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MPOC

PRESERVING NATURE BY CONNECTING FOREST HABITATS: WILDLIFE CORRIDOR IN TAWAU, SABAH

MALAYSIAN FARMER CHRONICLES: THE ORANG ASLI SUSTAINABLE OIL PALM TRAILBLAZER

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MESSAGE FROM THE CEO

Belvinder Sron
CEO of MPOC

Dear Readers,

Welcome to the fourth edition of PalmSphere, the MPOC Sustainability Newsletter. This edition highlights Malaysia's strides in sustainable palm oil practices that contribute to improving our industry. Our cover story, "Experts Confirm MSPO Standard Complies with EUDR," highlights the Malaysian Sustainable Palm Oil (MSPO) certification compliance with the European Union Deforestation Regulation (EUDR). This assessment reinforces our commitment to producing palm oil that meets international standards and global sustainability goals.

In "Preserving Nature by Connecting Forest Habitats," we examine the role of wildlife corridors in reducing forest fragmentation and promoting biodiversity. This initiative, set in the heart of Sabah, exemplifies our dedication to environmental conservation and protecting Malaysia's rich natural heritage. We feature a story celebrating the Orang Asli community's pioneering efforts in sustainable oil palm cultivation. Their practices contribute to the industry's sustainability and enhance their socio-economic well-being. We also explore Protenga's smart insect farm innovation, which converts palm oil waste into valuable resources, showcasing the potential of circular economy principles in our industry.

These articles reflect our ongoing commitment to sustainable practices, innovation, and the continuous improvement of the palm oil industry. We remain dedicated to promoting positive change and ensuring Malaysian palm oil is synonymous with sustainability and excellence. Thank you for your continued support and engagement, we hope you find this edition both informative and inspiring.

EXPERTS CONFIRM MSPO STANDARD COMPLIES WITH EUDR

A recent expert-led webinar held on 2 May 2024, hosted by MPOC, examined how Malaysia's MSPO certification standard can be a compliance tool for EUDR.

THE Malaysian Palm Oil Council (MPOC) Webinar 3.0 was enriched by the insights of esteemed experts from the European Forest Institute (EFI), the Malaysian Sustainable Palm Oil (MSPO), and independent certification auditor Pierre Bois d'Enghien.

Over 500 participants from Malaysia, Europe, and all over the world attended the Webinar, demonstrating the global importance of the discussion. The expert speakers discussed further the European Union Deforestation Regulation (EUDR) requirements and provided an in-depth analysis of how the MSPO standards align with the EU's expectations.

MPOC CEO Belvinder Sron, chairing the discussion, noted that both European and Malaysian experts reached the same conclusion, acknowledging MSPO as a world-class certification standard. She stated, “MSPO is stricter and more rigorous than the EU Regulation in some areas, such as deforestation’s cut-off date. More cooperation is needed between the European Union and the Malaysian palm oil community to identify how the EU can accept and recognise MSPO.”

The Webinar featured Pierre Bois d’Enghien, an international certification expert and auditor for palm oil and rubber, who agreed that the EU should recognise MSPO as a compliance tool. His extensive experience and knowledge in the field of certification lent significant weight to the discussion.

The GAP analysis authored by Pierre Bois d’Enghien, RSPO auditor and sustainability expert, makes several crucial findings regarding MSPO’s ability to serve as a tool for compliance with EUDR requirements.

1. The MSPO standard’s sustainability requirements meet the EUDR deforestation requirements.

2. MSPO also meets the EUDR legality requirements.
3. The MSPO Public Summary requirement (stipulated in the MSPO Certification Scheme Document):
    - Can fulfil the due diligence statement under the EUDR, with some limited exceptions.
    - Provides the basis for risk assessment by importers using the MSPO Trace website information as a verification system.

His assessment of MSPO and EUDR revealed that MSPO meets all the sustainability and legal requirements of EUDR, including stringent criteria on deforestation, biodiversity conservation, and social responsibility. D'Enghien told the audience of policymakers, business leaders, and other stakeholders that "MSPO is by any standard a world-class certification scheme for agriculture."

> **"EUDR is very difficult and costly. Compliance will only be achieved if the EU Commission is willing to work with – rather than just dictate to –countries in the developing world. This should start with recognising and rewarding the positive efforts of our trading partners, including the MSPO certification standard in Malaysia."**

Pierre Bois d'Enghien further comments on the importance of the EU formally recognising MSPO.

The Webinar is part of an online engagement series hosted by MPOC that provides international experts with opinions on palm oil and key issues. This platform plays a crucial role in advancing global dialogue and understanding the complex issues surrounding palm oil production as well as its impact on sustainability and legal requirements. It will include medical experts assessing current global health, nutrition, and palm oil debates, demonstrating its broad scope and relevance to a wide range of stakeholders.

