

LESTARI GEMS

Vol. 3

Deep Diving into Sustainability

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Featured reports

Plantation Sector: Biomass Pathway to Net Zero

Technology Sector: Rinsing Responsibly

COP27: Hits and Misses

The 2022 United Nations Climate Change Conference or Conference of the Parties, more commonly known as COP27 took place from 6 Nov to 18 Nov 2022 in Sharm El-Sheikh, Egypt. More than 90 heads of state and some 35,000 delegates of 190 countries, including Malaysia, took part in various discussions on climate issues. Here are the key highlights and commitments that could have an impact on Malaysia.

- **Loss and Damage Fund** – Dubbed the "climate justice" fund, developed countries finally agreed to establish a new fund to help vulnerable countries (mostly developing countries) pay for their "loss and damage" due to wilder weather, wildfires and rising seas driven by climate change. Although details on how it works will only be decided next year, this marked a step in the right direction to address the inequality where developing countries suffer climate-inflicted consequences due to the actions of developed countries which are the biggest emitters.

A report by 55 vulnerable countries estimated their combined climate-linked losses over the last two decades totaled US\$525b, or 20% of their collective GDP. According to GermanWatch, the 10 countries most affected by climate change based on 2000--2019 data were Puerto Rico, Myanmar, Haiti, the Philippines, Mozambique, the Bahamas, Bangladesh, Pakistan, Thailand and Nepal. Floods over two decades in Bangladesh have caused more than US\$30b in damages while the Philippines suffered over US\$500m in losses after being hit by Typhoon Rai in December 2021. In Malaysia, the Dec 2020–Jan 2021 floods resulted in damages amounting to RM6.1b.

The initiative to provide financial assistance to countries vulnerable to the impact of climate change is not new. In 2009, rich nations agreed to contribute US\$100b each year by 2020 to help poorer countries adapt their economies and lessen the impact of rising seas, more severe storms and droughts. In 2015 they agreed to extend this goal through to 2025. However, the funds fell short of the target as they provided only US\$83.3b in 2020, said the Organisation for Economic Co-operation and Development (OECD).

Meanwhile, outside of COP27, Indonesia was recently promised US\$20b to transition to renewable energy from coal. During the G20 summit in Bali, Jakarta secured US\$10b in concessionary lending from the US, Japan, Canada, Denmark, the European Union, France, Germany, Italy, Norway and the UK with international banks, including HSBC, Citigroup and Bank of America pledging to match that amount.

- **Palm Oil** – In conjunction with COP27, 14 of the world's leading agri-commodity companies, including Bunge, Cargill, COFCO International and Wilmar International, issued an agriculture roadmap outlining how they will work towards reducing emissions from land-use change. The road map sets out sectoral plans for cattle, soy and palm oil. For the palm oil sector, the roadmap focuses on deforestation, the implementation of No Deforestation, No Peat and No Exploitation (NDPE) commitments made by supply chain companies, and mandatory regulatory frameworks for sustainable palm production such as the ISPO in Indonesia and the MSPO in Malaysia.

Malaysia and Indonesia were singled out in the production of palm oil as both countries accounted for some 90% of global output in 2020, produced by about 1,500 mills. Although no listed Malaysian plantation companies were among the signatories, this road map is applicable to palm oil produced by estates and mills in Malaysia that are owned by Wilmar and can act as a practical framework for other Malaysian planters.

Forest loss linked to palm oil production in Indonesia and Malaysia peaked between 2012 and 2015 but has fallen markedly since 2015. Malaysia recorded decreasing primary forest loss from 2016 till 2021. Meanwhile, Indonesia saw four consecutive years of reductions in primary forest loss in 2017–2020, and the Indonesian Ministry of Environment and Forestry expects this trend to continue until at least 2024. As for the NDPE policy, almost 80% of refinery companies in Indonesia and Malaysia have implemented the policy. In terms of certification, as of 2020 over 96% of oil palm plantations in Malaysia were already MSPO certified, whereas for independent smallholders in Malaysia, it was just under 40%. The MSPO standard has been made mandatory since early 2020. This demonstrated the need for more extensive efforts to help small producers achieve this last-mile transformation. All these showed that Malaysia's palm oil sector is on the right track towards sustainability.

24 November 2022

- 1.5°C and Emission Targets** – At COP26 in Glasgow last year, countries agreed to focus on limiting global warming below or close to 1.5°C. This would require nations to cut net emissions by some 45% by 2030 and reach net zero by 2050. So, how close are we to hitting 1.5°C? According to Intergovernmental Panel on Climate Change (IPCC) scientists, temperatures have now risen at least 1.2°C above pre-industrial times. This means the world will likely miss the 1.5°C goal. Climate analysts said there was little reference of the 1.5°C target in the final text of COP27. In fact, a few countries were said to have resisted the inclusion of the target in the final agreement. Instead, it was in the recent G20 summit that leaders reaffirmed pledges to limit global warming to the target. Based on the World Resources Institute (WRI) 2019 data, the top three GHG emitters are China (26.4%), the US (12.5%) and India (7.06%) which contributed almost 46% of total global emissions.

