

# PalmSphere



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M P O C

EUDR RUNS INTO  
DIFFICULTY IN THE EUROPEAN  
PARLIAMENT

INTERNATIONAL  
JOURNALISTS' FAMILIARISATION  
VISIT TO MALAYSIA

INNOVATIONS IN PRACTICE:  
BUILDING RESILIENCE IN  
SMALLHOLDER FARMERS (PART 1)

## EUROPEAN COMMISSION UNDER MOUNTING PRESSURE TO RETHINK EUDR



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# MESSAGE FROM THE CEO



**Belvinder Sron**  
CEO of MPOC

**Dear Readers,**

Welcome to another edition of *PalmSphere*, where we continue to bring you insights from Malaysia's dynamic and resilient palm oil industry. With the EU Deforestation Regulation (EUDR) set to take effect by year-end, concerns around fairness and scientific integrity in the EU's "country benchmarking" process have come to the fore. Our cover story explores the growing pushback within the EU itself, where Parliament and Council members are urging a more credible and up-to-date approach – one that reflects real progress made by producing countries like Malaysia.

Despite our strong sustainability track record, Malaysia is still classified as a 'standard' risk country, while all EU Member States are considered 'low' risk by default. This imbalance undermines transparency and places an unfair burden on producers in the Global South. At MPOC, we continue to advocate for recognition based on current data, science-based metrics and a shared goal of halting deforestation.

This issue also takes you behind the scenes of MPOC's recent familiarisation programme for international journalists. Through their direct experiences on the ground, they gained valuable insight into Malaysia's sustainability efforts, smallholder empowerment and conservation practices. In our *Innovations in Practice* feature, meet Nisa Usman, a smallholder from Sabah whose success with regenerative agriculture and mushroom farming under the WAGS BIO initiative shows the power of grassroots solutions.

Lastly, our FAQ segment explores early findings on palm-based tocotrienols in joint health – a promising area we will revisit in the next issue. Thank you for your continued support.



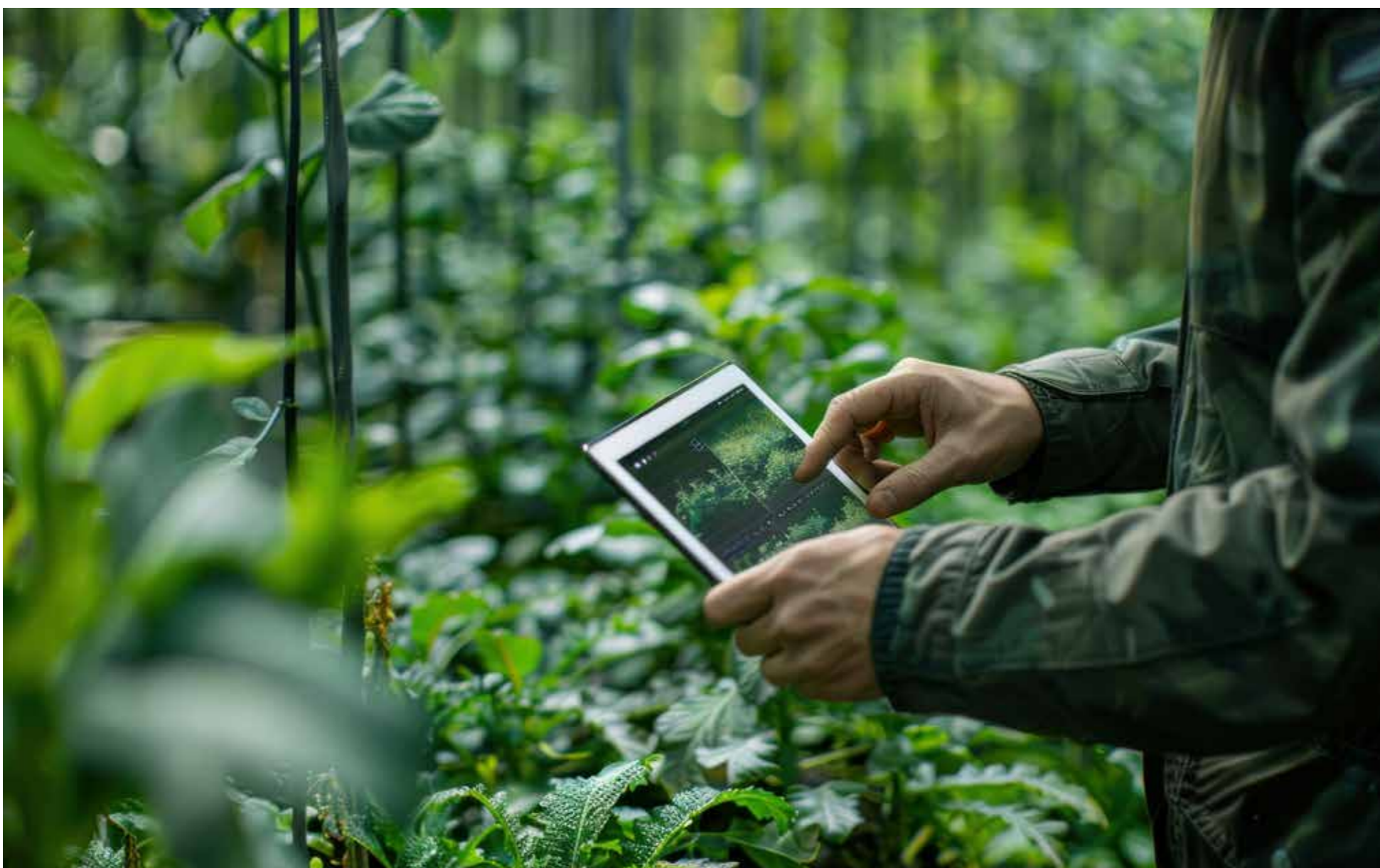
# EUROPEAN COMMISSION UNDER MOUNTING PRESSURE TO RETHINK EUDR

As the EU considers adjustments to its implementation plans, Malaysia is hopeful that a forthcoming review will reflect more accurate and up-to-date data.