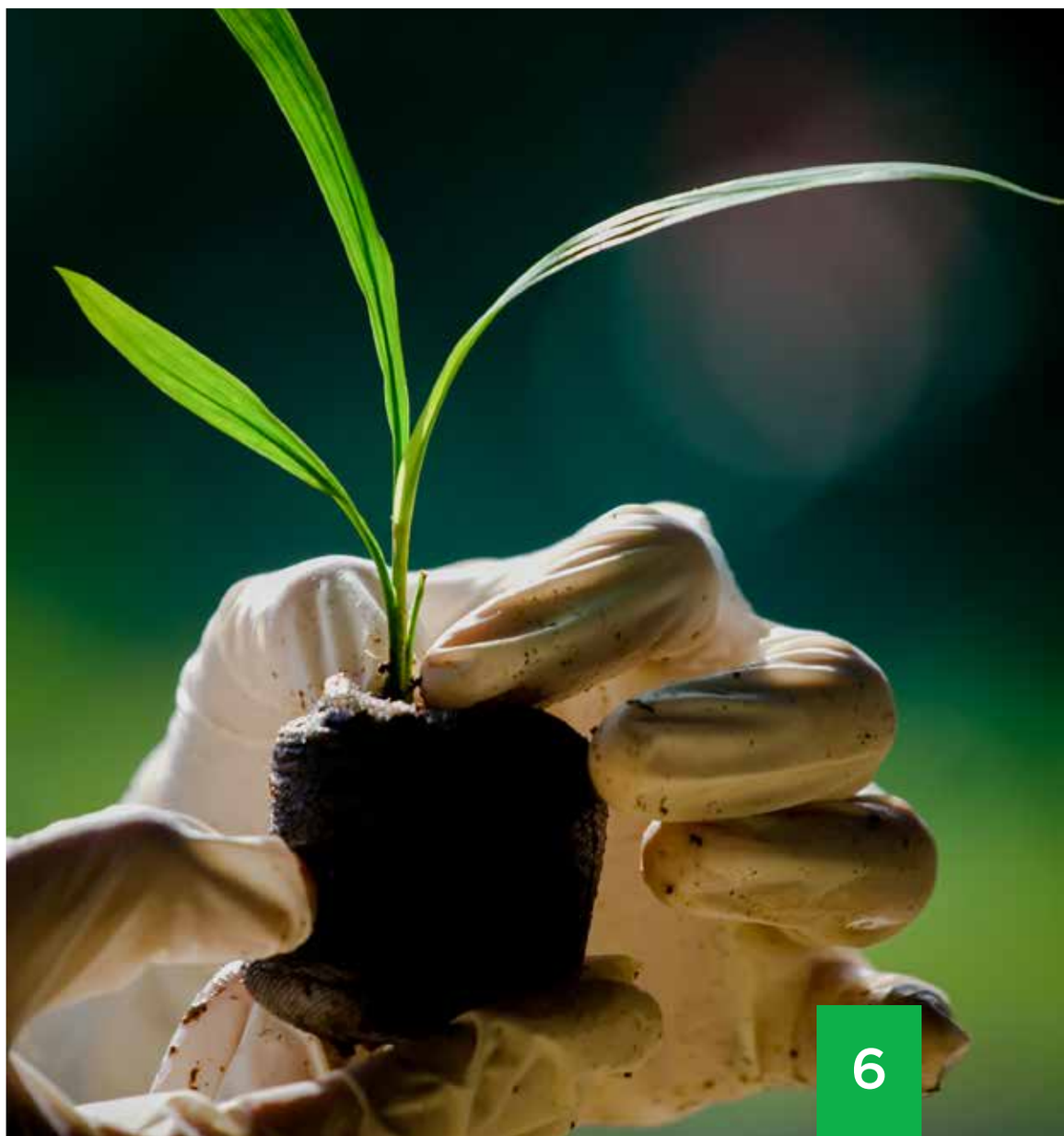


Photo credit @1StopBorneo

PRESERVING NATURE BY CONNECTING FOREST HABITATS: WILDLIFE CORRIDOR IN TAWAU, SABAH

Led by 1StopBorneo Wildlife, in partnership with Teck Guan Plantations, the project reconnects fragmented forests to create a thriving ecosystem within the oil palm plantation.

THE Wildlife Corridor in Tawau, Sabah, represents a significant stride in conservation efforts designed to connect the Tawau Forest and Quoin Hill, reducing the impact of forest fragmentation. Local conservation group 1StopBorneo Wildlife, in partnership with Teck Guan Plantations and with the support of various stakeholders, champions this initiative, which aims to create a thriving ecosystem within the oil palm plantation.

The project focuses on planting figs and flowers, which are essential for supporting the diverse wildlife of Borneo. With over 160 species of figs on the island, these plants are crucial for the sustenance of numerous animals, including bats, hornbills, deer, flowerpeckers, bears, and butterflies.

Photo credit @1StopBorneo

Shavez Cheema, a key figure in this initiative, emphasised the collective responsibility to help Tawau's wildlife, highlighting 1StopBorneo Wildlife's years of research and successful reforestation methods, particularly the planting of marcotted figs. Chun Xing Wong, President of 1StopBorneo Wildlife, also highlighted the importance of figs, educating the public about Sabah's biodiversity and the ongoing conservation visions for Tawau and Sabah.

The corridor benefits wildlife and serves as an educational platform. It has attracted support from various entities, including local schools, NGOs, and international visitors. The Lion Clubs of Tawau, One Tree Planted, Quentin Phillipps, and the Hornbill Awards are among the sponsors contributing to the 2024 reforestation efforts in Deramakot and Tawau.

The programme's key contributions include donating wooden hornbill boxes to provide nesting sites for hornbills in Pulau Tiga and Deramakot. The addition of these boxes is expected to support the stable populations of hornbills known to frequent these areas. The remaining boxes were placed in the Teck Guan plantation areas, home to a stable population of rhinoceros hornbills.

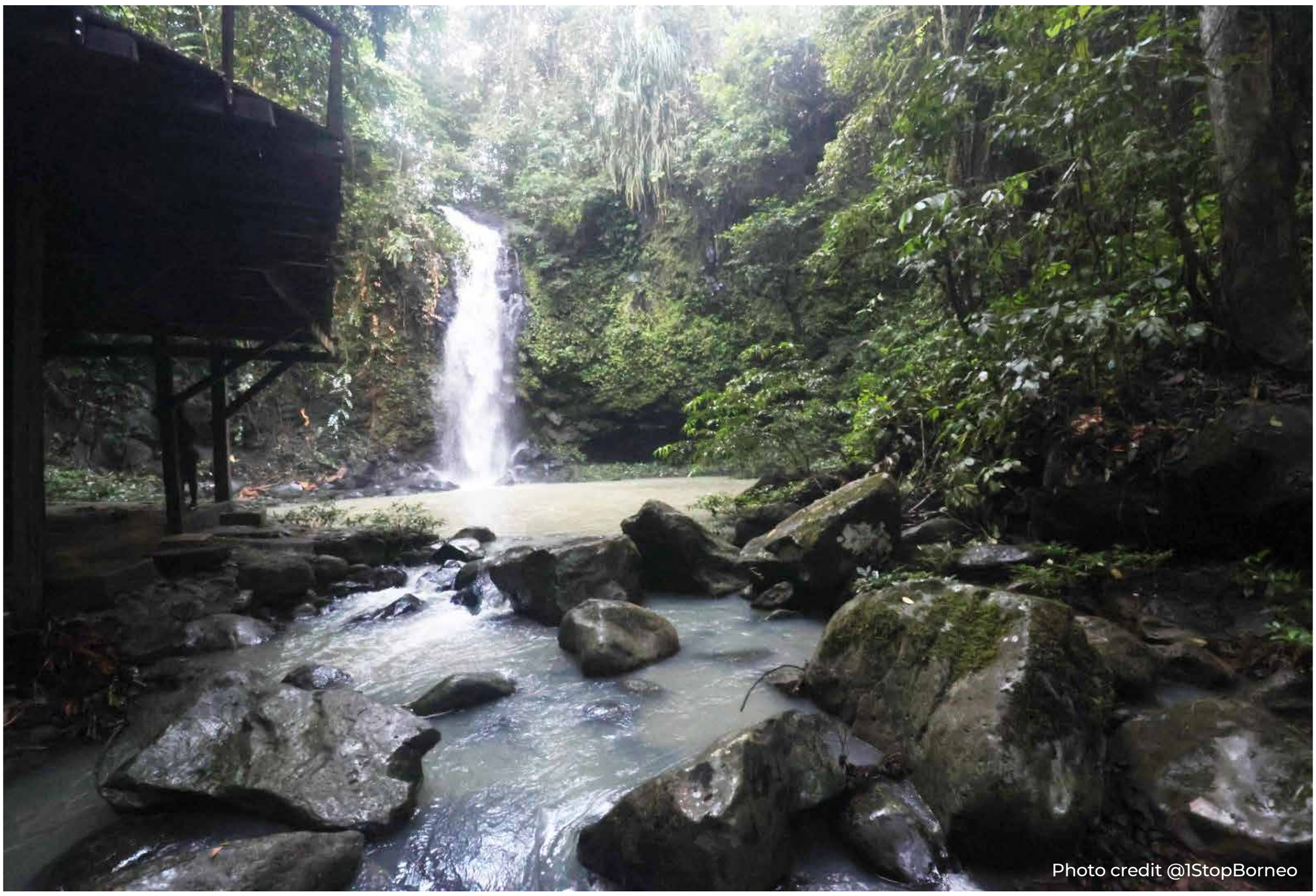
The launch of the Teck Guan Wildlife Corridor showcased educational footage on pangolins and Borneo elephants, highlighting the broader conservation effort in the region. The corridor has already been planted with over 500 trees, including various species of figs and butterfly-favourite flower plants, with more expected in the coming years.