Observers have expressed disappointment over the final outcome of COP27 for not doing more to reduce climate-damaging emissions. Not only was there a lack of more ambitious reduction targets, there was no additional commitment to scale back the use of fossil fuels such as coal, oil and natural gas. A small consolation was the European Union's plan to cut greenhouse gas (GHG) emissions by 57% by 2030, 2% higher than its previous goal. There was no other progress on efforts to limit global emissions. The final text of conference reaffirmed the need to reduce GHG emissions by 43% by 2030 relative to 2019 levels, unchanged from pledges made in Glasgow last year. Meanwhile, Malaysia, with a mere 0.8% share of global GHG emissions, has set a 2050 target to be carbon neutral with a plan to reduce the intensity of GHG emissions by 45% (compared to 2005 levels) by 2030.

- Fossil Fuel** – Despite demands from India and backing of the EU and many other countries for all fossil fuels to be phased down, the final agreement only mentioned "phase-down of unabated coal power". Several countries, including Saudi Arabia and China, blocked the progress to phase out all oil and gas. This means there is no new commitment to further cut the use of oil and gas. In Glasgow, countries agreed to stop new financing for fossil fuels by the end of 2022 and fully shift their focus toward financing clean energy. They also pledged to speed up the end to US\$5.9t of annual subsidies to coal, oil and gas.

In COP27, the final deal was to boost "low-emissions energy" without a clear definition of what "low-emissions energy" means. Observers argued that it could mean energy from wind and solar farms to nuclear reactors, coal-fired power stations fitted with carbon capture and storage and even gas, which has lower emissions than coal, but is still a major fossil fuel. Several countries, particularly those from Africa, have large gas reserves which could bring in lucrative deals for their countries.

ESG Rating 4 stars

Company	F4GBM Index	Rating	TP (RM)
ABMB	Yes	OP	4.20
CIMB	Yes	OP	6.40
PBBANK	Yes	MP	4.70
KLK	Yes	OP	25.50
IOI CORP	Yes	MP	4.10
PPB	Yes	MP	17.00
MISC	Yes	MP	7.05
YINSON	Yes	OP	3.15
GAMUDA		OP	5.15
SUNCON		OP	1.60
CTOS		OP	1.60
SAMAIDEN		OP	0.86

ESG Rating 2 stars

Company	F4GBM Index	Rating	TP (RM)
BAT		MP	11.45
CARLSBERG	Yes	MP	23.05
HEINEKEN		MP	25.80
KOSSAN		UP	0.85
SUPERMAX		UP	0.70
TENAGA	Yes	OP	10.17
TAANN		OP	5.50
ARMADA		OP	0.63

Plantation

Biomass Pathway to Net Zero

By Teh Kian Yeong | tehy@kenanga.com.my

OVERWEIGHT



Oil palm is synonymous with its oils. So much so that many are unaware that it produces more biomass than oil. Long under-appreciated, efforts to repurpose oil palm biomass have stalled several times since the 1990s. Combined with efforts to reduce deforestation and planting on peat soil, recycling biomass can be an effective means to close in on net zero palm oil. As the need to achieve net zero becomes more urgent, we feel that the time is ripe for the plantation sector to accelerate tried and tested biomass projects such as capturing biogas, and considers new opportunities as well. IOI's investment to repurpose oil palm trunks into timber panels and blockboards is one such example. If successful, it can be a game changer in palm oil's journey towards net zero. On the sector's investment merits, amidst uncertain economic outlook, we like the sector defensiveness as a producer of food and fuel, asset-rich NTA, undemanding ratings and its Shariah-compliant status (9.6% of the FBM Shariah Index, 9.4% of FBMKLCI). Maintain OVERWEIGHT with KLK (OP; TP: RM25.50) as our top pick.

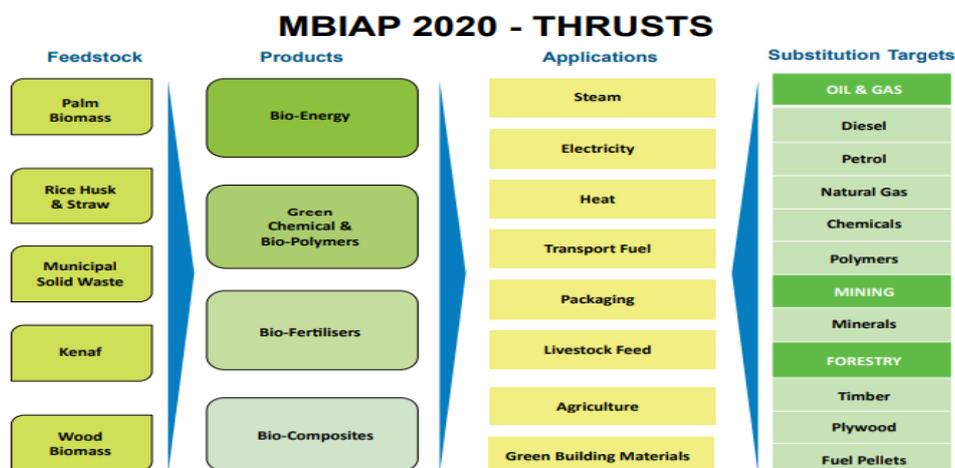
Net zero palm oil. "Malaysia has a natural competitive advantage in the Land Use, Land Use Change and Forestry (LULUCF) sector due to its sizeable carbon sink via more than 50% forest cover," according to the WWF. This natural carbon sink prevented Malaysia from becoming a net emitter until 2004. Over 70% of Malaysia's greenhouse gas (GHG) emissions are still offset by the country's forest. As at 2020, Malaysia generated 273m MT of CO₂, less than 1% of the world's emission and the agriculture sector's share was under 5%. Not huge but agriculture emission could have been lower if the oil palm sector had pushed towards net zero more aggressively. This push may just accelerate over the next few years, fuelled by the following:

- (a) Repurposing oil palm biomass to cut emission is gaining traction for a decade now, hence a more mature eco-system to support future projects is now broader and more established allowing for faster implementation moving forward.
- (b) Elevated energy prices also help, be it the higher price for palm kernel shells sold as biofuel or capturing biogas to produce electricity or composting to cut costlier synthetic fertiliser which requires energy, especially nitrogen fertiliser, to manufacture.
- (c) Exceptionally strong CPO prices in 1H CY22 also allowed for additional capex; a biogas facility can cost RM3-5m.

It is worth clarifying that this report focuses on net zero rather than carbon neutrality as net zero places greater emphasis on actual GHG reduction initiatives and efforts (which we will explore) while carbon neutrality can include the use of carbon credit from 3rd parties to offset or compensate for net emission.

Biomass in Malaysia. In the early 1990s, the then Ministry of Primary Industries set up the Oil Palm Tree Utilisation Committee to explore the potential of oil palm biomass. However, it was rapidly overshadowed when old rubber trees transformed the once small, localised furniture sector into an export-driven industry. Then in the 2010s, relevant government agencies, research institutions and private sector players were brought together to relook at the country's biomass potentials. In 2013, the Malaysian Industry-Government Group for High Technology (MIGHT), a think tank, issued the Malaysian Biomass Industry Action Plan 2020 (MBIAP 2020). Municipal waste, wood residue, paddy and straw were identified. However, it is palm biomass which dominates. Comprising over 80% of the country's annual biomass but often viewed as wastes rather than by-products, palm biomass was essentially under-appreciated.

Table 1 Malaysian Biomass Industry Action Plan 2020



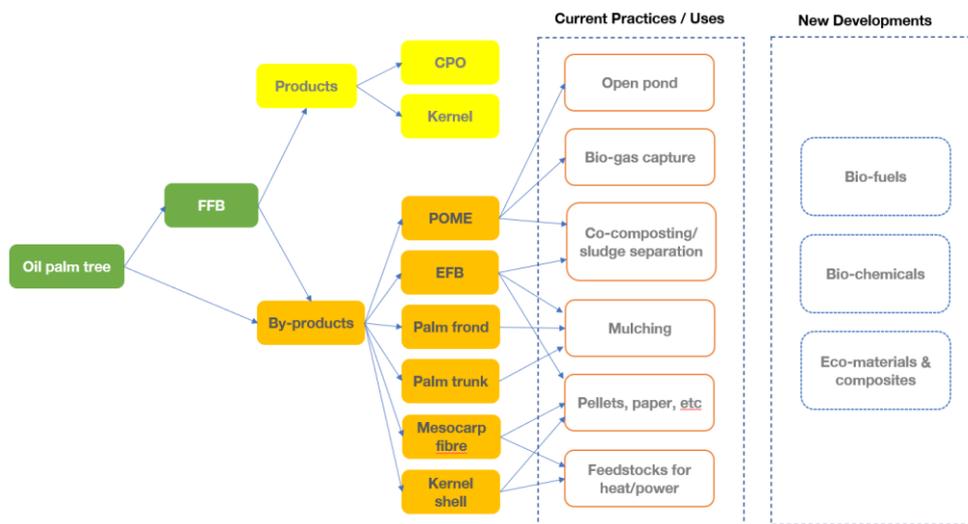
Source: Malaysian Biomass Industry Action Plan 2020 by MIGHT

Oil palm biomass. Though most well-known for its oils, 90% of what an oil palm tree generates is actually biomass rather than oil. This means there is a lot of oil palm biomass produced and there are six different types of them.

- (a) The main biomass types are: (1) oil palm trunk or OPT, (2) palm fronds, (3) empty fruit bunches or EFB, (4) mesocarp fibre, (5) palm kernel shell, and (6) palm oil mill effluent (POME) which is liquid, unlike the other five which are in solid form.
- (b) As much liquid POME (70-100m MT) as solid biomass (80-100m MT) is generated each year.
- (c) For solid biomass, 75% is out in the open field (OPT & palm fronds) while 25% is at the mill (EFB, mesocarp fibre & palm kernel shell).
- (d) POME, EFB, mesocarp fibre and palm kernel shell are churned out daily as the mill runs daily. On the other hand, OPT is only available when a tree is felled at the end of its life cycle. Palm fronds, which are pruned regularly, are available throughout the year but not daily.