**THE** policy landscape surrounding the EU's Deforestation Regulation (EUDR) has shifted quite dramatically since the beginning of the year. Donald Trump has played his part: the tariff war he triggered on returning to the White House is forcing governments everywhere to rethink approaches to regulation in the face of plummeting growth and competitiveness. The EU is no exception. Having been happy to sign off on the EUDR in 2024 (albeit with a delay to allow European companies to catch up), the European Commission's two legislative partners – the European Parliament and the Council of Ministers – have now tabled 'objections' to the Commission's implementation plans.

In their crosshairs is the controversial country benchmarking system, which assigns a ranking to Europe's trading partners worldwide based on the risk of deforestation they pose. Hence, countries like the Federation of Russia and North Korea are deemed 'high' risk, while around 50 countries are seen as 'standard' risk, including Malaysia. All European member states have been considered by the Commission to be 'low' risk, a fact not lost on the EU's trading partners.

The European Parliament's objection took the form of an official vote in Plenary, which passed with a convincing majority. As is becoming increasingly common in European politics, the dominant centre-right European People's Party (EPP) was willing to align with the new populist parties to its right to defeat the Commission's plans. Such is the dire need for growth and competitiveness. The Council of Ministers' objection came in the shape of a joint letter from a clear majority of 18 Member States. Both objections targeted the Commission's benchmarking methodologies, specifically its use of outdated data to measure the wrong thing; however, neither legally compels the Commission to reopen the legislation. The rejections do, however, necessitate a political response.



The EU's country benchmarking system ranks Malaysia as 'standard' risk for deforestation, unlike all EU member states, which are classified as 'low' risk.

In addition to institutional complaints about EUDR, a growing chorus of dissent from other quarters is becoming discernible. Industry groups are coming forward to raise their concerns, adding to the pressure on the Commission in the process. On 7 July, Mondelēz International joined the list of companies calling for a delay in the implementation of EUDR. At around the same time, a coalition of 16 agri-food associations wrote to complain about the cost burden EUDR would place on them.

So far, the Commission has resisted calls to reopen the legislation. But it cannot get away with not responding at all. Its preferred response is likely to be further regulatory ‘simplifications,’ similar to the package it conceded back in April. The expectation is that both Parliament and Council would be content to accept further concessions short of a reopening of the legislation, but they could still choose to dig in. If they do, the Commission would be compelled to take further action. “La rentrée” in September (when Brussels returns from the beach) will prove decisive.

Therefore, while EUDR implementation is expected to proceed as planned on 30 December 2025, we anticipate an early review of the country benchmarking in the first quarter of 2026. Indeed, such a review was conceded mainly by the Commission in response to the EP Plenary vote on 9 July. In the Commission’s calculations, an early benchmarking review will be enough to prevent further rejection from MEPs and member states, and its calculations are probably correct.

The review, when it comes, should be good news for Malaysia. MPOC and others have argued that the Commission’s first assessments last May were based on incorrect data – total forest cover instead of primary forest cover. Malaysia has an excellent record on the latter; much better than large, forested EU member states like Sweden and Finland.