The project also includes developing a waterfall café in Cocoa Village, known for its pristine rainforest and basaltic rock formations. This café aims to promote eco-tourism and give visitors a deeper understanding of the local ecosystem.

Chun Xing Wong, President of 1StopBorneo Wildlife, planting figs and flowers to ensure the continued growth of Borneo's diverse wildlife.

During the launch, Avito Hong emphasised the importance of small-scale ideas in conservation, illustrating how small forest pockets can transform into thriving ecosystems within a few years. Once barren land, the corridor will now serve as a lifeline for endemic species, offering a safe passage.

The Wildlife Corridor in Tawau is a conservation initiative that aims to reconnect fragmented habitats, support local wildlife, and educate the public on the importance of biodiversity. The collaborative efforts of various stakeholders, including the local community, highlight their commitment to preserving nature and fostering a sustainable environment for future generations.



Waterfall at the Cocoa Village, known for its pristine rainforest and basaltic rock formations.

MALAYSIAN FARMER CHRONICLES: THE ORANG ASLI SUSTAINABLE OIL PALM TRAILBLAZER

A second-generation indigenous smallholder, Bidin Loya leads his community's regenerative oil palm farming movement.

"OUR ability to adapt and survive in this ever-shifting landscape is our biggest strength!" asserts Bidin Loya, a Mah Meri oil palm independent smallholder for 30 years.

We are seated in Bidin's living room in a spacious concrete house nestled in the laid-back village of Kampung Sungai Judah on Carey Island, 72 km southwest of Kuala Lumpur. The 51-year-old gives us a rundown of how the Mah Meri have evolved from their hunter-gatherer lineage to become certified sustainable farmers within three generations.

The Mah Meri History

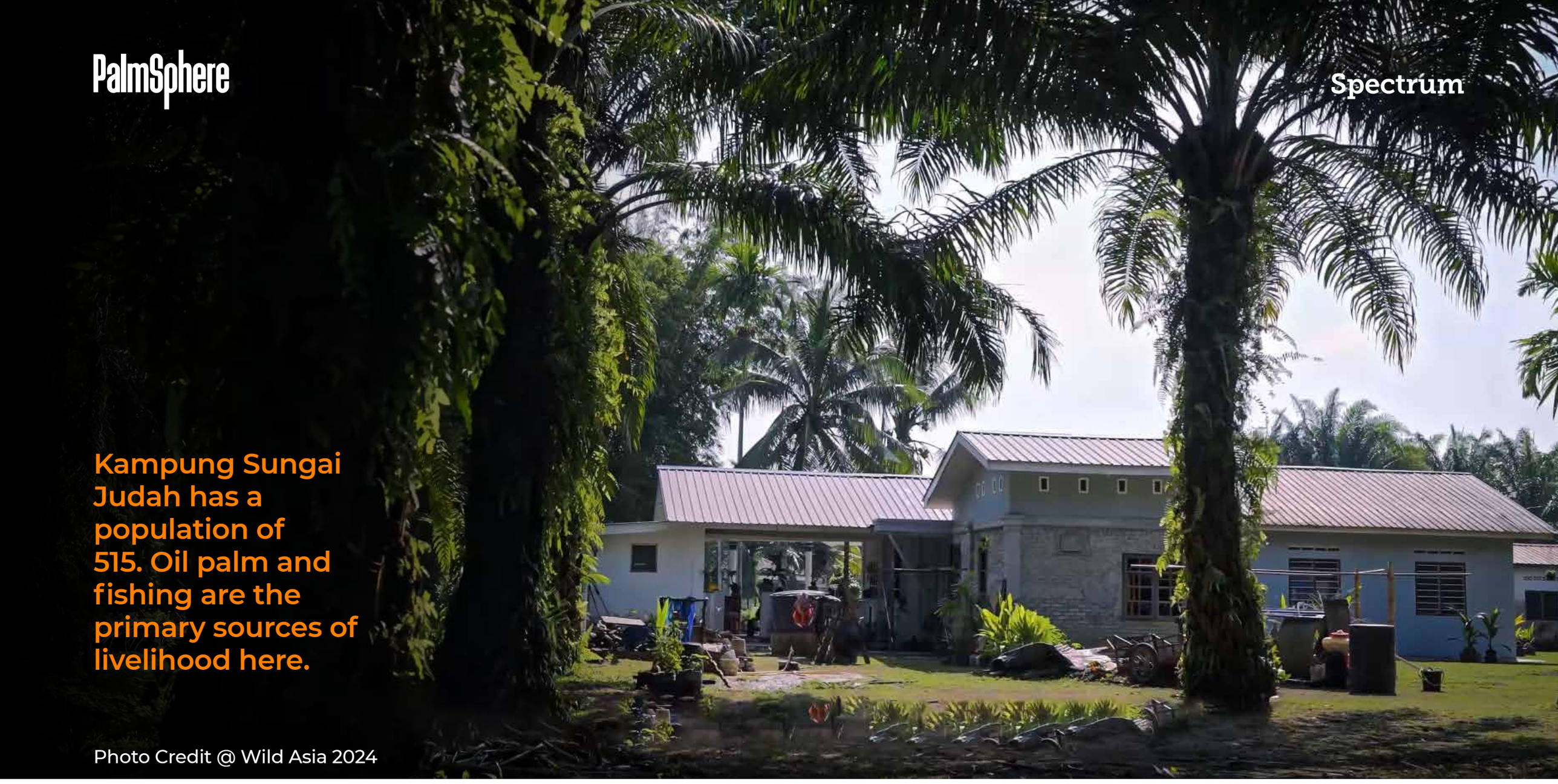
The Mah Meri are one of 18 Orang Asli (*original people;* indigenous) tribes living in Peninsular Malaysia, with their distinct Besise' language and sociocultural background. Early traces of their nomadic ancestors were discovered in the coastal regions of southern Peninsular Malaysia since the 15th century. In the mid-1800s, the first Mah Meri settlements were found along the southwest coast of Selangor, including Pulau Gobow (now known as Carey Island – Nowak, 1985*). On an island blessed with lowland rainforest, mangrove swamps, mudflat shores, and rivers, the Mah Meri lived off the forest and the sea.