Plantations have long practised recycling. Retaining palm fronds and OPTs in the field to recapture their nutrients is routine. Burning mesocarp fibre and palm kernel shells to generate steam and electricity to power the palm oil mill is also commonplace. However, in the early 2010s, Agensi Inovasi Malaysia (AIM) was tasked to look into higher value-added utilisation for biomass such as oil palm. Biofuels and biochemicals were identified as having such potential (see Table 3). AIM also concluded that biomass already aggregated at palm oil mills as the most accessible and cheapest. These low-hanging fruits include bio-gas capture and composting which also help reduce emission.

Table 3 Products and By-products Generated by the Oil Palm



Source: RSPO, AIM, Kenanga Research

GHG emissions. Estimating GHG emissions is complicated, lacks uniformity and often controversial. One key complication is accounting for emission during land-use change. For example, should a 100-year estate spread its LULUCF emission over the oil palm’s economic life, such as a standard 30-year time frame (for example) or the age of the estate? Palm oil’s oldest certification body, the Roundtable on Sustainable Palm Oil (RSPO), spreads LULUCF emission over 25 years, the economic life of an oil palm tree. Based on this, a replanted second cycle oil palm could have emission as low as 341kg CO₂e per MT of CPO while palm oil derived from a new planting on peat soil could reach 10,161kg CO₂e (Table 8). Despite such disparity, a tonne of CPO emits 2,024kg CO₂e on average, similar to soyabean oil (Table 9), according to the RSPO’s estimates.

More importantly, oil palm’s LULUCF emission from deforestation and peat planting is set to decline on growing awareness and tighter regulations. Malaysia pledged to keep half the country’s land forested at the Rio Earth Summit in June 1992. Malaysia’s forest cover today is 58% and oil palm planting is capped at 6m hectares. Meanwhile, Indonesia lost 10% of its forest during the 1990s although nearly half of Indonesia remains forested despite ongoing deforestation. Aside from governmental policies, private sector initiatives such as the “No Deforestation, No Peat, No Exploitation” or NDPE pledge is well supported by oil palm planters as well as multinationals spanning the food, toiletry and chemical supply chains.

Table 4 NDPE Is Supported By The Oil Palm Sector



Source: Kenanga Research

Table 5 Other Multinationals Backing NDPE



Source: Kenanga Research

Operationally, biogas emission from POME is the main culprit in the day-to-day production of palm oil. A tonne of CPO from a palm oil mill with biogas capture can emit as low as 341kg CO₂e versus 921kg CO₂e from a mill with open treatment ponds where CO₂ and methane (a GHG which is 25x more damaging than CO₂) simply escape into the atmosphere. Encouragingly, mills with biogas capture have grown to about 30% in Malaysia and 10% in Indonesia. Regulation is one reason – new mills must have biogas capture in Malaysia – but sound economics is the other reason. Methane is combustible so mills are increasingly using biogas to power the mill itself and selling surplus electricity to earn revenue.

Oil palm tree actually stores carbon. While better LULUCF and POME management can cut GHG emissions, repurposing oil palm biomass such as the trunk (OPT) into timber can potentially speed up the process of bringing palm oil to net zero, possible even as a net sequester. This could change the argument and perception of palm oil entirely and transform the operating landscape for the local timber and furniture industries.

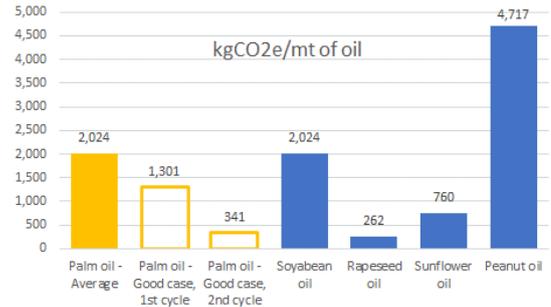
Table 6 Palm Oil GHG Emission Can Vary Significantly

RSPO PalmGHG (kg CO ₂ e per MT of CPO)	Good Case	Poor Case
a) Transport, etc	+11	+11
b) Fertiliser	+260	+260
c) POME - With/Without biogas capture	+70	+650
Emission from operations	+341	+921
e) Land change	+960	+960
f) If developed on peatland	-	+8,280
Emission from land change*	+960	+9,240
Annual range in GHG emission	+1,301	+10,161