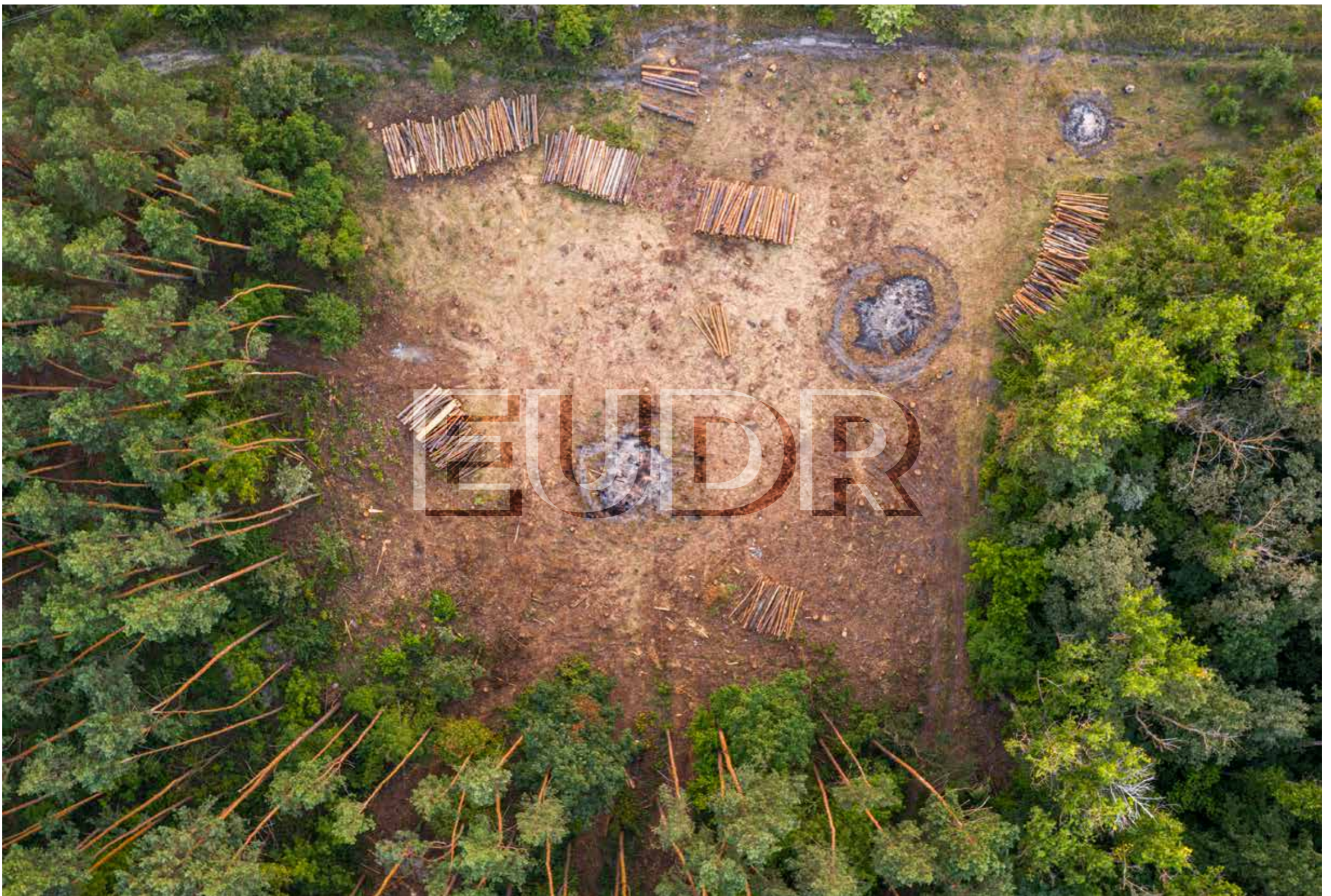
However, if the Commission were to go further and reopen the legislation entirely, there would also be risks for Malaysia. A reopening could open the door to a new ‘no’ risk category, which some member states and political groups have been advocating for. Unsurprisingly, they see ‘no’ risk as a natural home for themselves, free from any bureaucracy or oversight whatsoever. Proponents of ‘no’ risk include the EPP – the largest political grouping in the Parliament. If it were introduced, there is a risk Malaysia could find itself two regulatory categories away from the optimal tier, and an even larger compliance burden.

Other factors affecting the outcome include a new “Green Legislative Omnibus” package from the Commission, which builds on the “Sustainability Omnibus” it introduced in February. ‘Omnibuses’ are large-scale regulatory simplification exercises designed to strip out bureaucracy and make the EU more competitive. The Commission published a Call for Evidence on 22 July. The EUDR is currently not in scope, but this is likely to change.

The next few months or two will tell us a lot. While a full legislative reopening remains a long shot, meaningful simplification is seen as a necessity. For Malaysia, it is a moment to lean in, too.



An early review in 2026 could be Malaysia's best chance to secure fairer treatment under the EUDR.



# EUDR RUNS INTO DIFFICULTY IN THE EUROPEAN PARLIAMENT

The EU's Deforestation Regulation faces mounting criticism in Parliament over its risk classification system, with calls for urgent reassessment before it takes effect.

**THE** European Commission might have expected a slightly easier ride from its own Parliament, but its Deforestation Regulation (EUDR) is encountering as much opposition from Members of the European Parliament (MEPs) as it is from partner countries. On 24 June this year, the European Parliament's Environment Committee (ENVI) voted on two separate MEP-tabled resolutions objecting to the way the Commission is implementing EUDR. Of particular concern is the Commission's 'country benchmarking' system that classifies every global partner country into 'high', 'standard' and 'low' risk categories according to the perceived risk of deforestation they pose. Every EU member state, plus countries like the US, have been classified as 'low' risk; countries like Malaysia have been deemed 'standard' risk.

The MEPs' criticisms closely mirror those of MPOC. They argue that the Commission's assessments are based on forest data that is out-of-date; and that a new 'no' risk category should be created for EU member states. The proposer of the first objection, Austrian MEP Alexander Bernhuber from the centre-right European People's Party, argued that this skewed results against those countries that have made the most progress on deforestation in recent years.

More pointedly, by focusing solely on total forest loss, the Commission had overlooked primary forest loss, which is far more egregious to the planet. These omissions (and the MEPs' responses to them) raise questions about the credibility of the benchmarking system – particularly when the US and certain EU Member States are deemed 'low' risk despite having worse records than Malaysia on forest degradation. MEP Alexander Bernhuber called for the Commission to re-run the benchmarking assessments using better, more appropriate, up-to-date data.

Many of the same issues were also raised in the second objection by French MEP Mathilde Androuët from the right-wing Patriots for Europe party. She flagged the outdated data and flawed methodology, as well as the needlessly excessive regulation for what she called 'negligible' risk countries.



The Commission's assessments are based on forest data that is out-of-date.