By 1895, the forest had been cleared for the first coconut plantation developed by the British colonials, followed by tea, rubber, coffee, and oil palms. As the forests disappeared, the Mah Meri had to rely on cash crop farming and plantation jobs for their livelihoods.

Today, three-quarters of Carey Island remains an oil palm estate. The rest of the island harbours five Mah Meri village settlements, including Sungai Judah. An hour's drive from Kuala Lumpur, Sungai Judah has a population of 515. Oil palm and fishing are the primary sources of livelihood here.

"My father was born here. In his lifetime, he fished, harvested *nibong (Oncosperma tigillarium)* palms, and planted rice, coconut, and coffee. But he struggled to feed our family of eight due to unstable income," says Bidin, who was also born in Sungai Judah and is the fourth of six siblings. He dropped out of school at 15 due to his family's financial hardships.

In the early 1980s, JAKOA (Department of Orang Asli Development) allocated agricultural land parcels to the villagers. Bidin's father, who was planting coffee then, switched to oil palm due to coffee's fluctuating prices.



Steep Learning Curve

Like most independent smallholders, Bidin's father cultivated oil palm through trial and error and learned from his peers who worked at the nearby plantations. "We improvised as we went," says Bidin, who helped at his dad's farm. In 1995, Bidin started planting a 2-acre oil palm plot of his own, using seeds from his dad's farm. He was thrown straight in at the deep end. "Many of the inferior quality seedlings didn't survive. Plus, I couldn't afford to buy commercial fertilisers or pesticides," recalls Bidin. He used decomposed shrubs and palm fronds to manually fertilise the soil and control weeds by slashing.

Bidin was also juggling a full-time job as a heavy machinery operator with farming. "My farm was like a semak (overgrown with weeds) - a nightmare during harvest season," he adds. "And yields were low due to nutrient deficiency." The tide finally turned for him in 2009. Through JAKOA's help, he joined the Malaysian Palm Oil Board (MPOB)'s replanting programme, receiving quality seedlings and free chemical fertiliser. He intercropped the palm seedlings with banana trees to earn extra income.

In 2013, he received training and guidance from Tunjuk Ajar Nasihat Sawit (TUNAS) officers under MPOB's Sustainable Palm Oil Clusters (SPOC) initiative to achieve the Malaysian Sustainable Palm Oil (MSPO) standard for oil palm production. The same year, he quit his day job to focus full-time on oil palm.

Photo Credit @ Wild Asia 2024

By practising sustainable farming, more butterflies, birds, and grasshoppers are being spotted.

Bidin learned and embraced standard oil palm best practices to meet sustainability standards, such as reducing chemical inputs, stacking palm fronds 'correctly' to ensure optimum soil nutrients, and implementing the zero-burning policy. "My farming costs decreased, my trees are healthier, and my yields have improved," says Bidin, who became MSPO-certified in 2014. With a steady income, he could spend prudently on fertilisers and invest in a grass cutter to manage weeds. "Palm oil is our lifeline. Not only did it lift our community out of poverty, but it has also improved our living standards by leaps and bounds," says the father of eight, who earns a monthly average of RM2,000 from his 0.8ha farm. Bidin also manages his father-in-law's two farm plots (1.2ha), raking in about RM1,500 monthly.

In Sungai Judah, modern concrete houses have long replaced the simple wooden houses built in the 1970s. Stable electricity and water supply, tarred road access, and internet connectivity are among the basic amenities accessible to everyone. "We renovated our house to expand the space, bought motorcycles, and paid for our children's education." The Mah Meri is known for their weaving tradition, which spans generations. The womenfolk weave *mengkuang (pandanus)* and *nipah (Nypa fruticans)* leaves into household and ceremonial items. In early 2000, the Mah Meri women revived their weaving tradition by replanting *pandanus* clumps and crafting products to sell. (Rahim, 2007**) Bidin's wife, Noraini Ageh, plants *pandanus* in their backyard, processes the leaves and weaves them into gorgeous mats, pouches, and baskets to supplement the family income.

Transition to Next-Level Farming

In 2021, Wild Asia extension agents came to Carey Island to engage independent smallholders in joining the Wild Asia Group Scheme (WAGS). WAGS offers free technical advice, training, and capacity building to help independent smallholder farmers meet international certification standards and improve their farm management practices. “Since I’ve been farming sustainably for several years, it’s a good challenge to try for an international sustainability certification next,” Bidin explains. “Also, earning premiums for certified crops is a good incentive!”

His farm received international sustainable certification in 2022. It has been four years now since Bidin stopped using pesticides. He uses a grass cutter to control weeds and maintains ground cover to retain soil moisture to deter pests like bagworms, which prefer dry conditions. So far, his palm trees have been spared any pest infestations or diseases.

“Initially, I stopped buying pesticides because of a cash crunch,” says Bidin. “But I realised I can do without them (chemicals), and I’m seeing more insects and birds on my farm.” Insect biodiversity plays a vital role in the ecosystem for pollination, pest control, and recycling of nutrients in soil.

In 2023, Bidin joined the WAGS BIO awareness workshop to learn about regenerative agriculture practices. He learned how healthy, microbe-rich soils lead to healthier palms resistant to pests and diseases, as well as higher yields.