* Annualised by spreading over a 25-year life cycle span

Source: RSPO

Table 7 GHG Emissions of Selective Vegetable Oils

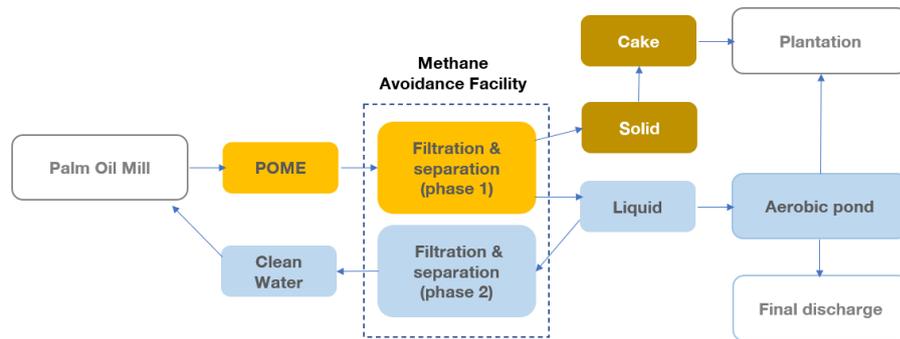


Source: RSPO

Interesting pathways to net zero. The concept of carbon neutrality and net zero are about removing damaging emissions from the atmosphere. However, carbon neutrality can be more “macro” accommodating in scope allowing for the buying and selling of carbon credits across the globe. On the hand, net zero is more focused on micro-level emission reduction efforts, often with defined targets as well. We have selected three net zero initiatives, chosen not for its stand-alone emission reduction potential but for their uniqueness and ability to complement with other initiatives as palm oil journeys toward net zero. All the three projects highlighted can thus complement biogas capture, which is the most effective means to reduce operational GHG emission but is already becoming an industry norm and hence not featured.

Project 1: Filter belt press (FBP) from Kuala Lumpur Kepong (KLK). A cost-effective, midway option between open pond treatment and biogas capture, developed by KLK, FBP is a solid separation system which mechanically separates the 4-5% of solidified organic matter in POME from the liquid. As these solids emit methane when decomposing in an oxygen-starved environment (anaerobic decomposition), FBP can help trim GHG emission. According to the International Sustainability & Carbon Certification (ISCC), FBP leads to 50% GHG emission reduction in palm oil mills and therefore offers great environmental potential. Reusing the leftover cake as biofertiliser further cuts GHG associated with the production and application of synthetic fertiliser. However, if POME solids are not removed, they eventually fill up the open ponds which then require dredging.

Table 8 POME Solid Separation Route to Reduce GHG



Source: Kuala Lumpur Kepong, Kenanga Research

Table 9 Fibre Belt Press Facility



Source: Kuala Lumpur Kepong

Table 10 Belt Press Cake cum Bio-fertiliser

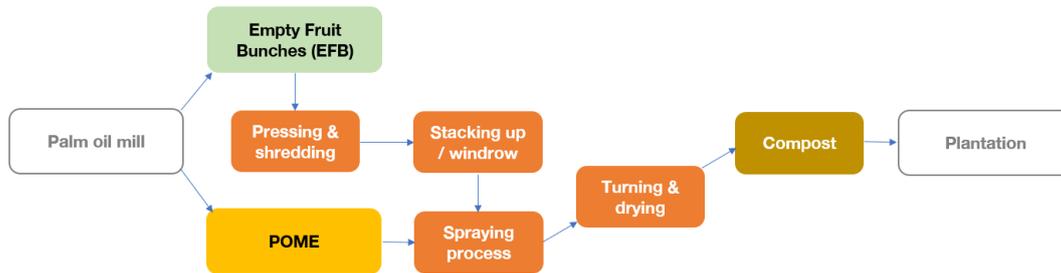


Source: Kuala Lumpur Kepong

Project 2: Generating solar electricity while co-composting by United Malacca (UMCCA). Composting is a natural, biological process where microorganisms break down organic matters into a stabler, finer, humus-like mixture. Since EFB can be left in the field to decay as it is, the advantage of composting EFB is to turn an otherwise heavy, bulky by-product which can fester vermin and diseases while it decays over 2-3 years into a more stable, manageable soil-like end product which can then be more easily packed, transported and applied in the fields or sold as organic biofertiliser. To further enrich pure EFB compost, plantations often mix POME with EFB to compost together (co-composting). In UMCCA's case, POME solids are removed first using a decanter before the liquid is mixed with EFB. By so doing GHG emission can be trimmed by 30-50%, possibly more as UMCCA believes it can reduce the intake of synthetic fertiliser by 50% in some years.

At Bukit Senorang in Pahang, UMCCA further integrated its co-composting facility with its palm oil mill whereby the mill supplies EFB, POME and electricity to run the co-composting facility. Also, as the facility is covered, UMCCA installed rooftop solar panels to sell the electricity generated.