By focusing solely on total forest loss, the Commission had overlooked primary forest loss, which is far more egregious to the planet.

In the event, Androuët's objection was rejected, but Bernhuber's resolution was passed by 49 votes to 37 and would now proceed to Plenary in the week commencing 6 July 2025, when all 705 MEPs in the European Parliament will have the chance to vote. As expected, a majority voted in favour and Bernhuber's resolution was formally adopted by the Parliament. This is a significant political win for critics of the EUDR, but the decision is non-binding on the Commission, meaning it would not be obliged to change its plans in response. However, the Commission might still wish to – ignoring a vote by the whole of the European Parliament is not a good look. It would be failing to heed a major signal of political discontent with the current proposal. Further concessions are likely, therefore.

The Commission has already made some concessions in response to the vote in the ENVI Committee. The lead EUDR official from the Directorate-General for Environment (DG ENVI), Sarah Nelen, gave a strong hint that the first review of the benchmarking system could be brought forward to early 2026 when updated FAO data for 2020-2025 would be available. She also said the issues of forest degradation and land use would be properly taken into account in the new rankings. Other changes she rejected, however, like the idea of a 'no' risk category. This would exceed the Commission's powers, she argued. To introduce one would require a legislative amendment to the EUDR, which would then have to be jointly approved by the European Parliament and the European Council.

For third countries like Malaysia, it is encouraging to see that certain MEPs also recognise the shortcomings of the current proposal and that the European Commission is capable of rapid amendment. However, questions remain over the timing of any new benchmarking review. New FAO data should be available in the early 4th quarter, but it seems likely that the current system will be in place by the time the EUDR regime becomes effective at the end of this year. If a revision quickly follows the current system, it will cause turbulence and uncertainty for importers and suppliers. A country's risk status carries significant reputational baggage: With so much uncertainty, not to mention compliance burden and cost, why would an importer choose anything other than a 'low' risk supplier, even if the quality is lower?

The Commission should be strongly encouraged to issue a new set of assessments before the EUDR takes effect. Doing so would offer much-needed clarity and market stability for both exporters and producers. It would also help avoid the awkward scenario of producers being assigned one risk designation at the outset, only to face a different classification with entirely new obligations a few months later. This is the message MEPs should be sending. Time will tell whether the Commission is listening.



The Commission should be strongly encouraged to issue a new set of assessments before the EUDR takes effect.

# INTERNATIONAL JOURNALISTS WITNESS MALAYSIA'S SUSTAINABLE PALM OIL COMMITMENT FIRST-HAND

Aiming to educate the global public on the sustainable palm oil production that Malaysia has been committed to for a long time, MPOC successfully initiates a familiarisation visit for international journalists to take a closer look and understand the grounds better.



Visit to Sungai Pin Conservation Area

**TO** strengthen global understanding of the Malaysian sustainable palm oil industry, the Malaysian Palm Oil Council (MPOC) recently hosted a familiarisation visit for international journalists from 15 to 21 June 2025. The programme brought together media representatives from India, Pakistan, the Philippines, Egypt, Kazakhstan, Uzbekistan, and Türkiye for an immersive, on-the-ground experience across Peninsular Malaysia and Sabah.

The visit began with a simple but important goal: to bridge the knowledge gap between perception and reality. For many, palm oil has long been a misunderstood commodity. But through site visits, dialogue sessions, and open conversations, the group was invited to see for themselves how Malaysia is addressing global concerns around traceability, labour practices, and environmental responsibility.



Journalists on a river cruise at the Sungai Pin Conservation Area

Key to this is the Malaysian Sustainable Palm Oil (MSPO) certification—a government-backed, mandatory scheme that sets strict standards across the value chain. Journalists learned how MSPO covers environmental and social criteria alongside ensuring smallholder inclusion, biodiversity conservation, and governance from the ground up.

In Sabah, the group was welcomed by the Sawit Kinabalu Group, one of the leading state-owned players in Malaysia's palm oil industry. Here, journalists had the opportunity to step into real plantation operations—walking through rows of oil palm trees, observing responsible field practices, and learning how efficient milling processes are applied on-site. It was not just a technical visit; it was a chance to see how sustainability is embedded into daily operations, not just policy documents.

The experience continued with a visit to the Sungai Pin Conservation Area, a dedicated reforestation and habitat restoration zone managed by Sawit Kinabalu. As they explored the site, journalists saw firsthand how conservation efforts are being integrated into oil palm landscapes—where protecting native flora and fauna, and maintaining wildlife corridors, go hand-in-hand with agricultural activity. It was a clear example of how operational excellence and environmental responsibility can coexist on the ground.

As part of their field visits, journalists toured smallholder plantations under the Wild Asia Group Scheme (WAGS). This grassroots initiative empowers independent oil palm smallholders to adopt sustainable, regenerative practices. The programme goes beyond conventional farming by focusing on soil health restoration, biodiversity enhancement, and improved water retention. These techniques not only reduce environmental impact but also boost long-term productivity and resilience—particularly important for smallholders who often operate with limited resources.

During the visit, the group observed two contrasting smallholder farms: one managed using conventional methods, and the other part of the WAGS BIO programme, which promotes regenerative agriculture. The differences were immediately visible. The BIO plot had darker, healthier soil, richer ground cover, and better moisture retention—results of practices such as composting, cover cropping, biochar application, and reduced reliance on agrochemicals.