Workshop participants learn to restore and reinvigorate soil using organic matter from the farm or enzyme fertilisers converted from kitchen wastes, and the benefits of intercropping to improve soil and farm biodiversity. “I hesitated at first because it sounded like a lot of work and commitment,” Bidin admits smilingly.“ But my wife encouraged me to give it a shot.”

He committed 0.8 hectares of his farm as a BIO plot (100% chemical-free) and offered his farm as a centre for Wild Asia to produce enzyme fertilisers in bulk to distribute to other farmers.

“It’s been six months since I started applying BIO juice and fish hydrolysate (liquid enzyme fertilisers). I can see worm castings, and the soil has improved - it has a rich, dark brown colour and an earthy smell. But it’s still too early to see any yield effects.” Bidin has stopped buying chemical fertilisers since last year and shaved off RM3,600 in annual fertiliser costs from his operating costs.

Paying the Way

To date, Bidin is only one of two farmers in Carey Island who have taken up the WAGS BIO gauntlet. “It’s not easy for our farmers to change their mindsets. But I can set the ball rolling and pave the way for others to follow,” Bidin sums up. “I hope my children and grandchildren will continue to farm sustainably to keep our land and earth healthy.

Bidin’s forefathers, who lived off the forest and valued healthy ecosystems, had to adapt their livelihoods to the changing world to ensure survival. Now, Bidin has become an inadvertent champion for regenerative farming and is reacquainted with the living soils. Sounds like he has come full circle.

Discover the inspiring story of Bidin in **this short documentary** and witness how sustainable oil palm planting has transformed his life.

In Malaysia, 5.65 million hectares of land have been cultivated with oil palm (MPOB 2023). Independent smallholder farms like Bidin Loya’s (40.46ha of land or less) account for 14.5% (0.82Mha) of this planted area. As of 2023, there are 214,980 independent smallholders in Malaysia.

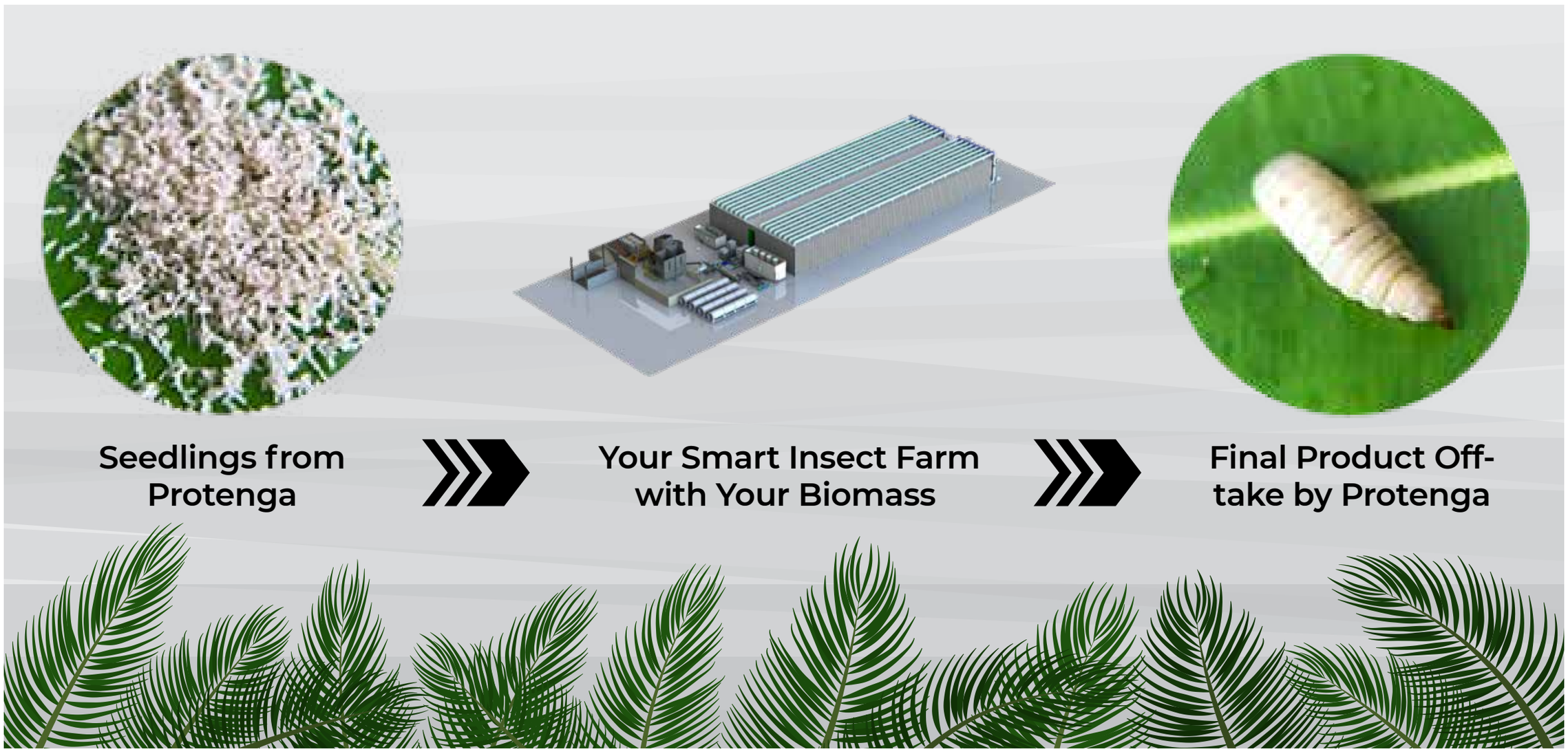
**Nowak, Barbara S. (1985); The Formation of Aboriginal Reserves: The Effects of Land Loss and Development on the Btsisi’ of Peninsular Malaysia.*
***Rahim, Reita (2007): CHITA’ HAE Culture, Crafts and Customs of the Hma’ Meri in Kampung Sungai Bumbon, Pulau Carey.*

MPOC wild asia www.wildasia.org

Malaysian Sustainable Farmer Chronicles is a collaboration between Wild Asia and MPOC that shares the innovations and best practices of MSPO-certified smallholder farmers in Malaysia.

PROTENGA'S SMART INSECT FARM: TRANSFORMING PALM OIL WASTE INTO SUSTAINABLE SOLUTIONS

Pioneering Black Soldier Fly technology transforms palm oil waste into valuable insect protein and organic fertiliser, supporting sustainability and efficiency in the palm oil industry.



THIS title encapsulates the article's essence, highlighting Protenga's approach to utilising Black Soldier Fly technology to convert palm oil waste into valuable resources. It emphasises sustainability, efficiency, and the positive impact on the Malaysian palm oil industry.