Table 11 Co-composting Using EFB & POME



Source: United Malacca, Kenanga Research

Table 12 Covered Co-composting Facility



Source: United Malacca

Table 13 Oil Mill (LHS) & Rooftop Solar Panels (RHS)



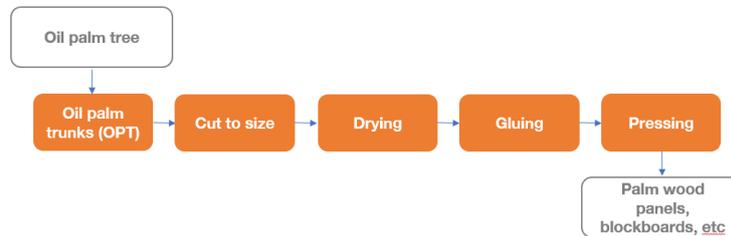
Source: United Malacca

Project 3: Panels and blockboards from OPT at IOI Palm Wood. Today, most plantations leave OPTs in the field to decompose. Much like leaving palm frond or EFB to break down so as to return the nutrients to the field, this practice can attract pests and harbour diseases such as Ganoderma. Moreover, as the OPT decays all the carbon stored or sequestered for the past 25-30 years is just released back to the atmosphere as CO₂ or even methane under certain conditions.

Since coconut palm trunks have long been turned into bridges, furniture or household articles, repurposing OPT as timber should not be surprising. Much research and studies have also been carried out by the Malaysian Timber Industry Board, Forest Research Institute of Malaysia, MPOB and the Malaysian Panel Product Manufacturers Association. Unlike most logs, OPT is more fibrous than woody with

more sugar as well as starch and the trunk's core is softer than the outer layer. However, it is sustainable; no additional land is cleared and eases demand pressure for forest-sourced timber. OPTs are quite uniform; a 25-year old trunk is relatively straight with diameter of 45–65cm and length of 7–13 metres. It is plentiful; an annual replanting of 200,000ha translates to 20m OPTs each year. Lastly, all the carbon stored in the trunk remains sequestered; a hectare with 140m³ of OPT can release up to 80MT of CO₂.

Table 14 Oil Palm Trunk to Sustainable Wood Products



Source: IOI Corporation

Table 15 Palm Wood Panel



Source: IOI Corporation

Table 16 Palm Wood Blockboard



Source: IOI Corporation

IOI Palm Wood Sdn Bhd plans to commercialise OPT and is constructing its first plant already. When completed, the plant should be able to produce 80,000m³ of kiln dried palm lumber, blockboards and panels. Although the operation will involve additional transportation, cutting and drying that will emit GHG, IOI Palm Wood estimates a hectare of OPT can probably still save about two hectares of natural forest.

Net zero is not that far. The oil palm plantation sector is moving towards net zero, albeit slowly, but the pace should pick up. For one, the current baby steps to repurpose oil palm biomass began more than a decade ago. Since then, various technologies, prototypes and options have been considered and tested. Technical and supporting services are more developed, pushing the momentum moving forward.

The economics of biogas capture and composting improve in a high energy price environment. There is an indirect substitutional effect in that biogas can be sold as fuel or more often than not in the form of electricity. Elevated energy prices also meant costlier synthetic fertiliser, thus more attractive to carry out composting. The case for rooftop solar panels, be it to cut reliance on buy-in energy or to sell electricity, simply becomes more compelling.

The run-up in CPO price also meant oil palm players are much better capitalised. Allocating RM3-5m for a biogas facility may not hinder a large integrated player but smaller independent millers and some mid-size groups would hesitate if their balance sheet or CPO prices are not strong.

A quarter to a third of current existing oil palm planted area is up for replanting by 2030. Aside from lower LULUCF emission based on the RSPO's assumption, a growing number of planters are replanting with higher yielding planting materials. Sime Darby Plantations, KLK and IOI are targeting 6m MT of CPO per hectare, almost double the worldwide yield for palm oil. This would reduce emission for palm oil.

Pressures from consumers, NGOs and regulators are unlikely to ease in the future. Fortunately, the standards for certified palm oil are already among the highest in the edible oils and fats market. As such, a benchmark has been established and we expect more palm oil to be certified.

KUALA LUMPUR KEPONG					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	★
	Corporate Social Responsibility	★	★	★	★
	Management/Workforce Diversity	★	★	★	☆
	Accessibility & Transparency	★	★	★	☆
	Corruption-Free Pledge	★	★	★	★
	Carbon-Neutral Initiatives	★	★	★	★
SPECIFIC	Biodiversity Conservation	★	★	★	★
	Sustainable Planting	★	★	★	★
	Guest Labour Welfare	★	★	★	☆
	Supply Chain Auditing	★	★	★	★
	Work Site Safety	★	★	★	★
Industrial Waste Disposal	★	★	★	★	
OVERALL		★	★	★	★

Lastly, IOI Palm Wood’s plans to commercialise carbon stored in OPTs can be a game changer in achieving net zero for palm oil. However, the product is still untested. Also, market acceptance takes time and emission from the manufacturing process needs to be stabilised then audited before the overall carbon offset potential is recognised. Nevertheless, we welcome the spirit behind the project and will be monitoring the project closely.

Meanwhile KLK’s FBP and UMCCA’s co-composting projects are reminders that the journey towards net zero need not always involve high outlays or risks. Well thought-out practices or timely intervention can go a long way in preventing GHG from developing while saving costs at the same time.