But the benefits go beyond the land. Farmers in the WAGS BIO programme have reported lower input costs and improved yields. For many, this approach has become a pathway to improved livelihoods.



Mr. Muharram, a smallholder under the WAGS programme, demonstrating the oil palm harvesting process on his BIO Farm.



A visit to Wild Asia’s Living Lab to explore regenerative farming practices in sustainable palm oil production



Visit to smallholders’ farms to learn about sustainable practices on the ground

In Peninsular Malaysia, a highlight was the visit to SD Guthrie’s EcoGardens on Carey Island. The group explored the Palm Oil Experience Centre and their Robotics Facility, where they saw up-close how technology from robotics to field automation is being used to increase yields while reducing labour dependency and elevating sustainability outcomes. It was a clear signal that Malaysia is not standing still; innovation is paving the way.

A seminar session with experts from the Malaysian Palm Oil Board (MPOB), the Malaysian Sustainable Palm Oil (MSPO), and MPOC allowed journalists to engage in an open discussion. Discussions revolved around R&D advancements, the robustness of MSPO, and the nutritional benefits of palm oil. The dialogue session allowed journalists the opportunity to ask critical questions and engage with experts on the future of sustainable palm oil production.



**This visit reflects Malaysia's strong commitment to transparency, sustainability, and continuous engagement with the global community. We believe that equipping journalists with firsthand knowledge and access to stakeholders is vital to ensuring accurate, objective, and informed reporting on the palm oil industry."**

**CEO of MPOC, Belvinder Sron**

For countries such as India, which is implementing its National Mission on Edible Oils – Oil Palm (NMEO-OP), the visit underscored Malaysia's position as a key partner in providing sustainable expertise and technological collaboration. For Central Asian countries like Kazakhstan and Uzbekistan, where awareness about palm oil remains limited, the visit offered clarity — dispelling outdated myths and revealing the professionalism behind Malaysia's palm oil supply network. Meanwhile, Türkiye and Egypt expressed growing interest in the MSPO certification framework, signalling more substantial alignment with global sustainability standards.

The itinerary was not limited to the commercial side of palm oil. A visit to the Malayan Tiger Conservation Centre (MTCC) and the National Elephant Conservation Centre (NECC), organised in collaboration with PERHILITAN and the Malaysian Palm Oil Green Conservation Foundation (MPOGCF), offered a powerful reminder that Malaysia's sustainability journey includes wildlife and biodiversity, not just agriculture.



A demonstration by elephants and their mahouts showcasing trained behaviours used in daily care



A feeding session at NECC, where journalists gained insight into elephant care and conservation efforts

For many of the participants, the visit shifted their perception. What had previously been shaped by headlines or assumptions was now grounded in observation and experience. The opportunity to ask questions, challenge perspectives, and witness the industry up close proved to be a turning point.

*“Before the trip, I had a rather stereotypical view of palm oil,” said Aziza Mambekova, a journalist from Uzbekistan. “But I saw professionalism, innovation, and a sincere commitment to sustainability.”*

For Malaysia, these familiarisation visits are not just about promotion — they are about positioning the country as a credible, forward-looking leader in sustainable palm oil.



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# INNOVATIONS IN PRACTICE: BUILDING RESILIENCE IN SMALLHOLDER FARMERS (PART 1)

Beyond helping independent smallholders boost sustainable oil palm production, Wild Asia empowers them through alternative income-generating enterprises.

## BUILDING RESILIENCE

When Nisa Usman signed up to join the Wild Asia Group Scheme (WAGS), she never imagined she would one day grow organic vegetables to feed her family, make extra income from other enterprises, and earn the “mushroom entrepreneur” moniker.

In 2017, Wild Asia extension agents visited Nisa’s village, Kampung Paris, Kinabatangan District, Sabah, to offer free training aimed at helping independent smallholder farmers improve their farm management practices and meet sustainability standards.

**Innovations in Practice** is a series that showcases MSPO (Malaysian Sustainable Palm Oil) certified farmers who adopt sustainable land management practices and carbon removals through nature-based and low-tech solutions, as a pathway to achieving a nature-positive palm oil.

A two-hour drive from Sandakan, Kampung Paris has a population of approximately 700, comprising the indigenous Orang Sungai. Nisa's family cultivated cocoa, rice, and corn for subsistence before switching to oil palm in 2000.

Then, a young mother of four, Nisa, inherited the 5-ha family farm in 2003. As full-time oil palm farmers, she and her husband did all the work – from weeding and pruning to harvesting. Through WAGS, they learned to farm sustainably and reduce operating costs by reducing chemical inputs. Within a year, she gained her international sustainable certification.

With only a primary school education and few other skills, Nisa relied solely on her oil palm income and was subjected to the capricious fluctuations of palm oil prices. When Wild Asia introduced the **WAGS BIO** initiative in 2020, Nisa seized the opportunity to acquire new skills. A production system designed to help farmers adopt regenerative farming practices, WAGS BIO strives to demonstrate that profitability and environmental sustainability can coexist.

"I signed up (for BIO) not knowing that it would open doors to extra revenues and benefits," says Nisa, whose plantation received **Malaysian Sustainable Palm Oil (MSPO)** certification in 2019.