The future looks hungry. By 2050, our planet is expected to house nearly 10 billion people, which, combined with climate change, creates a massive challenge for food production. Despite our strained resources, food waste remains a persistent problem. This highlights the urgent need for innovative solutions across the food supply chain - the palm oil industry is no exception. An insect species known as the Black Soldier Fly (BSF, *Hermetia illucens*) is nature's marvel; it can revolutionise waste management and food security and may hold the solution for a more circular economy.

Stay connected with Protenga's IoT health checks.

Innovative Smart Insect Farm

Protenga, a biotechnology company based in Senai, Johor, has developed a modular insect technology to efficiently convert palm oil biomass into high-quality insect protein via its decentralised Smart Insect Farm (SIF) network. This hub-and-spoke model leverages data-driven insect farming to efficiently convert palm oil waste into high-quality insect protein.

The byproducts of the insect farming process, called insect frass, become a nutrient-rich, bioactive organic fertiliser. Frass, which is the insect's excrement, castings, shedding, and exoskeletons, can be recycled back into the plantations, closing the loop, restoring soil health, and minimising environmental impact. Imagine healthier soil, thriving oil palm plantations, and building a sustainable future that continues to advance Malaysia's palm oil industry.

With over eight years of experience, Protenga's Smart Insect Farm is a perfect fit for the palm oil industry's sustainability goals. By utilising what would otherwise be considered waste, Protenga tackles the industry's waste management challenges head-on by converting waste to a protein-rich insect protein source, contributing to food security by providing valuable animal nutrition speciality ingredients.

Harnessing the Power of BSF

The BSF are nature's incredible decomposers with a relentless appetite for organic waste. They efficiently transform palm oil byproducts such as POME sludge, decanter cakes, palm kernel expellers, boiler ash, and other byproducts into valuable resources.

Protenga's solution goes beyond the technology supply, offering a long-term partnership model for the operations of Smart Insect Farm with palm oil mills and biomass owners. The Smart Insect Farms are co-located with the biomass source. Protenga ensures the supply of seedling larvae for stable operations, provides automation and process control software for efficient remote management, and offers maintenance services. These SIF convert palm oil byproducts into fresh BSF larvae.

Protenga then buys back the larvae to process them into valuable products like Hermet Protein (insect protein), Hermet Oil (insect oil), and Hermet Frass (insect frass). Hermet Protein and Oil find their way into aquaculture, pet food, and animal feed, while Hermet Frass becomes a key ingredient in compound fertilisers.

Witness the Black Soldier Fly in flight.

Experience hassle-free maintenance service with Protenga.

InsectOS empowers operators to manage the Smart Insect Farm seamlessly.

Modular and turnkey, the Smart Insect Farm utilises Protenga's proprietary InsectOS farm data management system. This system allows for remote farm control and provides real-time data on-site, from recipes and feedstock inventory to worker attendance. The palm oil mill owners require no in-depth BSF expertise, as Protenga supplies the BSF seedlings to the farms. The mills provide the waste, and the Smart Insect Farm takes care of the rest. It is simple, reliable, and profitable.

Protenga's solution goes beyond adding and managing palm oil's biomass value. It strengthens Malaysia's feed and fertiliser security while promoting community engagement through local job creation. The Smart Insect Farm offers a sustainable and profitable solution for the palm oil industry, paving the way for a brighter, more buzz-worthy future.

For more information on the Smart Insect Farm and its value creation, visit www.smartinsectfarm.com or email insect-tech@protenga.com.

VISIT TO MALAYSIA: UK STAKEHOLDERS EXPERIENCE PALM OIL EXCELLENCE

To further promote the acceptance of MSPO standards, MPOC hosted UK palm oil stakeholders to explore Malaysian palm oil's sustainability and socio-economic contributions to the nation and globally.

UK stakeholders deepen their understanding of the socio-economic contributions and sustainability practices of Malaysian palm oil during their visit to the Genting Trushidup Oil Mill in Sandakan.

EARLIER this month, the Malaysian Palm Oil Council (MPOC) hosted a visit to Malaysia for a group of palm oil stakeholders from the UK. The visit focused on adding value to the Malaysian palm oil industry; providing a platform for the delegation to explore and understand the sustainability credentials and socio-economic contributions of Malaysian Palm Oil. The objective was to promote acceptance of the Malaysian Sustainable Palm Oil (MSPO) standards and exchange views on sustainability, traceability systems, inclusion of smallholders in MSPO and conservation of the environment and wildlife. During the visit, the group travelled to Sandakan before continuing the discussions in the Klang Valley.

The dialogue session between the UK delegation and the local palm oil stakeholders included representatives from 3Keel, KFC Asia, and others, during which they discussed key topics such as MSPO 2.0, human rights and labour issues, traceability complexities, and more.

MPOC, in collaboration with Wild Asia, led the delegation on visits to smallholder plantations and the Genting Trushidup Oil Mill in Sandakan. The delegation also had the opportunity to visit the Sepilok Orangutan Rehabilitation Centre and the Borneo Elephant Sanctuary, underscoring Malaysia's commitment to wildlife conservation. Additionally, they toured SD Guthrie's Palm Oil Experience Centre in Carey Island and smallholder plantations under FELDA in Sungai Tengi Selatan, Kuala Kubu Bharu, providing a comprehensive view of both large-scale and smallholder palm oil operations.

The highlight of the visit was a dialogue session organised by MPOC and chaired by Belvinder Sron, CEO of MPOC, on the final day. This session facilitated meaningful discussions with the UK delegation and the Malaysian palm oil stakeholders, focusing on the rollout of MSPO 2.0, traceability systems and their complexities, different challenges smallholders face, and the social aspects of MSPO standards.

