

HOW DOES MALAYSIAN PALM OIL SUPPORTS UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (SDGs)

UN Sustainable Development Goals, or SDGs, that were included in Agenda 2030, are a set of goals to end poverty, protect the earth's environment and climate, and ensure that people everywhere can enjoy peace and prosperity. Since Malaysia was the second largest importer of palm oil in the world and constituted about 38% of the Malaysia's agricultural output value, how can Malaysian Palm Oil (MPO) support UN





Personal Care and Cosmetics Industries

- Palm oil, which is one of the common natural ingredients for many personal care and cosmetics products enable consumers to apply it to our body safely.
 According to Treehugger (2021), palm oil contains high content of vitamin E, texture-hearting for the said and hearting for the said and heart and heart
- boosting fatty acids, and natural alcohols that gives a desirable emollient property.
 The high fat content properties gives the soap products more solid.



Biodiesel and Biofuel Industries

Food industries

- Palm oil was categorized as one of the antioxidants as it is rich in Vitamin E. Hence, the shelf-life of palm oil can be very long at low free fatty acid (FFA).
- Besides that, palm oil is very versatile compared to other types of oils as it can withstand high temperatures and in semi-solid form at room temperature.
- The rate of oil extraction for palm oil (19%-21%) is higher than other types of oil, indicating that it offers lower costs on food production while ensuring the food security and food quality.



P&G

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1. Attract investments to rural areas

By attracting more people working in the suburban or rural areas on oil palm plantations or related industries, there are more new residential areas will be developed. Some important infrastructures such as schools and hospitals will be built for the citizens. It will also directly reduce the inequalities between rural and urban areas when more people decided to move out of cities.

2. Improve sustainability of the cities

An increasing amount of waste produced from palm oil production will attract the engineers and scientists to improve the sustainability of the cities through:

- Reduce reliability on non-renewable natural resources.
- Turn trash into cash!!!
- ----> Example: Biodegradable product (utensils, trays and boxes) from EFB fiber through pulping, Biofertilizer

3. Triggers the innovations and implementation of the Industrial Revolution (IR 4.0) in the palm oil industry Expansion of the palm oil industry in Malaysia will attract researchers' interest to do research on oil palm and eagerness to explore new findings to improve oil extraction efficiency. For example: UKM-YSD Chair for Sustainability that aims to turn palm oil mills into green factories by targeting for carbon neutral.



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FOR THE GOAL





SOH MING LUN

BACHELOR OF CHEMICAL ENGINEERING WITH HONOURS UNIVERSITI PUTRA MALAYSIA, SERDANG



LIM SIL YONG

LIFE ON

LAND

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INSTITUTION

LIFE

BELOW

WATER

BACHELOR OF MECHANICAL ENGINEERING WITH HONOURS

Contributions of Malaysian Palm Oil in Achieving UN Sustainable Development Goals

Introduction to Palm Oil^[9]

- Palm oil is the most widely consumed vegetable oil in the world



Social Development Pillar

SDG 1: No Poverty

Indigenous communities: switch from cash crops to oil palm (40% of output in Malaysia)^[9]

Government aids in improving livelihoods of palm oil smallholders

- Offers incentives to diversify their crops and optimize the use of land ^[8]
- Allocates budget for implementing the Oil Palm Smallholders Replanting Stimulation Scheme^[10]



Health Development Pillar

SDG 2: Zero Hunger & SDG 3: Good Health and Well-being

Palm Oil & Food Security^[9]

- Affordable: Most cost-efficient edible oil - Utilization: Oil palm-livestock/crop integration

Palm Oil & Nutritional Impact

- Red palm olein (RPO) retains 80% of vitamins and carotenoids ^[9]
- Malaysian RPO has contributed to reducing "hidden hunger" such as vitamin A deficiency

* Fortification of food products^[3]:

- High acceptance by consumers & effective way to deliver nutrients
- RPO or carotene complex extracted from RPO:
- Shortening, snack, ice-cream & more food products
- * Research Outcomes Primary school children^[1]:

A decrease in the prevalence of vit A deficiency from 39% to 12% after 1 year of consuming RPO fortified biscuit.

Lactating women^[6]:

RPO supplementation (12 g/day) increases the plasma concentrations of provitamin A carotenes significantly.

Environmental Development Pillar



Economic Development Pillar JOB

Palm oil biomass as biofuel

SDG 7: Affordable & Clean Energy

- Sustainable source
 - * 85.5% of Malaysia's total biomass production is contributed by palm oil industry^[12]
- Replace petroleum crude oil & overcome petrol crisis
- Protect environment
 - * Every 1% increase in biofuels per capita, CO2 emissions per capita decrease by 0.65% [4]

Roundtable on Sustainable Palm Oil (RSPO)^[13]

- set of environmental & social standard
- * companies comply to produce Certified Sustainable Palm Oil (CSPO)
- * help minimize the negative impact of palm oil cultivation (environment & communities in palm oil-producing areas)



Conclusion

Raising public awareness about sustainable palm oil is essential because it contributes to environmental equitable socioeconomic protection and fosters circumstances throughout the world's palm oil supply chain.