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**Nisa grows an abundance of cucumbers in her home garden, which she learned about under a Yayasan Hasanah Special Grant project managed by Wild Asia in 2020.**

She learned to make compost, fruit-based enzymes, and fertilisers from fish waste, kitchen waste and farm wastes to create microbe-rich soil for her palm trees. In 2020, under a [Yayasan Hasanah](#) Special Grant project managed by Wild Asia, Nisa learned to grow a home garden. She received free farming tools, including mesh netting to protect her seedlings, a water tank, and a hose for irrigation on the farm.

“Thanks to BIO training, I have created a thriving organic garden that yields fresh, pesticide-free vegetables for my family,” adds Nisa, who planted on a modest 6-sqm plot and applies DIY enzyme fertilisers on her home garden. Her bountiful harvest of cucumbers, luffa, brinjals, and okra was more than enough to feed her extended household of ten. Under another BIO initiative, Nisa intercropped oil palm with ginger and made RM480 from her first two harvests.

“We shaved off about RM300 from our monthly food expenses since we started the home garden.” But it was the mushroom cultivation venture that harnessed her entrepreneurial streak.

Wild Asia roped in a mycology and plant pathology expert, Dr. Rakib Rashid from Universiti Malaysia Sabah’s [Faculty of Sustainable Agriculture](#), to teach farmers on mushroom cultivation, providing them the opportunity to earn supplemental income. Wild Asia connects farmers with mushroom block suppliers to obtain wholesale pricing and facilitates the delivery of the blocks to farmers. Nisa started with an initial 200 mushroom blocks. Within two weeks, she had her first harvest, sold the mushrooms, and made a gross profit of RM1,000.

“I was surprised at how easy it was to maintain the mushroom blocks. We just need the right temperature, humidity, air flow and lighting conditions for them to flourish,” says the 49-year-old. Encouraged by the results, Nisa designated a fixed space in her house for her mushroom venture.

Each mushroom block has a lifespan of about three months and can produce six to seven harvests. Three years on, she still grows an average of 350 to 500 mushroom blocks, earning a net profit of about RM2,000 to RM3,000 for each harvest. Aptly, her local community labelled her as *usahawan cendawan* (mushroom entrepreneur).



The long-standing theme has always been: Is chemical-free farming possible? That led to the understanding that crop diversity is good for soils, which in turn led to new income sources for farmers as the natural next step".



**Wild Asia Founder and Executive Director**, Dr Reza Azmi

### The Ripple Effect

Nisa is one of 203 WAGS BIO farmers across Malaysia and Thailand who are directly and indirectly reaping the benefits of these alternative income-generating activities.

Back in 2019, when Wild Asia sketched out the blueprint for the BIO programme, income diversification was not spelt out in the agenda. The big picture is about helping farmers adopt regenerative farming practices, improve their livelihoods, and foster resilience.

Farmers who adopted natural farming practices for their oil palm blocks would then apply their newfound knowledge and skills at home, yielding extra earnings.

Smallholder farmer Norella Ambang has tended a home garden since young. The mother of five grows a variety of vegetables and fruits for her family's use. However, through BIO workshops, the Sabah-based farmer discovered wholesome alternatives, such as making DIY organic fertilisers and natural pest control methods.

"I'd look up farming tips on the Internet, but nothing beats hands-on learning through practical workshops," says the MSPO-certified smallholder who owns a 4.8 ha oil palm farm. "It's heartening to feed my family organic food that is rich in nutrients, low in pesticide residues and delivers spin-off environmental and social benefits."

Her organic chillies, whipped into *sambal* (a relish) and sold to colleagues and friends, are a perennial bestseller. An avid social media user, Norella shares her farming journey on TikTok and Facebook, inspiring her followers to adopt organic farming practices.

### **Eclectic Enterprises**

In Sabah, enterprising offshoots from BIO programmes that could generate alternative income for farmers include *Laran* (*Neolamarckia cadamba*) tree intercropping, *Mas Cotek* (*Ficus deltoidea*) cultivation, biochar production (through carbon credits) and a low-energy composting system to bulk produce compost.

“We brainstorm for ideas within WA and with our farmers, and tap into our collective experiences and expertise. Then, we test out the ideas on working farms,” adds Wild Asia Director and Advisor Peter Chang, who oversees the WAGS BIO operations.

Wild Asia also conducts market research to determine the type of crop that meets supply and demand, is compatible with climatic factors and soil types, and the prevailing conditions.



Nisa intercrops oil palm with ginger, generating additional income through her bountiful home garden harvest.

“In 2020, ginger was sold at RM8 per kg; now the price is RM20 per kg. Laran timber has a high commercial value. And we found a factory that processes Mas Cotek into herbal products, and they are willing to purchase the harvest from our farmers”, says Chang.

For the mushroom venture, the number of farmers who want to grow mushrooms commercially is kept to two farmers per area, to avoid saturating the market.

### **Innovative Compost Method**

In early 2024, Chang and his team established a novel composting system, known as the Cascading Compost System (CCS). The conventional method for making compost requires turning it every two weeks or once a month to allow organic waste to decompose properly.

Using a cascading system, the compost ‘bins’ are stacked like three-step stairs. At the topmost bin, a layered mix of grass, woody shrubs, leaf litter, and elephant dung is left to decompose for a month, then manually transferred to the next bin below, and the lowest-level bin in the following month. A specially designed irrigation system helps to sprinkle DIY enzyme fertilisers and water on the compost every three days. The wooden bins include mesh wire panels to provide more aeration.