> **"For Malaysia, we see the UK as a constructive partner in sustainability. Given the importance of sustainability, legality, and social responsibility in supply chains, we are enthusiastic about cooperating with the UK and Malaysian stakeholders to improve sustainability practices related to deforestation, traceability, climate change, and human rights, particularly through the enhanced features of the MSPO 2.0."**

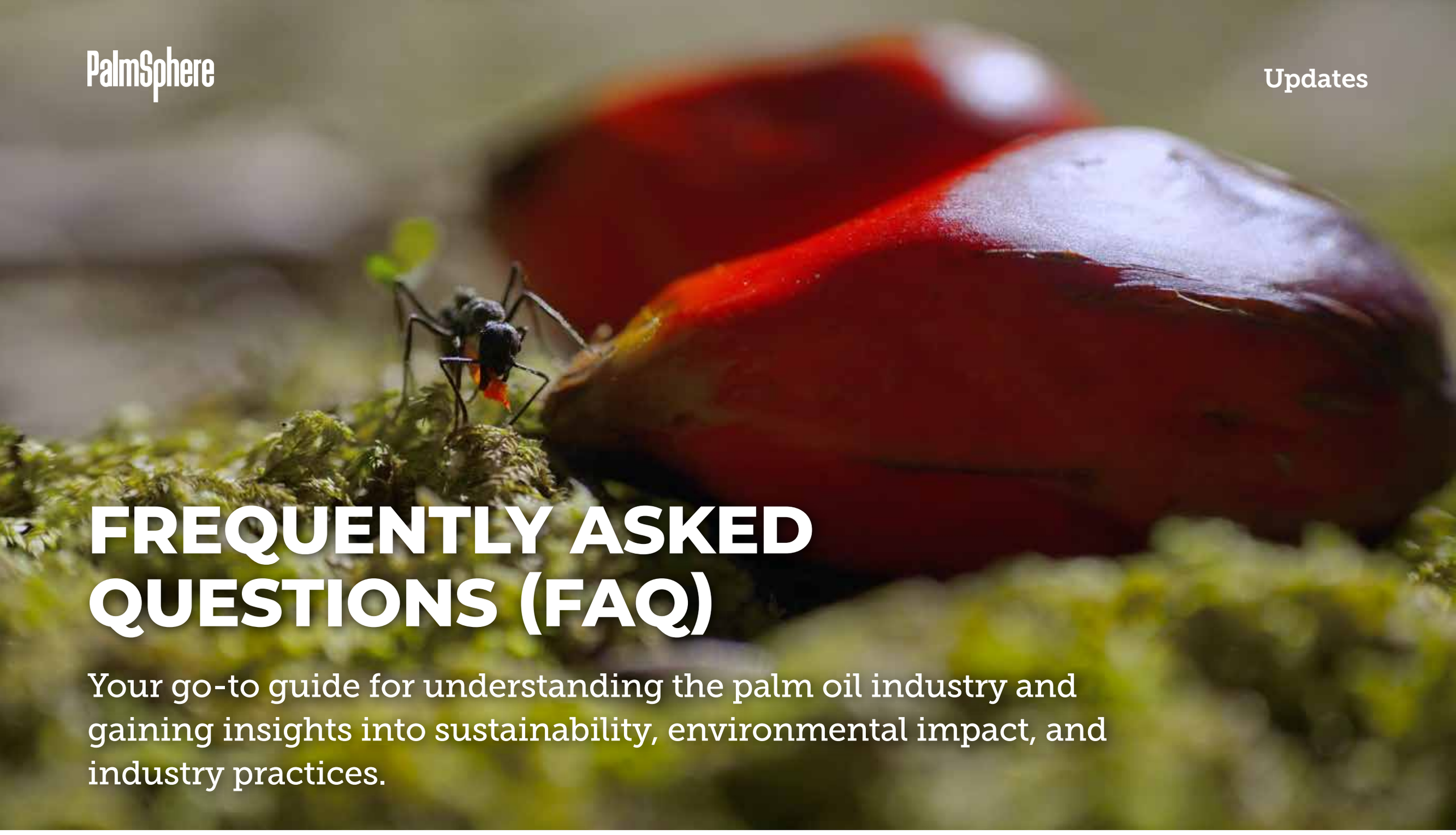
Belvinder Sron, CEO of MPOC, highlighted the UK as a highly promising market, noting that palm oil is among the most consumed oils and fats.

A smallholder farm in Sandakan showcasing the utilisation of biochar as part of their farming practices.

In the first four months of 2024, the export of Malaysian palm oil and its derivatives registered an increase of 71.3% compared to the same period last year. In 2023, the UK imported 381,000 tonnes of palm oil, with Malaysia contributing 5% of these imports. Following the UK's accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), tariffs on Malaysian palm oil imports will be eliminated. As Malaysia is well-equipped to provide a competitively priced and secure palm oil supply, this change is expected to benefit the industry and UK consumers.

This visit aligned with the UK’s goal of enhancing traceability and transparency throughout the palm oil supply chain in its markets. By partnering with responsible palm oil-producing countries like Malaysia, the UK can help strengthen the overall sustainability standards of global palm oil production and set a precedent for other countries to follow.

"MPOC will continue to serve the Malaysian palm oil industry with more such programmes in high-value markets, ensuring that sustainable practices are promoted and recognised internationally. Through these partnerships, Malaysia aims to showcase its commitment to responsible palm oil production and set a positive example for the industry as a whole," added Belvinder.



FREQUENTLY ASKED QUESTIONS (FAQ)

Your go-to guide for understanding the palm oil industry and gaining insights into sustainability, environmental impact, and industry practices.

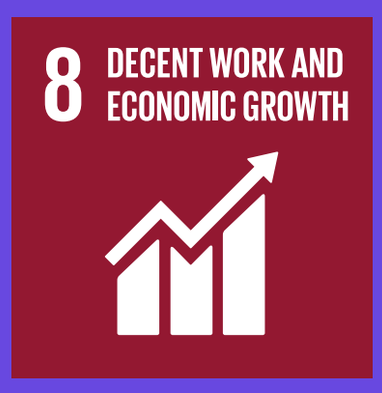
QUESTION:

How does Malaysian palm oil contribute to achieving the United Nations Sustainable Development Goals (SDGs)?

ONE major misconception is that palm oil from the Global South, is inherently unsustainable. This narrative has influenced restrictive trade policies, particularly in Europe. However, Malaysian palm oil has achieved significant sustainability milestones, such as near-zero deforestation rates and efficient land use. The industry's compliance with stringent sustainability certifications, such as the Malaysian Sustainable Palm Oil (MSPO), underscores its commitment to environmental stewardship and sustainable development.

In 2015, United Nations General Assembly Resolution 70/1, *Transforming our world: the 2030 Agenda for Sustainable Development*, established 17 SDGs with a “pledge that no one will be left behind.” At the halfway point to the 2030 deadline for achieving them, a critical assessment reveals mixed success.

Malaysian palm oil significantly contributes to multiple SDGs:



SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth): In Malaysia, the palm oil sector is a major source of income and employment and a critical driver for economic growth at all levels of society. It plays a leading role in providing sustainable employment opportunities and reducing poverty in rural communities.

SDG 2 (Zero Hunger) and SDG 3 (Good Health and Well-Being): As one of Malaysia's top exports, palm oil provides readily available oil to much of the world's population, contributing to global food security and helping to alleviate hunger. Containing zero trans fats also helps promote healthy diets and lifestyles.