Malaysia is fully supports with the Roundtable on Sustainable Palm Oil in developing a biodiverse ecosystem along the whole palm oil supply chain.

SDG 8: Decent Work & Economic growth

New employment opportunities^[5]

- Farming & Harvesting



3.5

- * higher labor productivity & lower labor requirement than other crops
- Drives palm oil-related industry
 - * palm oil processing, R&D, trading, logistic, biofuel

Economic Growth

- High oil yield per unit of cultivated land ^[2, 4]
 - * produce more oil than others (tonnes/ha)
- Provide an ongoing source of income^[7, 11]
 - * start bearing fruits after 30 months of field planting
 - * produces fruit all year-round with an economic life of 25 to 30 years
- Growth of investment, output, foreign exchange earning^[14]



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How Does Malaysian Palm Oil (MPO) **Support the United Nations (UN) Sustainable Development Goals (SDGs)**

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MALAYSA is the WORLDWIDE nd - largest producer of palm oil with

of overall production from 5.73 million hectares of land by >800,000 farmers

NO POVERTY



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CPO = Crude Pa

- supported by other government agencies (FELDA/FELCRA/RISDA)
- farmers paid above the Malaysian Minimum Wage Order 2022 (RM1500/month)
- reduced poverty in Malaysia down to less than 5%



of biogas in Malaysia coming Oil Palm Mills has been



practising negative emission &



AFFORDABLE AND

LEAN ENERGY

igs of Greenhouse **Gases (GHG)**

- MPO initiated methane-capture facility installations for mills to reduce GHG emissions
- **Biogas capture acting as a prominent** source for large-scale renewable energy generation

125 out of 452 oil mills in Malaysia operated a biogas plant saving approximately 712 kt CO₂ per annum

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MALAYSIA PALM OIL CONTRIBUTION TOWARDS SUSTSINABILITY

WE ARE PRESENTLY IN THE SUSTAINABLE DEVELOPMENT GOALS PERIOD, WHICH FOLLOWS THE MILLENNIUM DEVELOPMENT GOALS. WHILE REDUCING POVERTY REMAINS A TOP PRIORITY, IT IS WIDELY ACKNOWLEDGED THAT SUCH EFFORTS MUST ALSO FOCUS ON OTHER SOCIAL DEMANDS, SUCH AS THOSE RELATED TO EDUCATION, HEALTH, SOCIAL PROTECTION, AND EMPLOYMENT PROSPECTS, AS WELL AS ISSUES LIKE CLIMATE CHANGE AND ENVIRONMENTAL PROTECTION. THE "PEOPLE, PLANET, AND PROFIT" TRINITY IS COMMONLY USED TO CONDENSE THIS STRATEGY.



MPOC

POLICIES THAT PLEDGE TO PREVENT EXPLOITATION, PEAT DEVELOPMENT, AND DEFORESTATION ARE NECESSARY FOR SUSTAINABLE PALM OIL PRODUCTION. MALAYSIA SUSTAINABLE PALM OIL (MSPO) CERTIFIES GROWERS AND MILLS IN MALAYSIA USING NATIONAL STANDARDS AND PROMOTES THE EXPANSION OF THE SUSTAINABLE INDUSTRY. THE ROUNDTABLE ON SUSTAINABLE PALM OIL (RSPO) IS THE TOP CERTIFYING ORGANIZATION ON A WORLDWIDE SCALE. COMPANIES MUST ADHERE TO A SET OF ENVIRONMENTAL AND SOCIAL STANDARDS ESTABLISHED BY BOTH THE MSPO AND RSPO IN ORDER TO PRODUCE CERTIFIED SUSTAINABLE PALM OIL. THESE STANDARDS, WHEN CORRECTLY APPLIED, CAN LESSEN THE HARM THAT PALM OIL PRODUCTION DOES TO THE ENVIRONMENT AND THE LOCAL POPULATIONS IN PALM OIL-PRODUCING AREAS.

IT IS SIGNIFICANT TO NOTE THAT ACCORDING TO THE MSPO AND RSPO STANDARDS, NO PRIMARY FORESTS, AREAS WITH SIGNIFICANT CONCENTRATIONS OF BIODIVERSITY (SUCH AS THOSE HOME TO ENDANGERED SPECIES), FRAGILE ECOSYSTEMS, OR AREAS CRUCIAL TO MEETING THE BASIC OR TRADITIONAL CULTURAL NEEDS OF LOCAL COMMUNITIES (HIGH CONSERVATION VALUE AREAS) CAN BE CLEARED FOR PALM OIL PRODUCTION. THE USE OF PESTICIDES AND FIRES MUST BE DRASTICALLY REDUCED, EMPLOYEES MUST BE TREATED FAIRLY IN ACCORDANCE WITH NATIONAL AND INTERNATIONAL LABOR STANDARDS, AND LOCAL PEOPLE MUST BE INFORMED AND CONSULTED PRIOR TO THE ESTABLISHMENT OF NEW PLANTATIONS ON THEIR LAND.





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