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**Stacked like three-step stairs, a cascading compost system (CCS) is a low-energy composting method that does not require heavy machinery or intensive labour.**



The CCS method was established by Chang and his team in early 2024.

“All the organic materials are gathered from the farm, and we collect the elephant dung from the nearby Borneo Elephant Sanctuary, but any easily available livestock manure would do. It’s a low-energy composting method that does not require heavy machinery or intensive labour,” Chang explains.

The CCS can produce an average of five to seven cubic metres of compost per month. A rotary sieve drum is used to separate the compost into fine and coarse compost. The coarse compost can be used on the oil palm plots, whilst the fine compost can be packaged and sold as organic compost for vegetables and potted plants.

“We’re also looking at using the compost in different ways, like making a biochar compost mix or mixing it with mill wastes. The CCS can also be a potential enterprise for farmers to generate additional income,” says Chang.



# FAQ: BENEFITS OF PALM TOCOTRIENOL-RICH FRACTION IN OSTEOARTHRITIS MANAGEMENT

Your essential guide to the palm oil industry, covering nutrition and health, sustainability, environmental impact, and industry best practices.

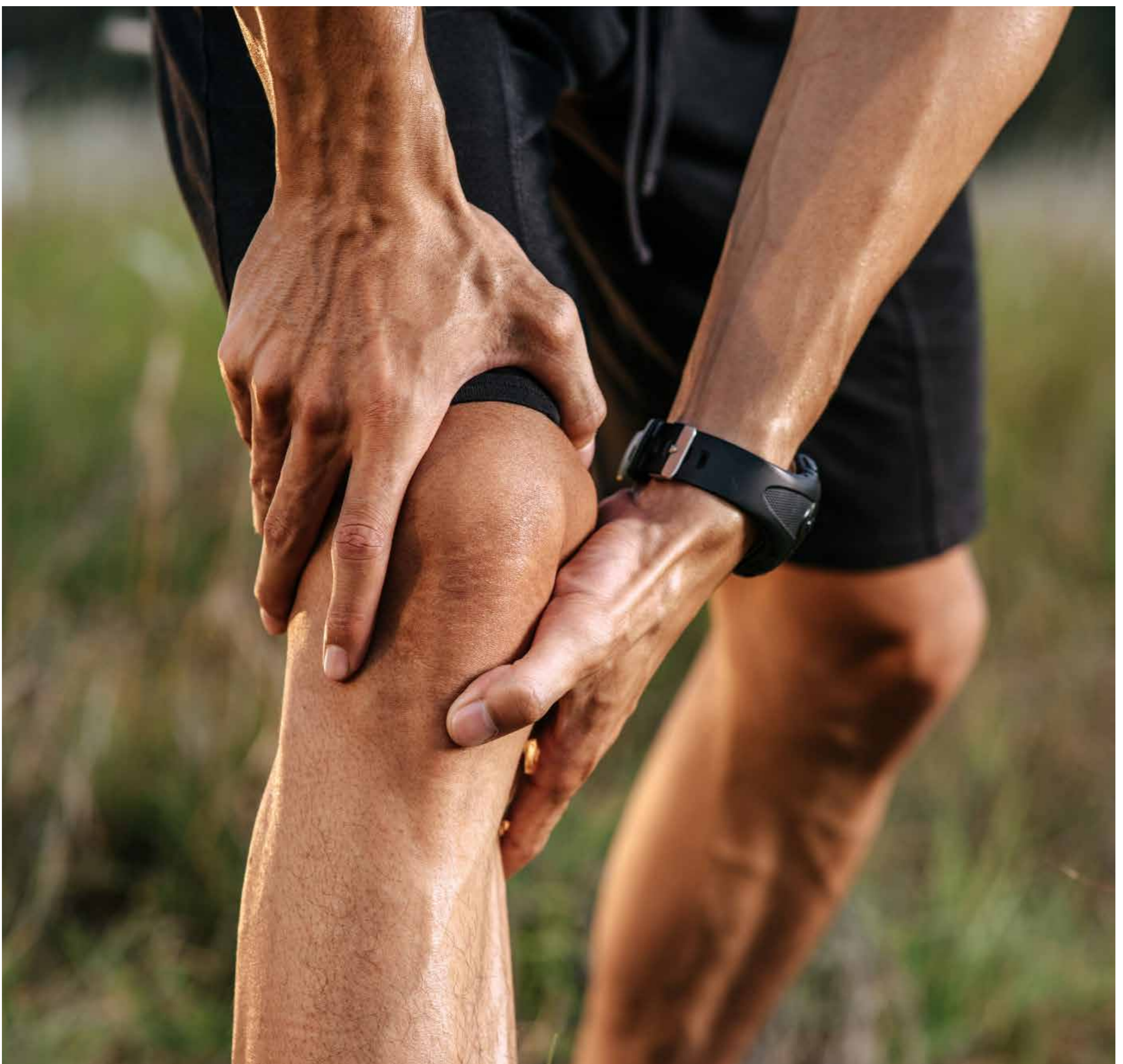
## QUESTION:

How can palm tocotrienols help with joint health and osteoarthritis (OA)?

**INFLAMMATION** and oxidative stress are key contributors to joint degeneration in OA (Ansari et al. 2020). Palm tocotrienols, a potent form of vitamin E, have shown promise in protecting joint health due to their powerful antioxidant and anti-inflammatory properties.