SDG 12 (Responsible Consumption and Production) and SDG 15 (Life on Land): Malaysian palm oil industry's efforts in sustainable land management and biodiversity conservation, including through the mandatory Malaysian Sustainable Palm Oil (MSPO) certification scheme, have helped reduce Malaysia's deforestation rate to nearly zero.

Success in achieving the SDGs, particularly in global agriculture, hinges on recognising the benefits of smallholder agriculture, including palm oil. Malaysian palm oil and the smallholder farmers that produce it exemplify the potential for sustainable, inclusive growth supporting economic development and environmental stewardship. Embracing and supporting their role is vital for the global pursuit of a more sustainable and equitable future.

Source:
https://www.globalgoals.org/goals/
https://sdgs.un.org/2030agenda
https://unstats.un.org/sdgs/report/2022
https://www.mypalmoilpolicy.com/the-value-chain/
https://wits.worldbank.org/CountrySnapshot/en/
https://palmoilalliance.eu/replacing-trans-fat/
https://mspo.org.my/about-mspo
https://fra-data.fao.org/MYS/fra2020/home/

QUESTION:

What technologies are being explored to reduce greenhouse gas (GHG) emissions in the Malaysian palm oil industry?

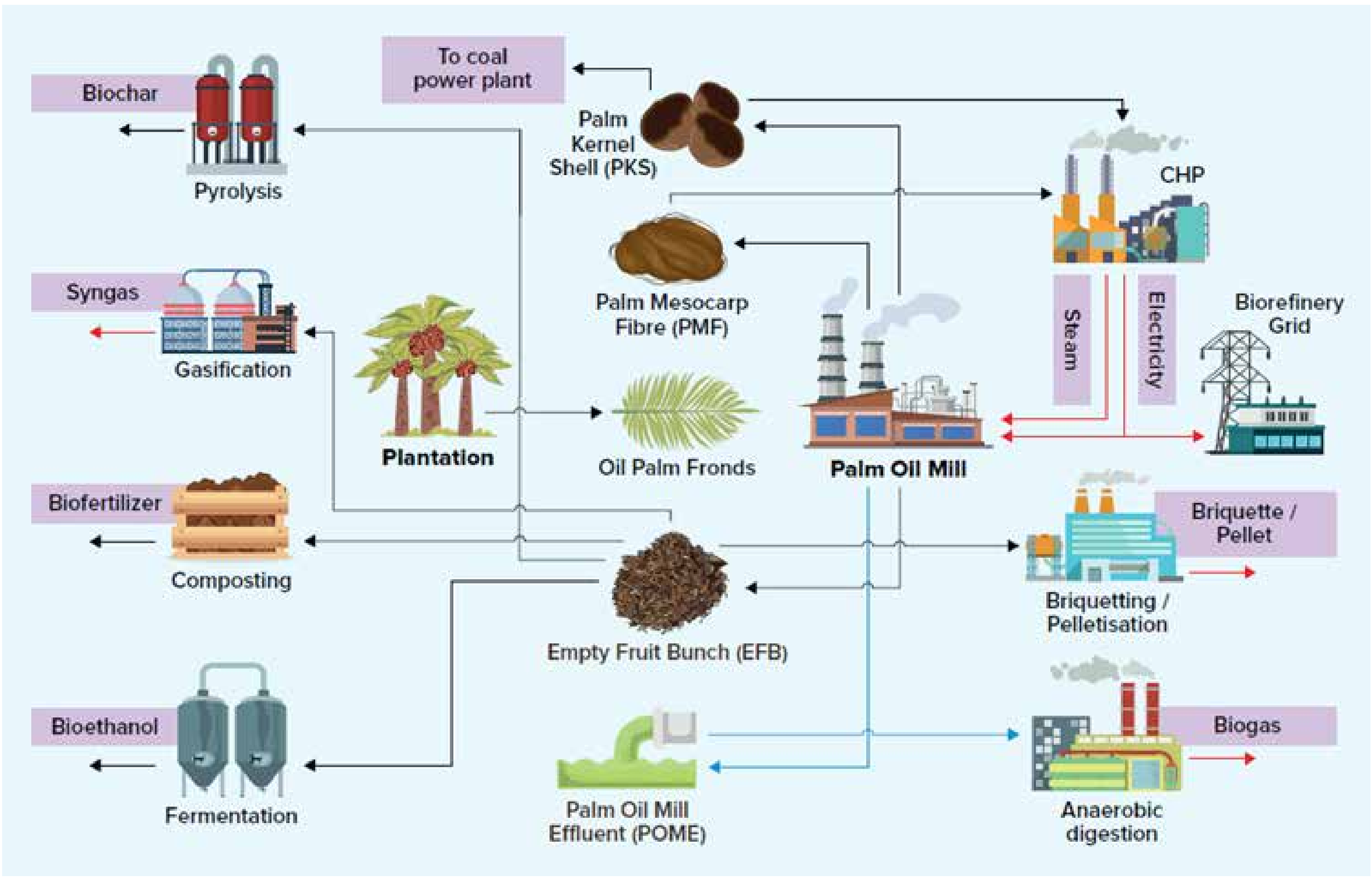
As nations transition to low-carbon economies and meet their net zero or carbon neutrality targets, several biomass conversion technologies are being explored to further reduce GHG emissions. These include mulching, combined heat and power (CHP) systems, anaerobic digestion, briquetting, pelletisation, composting, fermentation, gasification, and pyrolysis.

At the current state, the technologies adopted by the Malaysian palm oil sector include:

1. **Mulching:** Returning empty fruit bunches (EFB) to plantations as mulching materials.
2. **CHP system:** Utilising combined heat and power systems.
3. **POME anaerobic digestion:** Processing palm oil mill effluent.
4. **Direct co-firing of palm kernel shell (PKS):** Using PKS in coal power plants.

The current state of technology adoption has resulted in a 68.8% reduction in baseline emissions. In the current industry practice, EFB is mainly returned to plantations as mulching materials. In some palm oil mills, EFB is converted into value-added products such as pellets, biofertiliser, animal feed, dried long fibre, and others.

Keep an eye out for an upcoming report from Swinburne University of Technology (Sarawak Campus). The report, which will be published on the MPOC website, will highlight the latest findings and potential pathways for the Malaysian palm oil industry to transition towards net zero emissions.



Overview of current and emerging emission reduction technologies.

Reference:

- https://www.cell.com/heliyon/fulltext/

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