's palm oil LARGEST exports around the world PALM OIL Other countries' palm EXPORTER. oil exports
 - 25.8% of the world's palm oil was produced in Malaysia in 2020 [3].
 - Malaysia contributed **9.1%** and **19.7%**, respectively, to the world's production and exports of oils and fats in the same year[3].
 - National certification *scheme* for palm oil processing facilities, independent smallholders, and oil palm fields. [4].
 - To prolong the sources for **palm oil industry** by providing safe and secure working conditions to provide undamaged economic growth towards Malaysia [4].

HOW CAN MPO FURTHER CONTRIBUTE TOWARDS THE UN SDGS





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WASTE-TO-WEALTH TECHNOLOGY **TOWARDS SUSTAINABILITY OF PA OIL INDUSTRY IN MALAYSIA**



WHAT IS WASTE-TO-WEALTH?

A concept to address the environmental problem by changing the traditional view of biomass waste as an end product to be fully utilized in multifarious industries for worldwide beneficial.



73.9 mil MT of palm

oil consumption

in 2021/2022

Т

Н

0



Malaysia's biomass waste is around 122.4 mil MT in 2020



Waste is disposed in landfills, burned or composted to organic feed/fertilizer



Planted area is ~5.757 mil hectares in 2021



MPOC

Contribution on GDP worth RM36.9 billion (37.1%)^[1]



Only 10% wastes are utilized as biomass energy, biocomposite, organic feed etc







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SDG9: Industry, Innovation and Infrastructure

• Develop sustainable, resilient and inclusive infrastructures

Palm oil industry promote development in rural area. **Example:** Sarawak palm oil industry as catalyst for rura development [10]

ight in workers



Create employment opportunities for food, logistic supports and mobile communications vendors

Infrastructure development

Example: roads, water and electricity supply • Upgrade all industries and infrastructures for sustainability

Production yield of palm oil industry increases with time as the facilities and technologies develo such as POME, FFB. [12]



Example: Palm oil industry can be net zero carbon by 2040. [11]

- By increasing oil extraction rate (OER), the yield and sustainability can be increased.
- Itilization of hiomass such as nalm oil kernel

SDG17: Partnerships to achieve sustainable development goals

• Encourage effective partnership Availability of smallholders in Malaysia palm oil industry. Example: Smallholders contribute to 40% of palm oil production. [13] [14]

Giving rises in smallhold

mpty food branches for generation of renewable nergy used in downstream process in palm oil ndustry.

Create sustainable agricultura production and supply chains

ТΜ

03

Worker Welfare (SDG 8)



Protection of worker welfare will be ensured by the effective implementation of sustainability certifications like the Roundtable for Sustainable Palm Oil (RSPO). A revolutionary piece of guidelines for the oil palm industry, the "Decent Living Wage", which was adapted from the Global Living Wage Coalition Methodology, was released by RSPO in June 2019. [9]



All workers in RSPO-certified units will be paid with more livable wage. The worth of the prevailing wages they pay to their workers will be determined. The development and implementation of standard operating procedures (SOPs), which include guidelines on workplace protections like Personal Protective Equipment (PPE) and safe working conditions as well as a commitment to meet or exceed local national minimum wages are guided by RSPO standards for members managing their workforce. [9]

Through independent certification, it helps to promote environmentally and socially responsible palm oil production and use throughout the palm oil supply chain as well as to enhance the environmental and social awareness of the palm oil industry in Malaysia. [8]



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