Emerging research suggests that tocotrienols may influence metabolic processes involved in inflammation, offering a broader protective effect on the joint environment. With their multi-faceted biological activity, palm tocotrienols may contribute to preserving cartilage, easing joint stiffness, and supporting overall joint function – especially when used as part of a holistic approach to osteoarthritis care.

Tocotrienol-rich fraction (TRF) is a natural full-spectrum vitamin E complex extracted from Malaysian palm fruit oil, retaining essential phytonutrients that have shown potential in supporting joint structure and function in preclinical studies.



**QUESTION:**

Has the joint-supporting effect of tocotrienols been studied?

Yes. A preclinical study conducted by the Faculty of Medicine, Universiti Kebangsaan Malaysia (UKM), investigated the effects of TRF on rats with induced osteoarthritis. The joint-protective effects of palm TRF have been demonstrated in vivo using a well-established rat model of OA (monosodium iodoacetate-induced):



A preclinical study (Al-Saadi 2021) found that supplementation with TRF significantly improved grip strength and reduced levels of cartilage oligomeric matrix protein (COMP) – a biomarker associated with cartilage damage. These findings indicate that tocotrienols may help preserve cartilage integrity and improve joint function. Furthermore, a serum metabolomics study (Ekeuku et al. 2023) revealed that TRF supplementation helped normalise disrupted amino acid metabolism, particularly involving branched-chain and aromatic amino acids such as phenylalanine, tryptophan, arginine, and proline. These metabolites are often elevated in OA and are linked to joint inflammation and oxidative stress. By restoring metabolic balance, TRF may contribute to slowing disease progression and improving joint homeostasis.

**QUESTION:**

What makes the combination of tocotrienols and glucosamine stand out?

In these studies, both TRF and glucosamine demonstrated a profound improvement in grip strength compared to either treatment alone, suggesting a synergistic effect on joint function and potentially pain perception. The enhanced functional outcome in the combination group highlights the added value of using both agents together. The metabolomic study further supported these findings, showing that the combination treatment produced a metabolic profile closest to that of healthy rats.

In this animal model of osteoarthritis, the combination of TRF and glucosamine demonstrated potential for faster symptom improvement and enhanced protection of joint structure, supporting its relevance for future clinical research.



**QUESTION:**

How long does it take for TRF + glucosamine to show benefits for joint health in preclinical study?

In the UKM study, the supplementation period was four weeks, during which measurable improvements in grip strength and joint biomarker levels were observed. While this indicates a promising start, longer-term use may be needed for more complete healing or cartilage regeneration. As with most nutraceuticals, consistent usage over time is key to experiencing full benefits.

**QUESTION:**

How is EVNol™ different from regular vitamin E?

EVNol™ is a full-spectrum palm tocotrienol-rich fraction (TRF) extracted from Malaysian palm fruit oil. Unlike regular vitamin E supplements that usually contain only alpha-tocopherol, EVNol™ naturally retains a full spectrum of tocotrienols including:

- Alpha-tocotrienol
- Beta-tocotrienol
- Gamma-tocotrienol
- Delta-tocotrienol
- Also contains alpha-tocopherol
- Plus other phytonutrients

QUESTION:

What’s next for TRF in osteoarthritis research?

The promising findings from this animal model, where EVNoI™ TRF combined with glucosamine demonstrated faster symptom improvement and preserved joint integrity, have laid the groundwork for the next phase of investigation: clinical translation.



Focus for Future Research

Future research should focus on well- designed human clinical trials to evaluate safety, efficacy, and optimal dosing of TRF, both as a monotherapy and in combination with standard treatments like glucosamine or nonsteroidal anti-inflammatory drugs (NSAIDs).



Exploring Mechanisms

Mechanistic studies are warranted to explore TRF's anti-inflammatory, antioxidant, and chondroprotective pathways in greater depth.



Long-Term Clinical Impact

Longitudinal studies examining disease-modifying effects and biomarker response may also help position tocotrienols as a viable adjunct or alternative to conventional OA therapies.

Acknowledgements

ExcelVite Sdn. Bhd.  
Lot 56442, 7½ Mile, Jalan Ipoh/Chemor, Chemor 31200, Perak.  
Websites: [www.excelvite.com](http://www.excelvite.com), [www.tocotrienol.org](http://www.tocotrienol.org) and [www.carotene.org](http://www.carotene.org)  
For further information, please contact [info@excelvite.com](mailto:info@excelvite.com)

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Final Announcement



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# NUTRITION SATELLITE SYMPOSIUM in conjunction with PIPOC 2025

Empowering Palm Oil Nutrition Today  
for a Healthier Tomorrow



17 November 2025



Conference Hall 2, Level 3,  
Kuala Lumpur Convention Centre (KLCC)



Jointly organised by  
Malaysian Palm Oil Board and  
Malaysian Palm Oil Council

Ministry of Plantation and Commodities, Malaysia

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# SYMPOSIUM OVERVIEW

Discover and share the latest breakthroughs in palm oil nutrition research at the Nutrition Satellite Symposium, a premier event held alongside PIPOC 2025.

## Key Topics of Discussion

Saturated Fats and Cardiometabolic Risk

Palm Oil Epidemiological Study and Human Health  
- Separating myths from facts

Red Palm Oil for Nutrition and Vitamin A Deficiency  
- A potential intervention for malnourished children

Palm Phytonutrients

- Disease prevention and management

Athletic Performance and Recovery

- The impact of dietary fats on sports nutrition



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