Following this review, we are updating our ESG rating in carbon neutral initiatives for KLK, IOI and UMCCA as follows:

KLK: We raise its 3½-star rating to 4 stars in view of its FBP initiative. According to the International Sustainability & Carbon Certification (ISCC), FBP leads to 50% GHG emission reduction in palm oil mills and therefore offers great environmental potential. Also, the investment costs of the BFP are significantly lower than those of methane capture methods. No change to our overall ESG rating for KLK which remains at 4 stars.

IOI: We upgrade our rating to 4½ stars for its plans to commercialise OPTs, a worthy effort to recycle trunks that can directly cut down the release of methane into the atmosphere. According to IOI, one hectare of OPT can save up to 2ha of natural forest. Its first plant is already under construction. Our overall ESG rating for IOI stays at 4 stars.

UMCCA: We now accord 3 stars from 2½ stars previously. Its dual efforts of using its self-generated solar energy to power its co-composting facility in Bukit Senorang, Pahang is commendable. We maintain our ESG rating for UMCCA at 3 stars.

OVERWEIGHT. Plantation earnings may be easing going into CY23 but with US and Europe facing headwinds, the sector’s defensive quality can be attractive. Palm oil is essentially a consumer staple (food and fuel) albeit subject to commodity price cycles. Margins and cashflows are looking to stay healthy as CPO prices should still stay firm in CY23. The sector’s asset-rich balance sheet is now being bolstered by elevated CPO prices. Moreover, trading at FY23F P/BV of 1.2x and FY22–23F PER of 10–11x suggest a lot of bad news, including softer CY23 prices, are already reflected in the sector’s valuation. Within the sector, we like KLK (OP, TP: RM25.50) whose acquisition of IJM Plantations is reflected in its earnings but not in its ratings. TSH (OP, TP: RM1.35) is structurally transformed by the CPO price run-up, easing divestment of plantation assets at attractive prices to de-gear and now able to accelerate planting and expanding from 40k hectares to 60-65k hectares over the next 8-10 years. For income seekers, HSPLNT (OP, TP: RM2.50) offers attractive dividend yields.

IOI CORPORATION					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	★
	Corporate Social Responsibility	★	★	★	★
	Management/Workforce Diversity	★	★	★	★
	Accessibility & Transparency	★	★	★	★
	Corruption-Free Pledge	★	★	★	★
	Carbon-Neutral Initiatives	★	★	★	★ ☆
SPECIFIC	Biodiversity Conservation	★	★	★	☆
	Sustainable Planting	★	★	★	☆
	Guest Labour Welfare	★	★	★	★
	Supply Chain Auditing	★	★	★	★
	Work Site Safety	★	★	★	★
	Industrial Waste Disposal	★	★	★	☆
OVERALL		★	★	★	★ ☆

UNITED MALACCA					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	
	Corporate Social Responsibility	★	★	★	
	Management/Workforce Diversity	★	★	☆	
	Accessibility & Transparency	★	★	☆	
	Corruption-Free Pledge	★	★	★	
	Carbon-Neutral Initiatives	★	★	★	
SPECIFIC	Biodiversity Conservation	★	★	★	
	Sustainable Planting	★	★	★	
	Guest Labour Welfare	★	★	★	
	Supply Chain Auditing	★	★	★	
	Work Site Safety	★	★	★	
	Industrial Waste Disposal	★	★	★	
OVERALL		★	★	★	

Peer Table Comparison

Name	Rating	Last Price (RM)	Target Price (RM)	Upside (%)	Market Cap (RM'm)	Shariah Compliant	Current FYE	Core EPS (sen)		Core EPS Growth		PER (x) - Core Earnings		PBV (x)	ROE (%)	Net Div. (sen)	Net Div Yld (%)
								1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.
PLANTATION																	
BOUSTEAD PLANTATIONS BHD	MP	0.645	0.650	0.78%	1,444.8	Y	12/2022	9.3	5.5	-14.1%	-40.6%	6.9	11.7	0.5	20.3%	12.5	19.4%
FGV HOLDINGS BHD	MP	1.32	1.55	17.42%	4,815.6	Y	12/2022	35.9	26.2	12.3%	-27.1%	3.7	5.0	0.7	22.1%	8.0	6.1%
GENTING PLANTATIONS BHD	MP	6.40	6.00	-6.25%	5,742.1	Y	12/2022	56.6	44.3	26.3%	-21.8%	11.3	14.5	1.1	10.0%	27.0	4.2%
HAP SENG PLANTATIONS HOLDINGS	OP	2.01	2.50	24.38%	1,607.4	Y	12/2022	27.8	20.6	10.8%	-25.7%	7.2	9.7	0.8	12.7%	18.0	9.0%
IOI CORP BHD	MP	4.02	4.10	1.99%	24,956.1	Y	06/2023	26.0	22.6	-10.2%	-13.0%	15.4	17.8	2.3	15.3%	14.0	3.5%
KUALA LUMPUR KEPONG BHD	OP	21.20	25.50	20.28%	22,856.9	Y	09/2023	159.2	140.9	-17.0%	-11.5%	13.3	15.0	1.6	12.2%	50.0	2.4%
PPB GROUP BHD	MP	16.22	17.00	4.81%	23,074.6	Y	12/2022	111.8	107.4	6.2%	-3.9%	14.5	15.1	0.9	7.4%	40.0	2.5%
SIME DARBY PLANTATION BHD	UP	4.43	3.65	-17.61%	30,636.6	Y	12/2022	29.5	24.3	1.3%	-17.7%	15.0	18.2	1.9	12.7%	17.0	3.8%
TA ANN HOLDINGS BHD	OP	3.63	5.50	51.52%	1,598.9	Y	12/2022	60.0	57.8	-8.9%	-3.8%	6.0	6.3	0.9	15.9%	50.0	13.8%
TSH RESOURCES BHD	OP	1.07	1.35	26.17%	1,476.8	Y	12/2022	14.5	12.4	-7.8%	-14.3%	7.4	8.6	0.6	35.3%	5.0	4.7%
UNITED MALACCA BHD	MP	5.40	5.30	-1.85%	1,132.8	Y	04/2023	48.2	40.5	-12.8%	-16.0%	11.2	13.3	0.8	7.2%	15.0	2.8%
Simple Average								57.0	49.7	0.0%	-15.5%	10.5	12.4	1.2	15.1%		5.3%

Source: Bloomberg, Kenanga Research

Technology

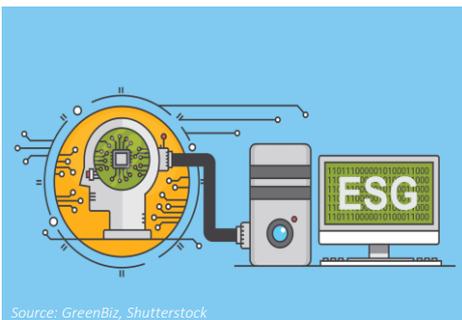
Rinsing Responsibly

By Samuel Tan | samueltan@kenanga.com.my

OVERWEIGHT



Water is not often discussed when it comes to semiconductor manufacturing, which is in fact a very water-intensive business. The process of manufacturing IC on a 12-inch wafer requires up to 8,000 litres of water, which translates into daily water consumption of 265m litres for a large fab producing 1m wafers/month. OSAT players also utilise ultrapure water (UPW) during the wafer dicing process. Out of the three local companies (INARI, MPI, UNISEM) featured in our findings, we learnt that all three companies are: (i) compliant with the wastewater disposal regulation in the respective countries it operates in, (ii) exhibit improving water-use efficiencies, and (iii) increasing efforts for water recycling. After our review, we recalibrated our rating on INARI’s “waste disposal / pollution control” criteria to 3 stars (previously 4 stars) as we deem its practices to be fairly consistent with peers such as MPI and UNISEM. However, we maintain a 3-star rating (vs. peers of 2.5-star) for INARI’s “disclosure and transparency” criteria given the extensive disclosure of its wastewater management system. With the adjustment made, we maintain an overall ESG rating of 4 stars for INARI and MPI while UNISEM’s ESG rating is kept at 3 stars.



Source: GreenBiz, Shutterstock

No water no chip. Water and electronics may not strike one as a pair that goes hand in hand but in actuality, water is a crucial component in the manufacturing of semiconductors. It requires around 8,000 liters of water to create an IC on a 30cm wafer (or also referred to as a 12-inch wafer). Water is used in various stages of the front-end manufacturing cycle, such as stripping, etching, photolithography, backgrinding, cleaning and polishing. However, this is no ordinary water but specifically ultrapure water (UPW) that is purified to very strict specification — removing all ions, particles, chlorine and silica — which is the only type of water permitted to be used in the wafer fabrication

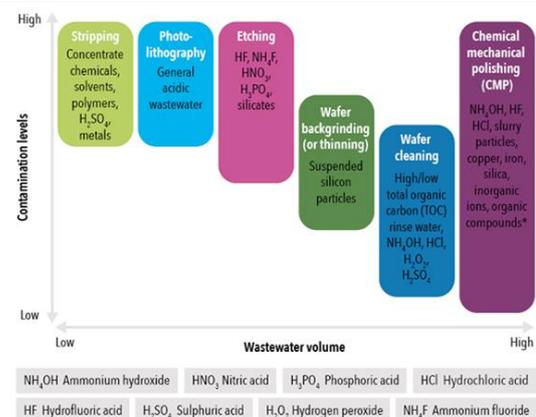
facility (fab) in order to ensure that the semiconductor produced is free from contamination. Due to the stringent filtration process, it requires approximately 14,000 to 16,000 liters of ordinary household tap water to yield 10,000 liters of UPW. This means that a large wafer fab producing 1mil wafers monthly utilises around 265m liters of water per day which equates to the daily water consumption of approximately 1.3m Malaysians (based on the National Water Services Commission estimate of 201 liters per person) or twice the population of Petaling Jaya.

Exhibit 1: Production of ultrapure water (UPW)



Source: SK Hynix

Exhibit 2: UPW usage in various stages of wafer production



Source: Global Water Intelligence

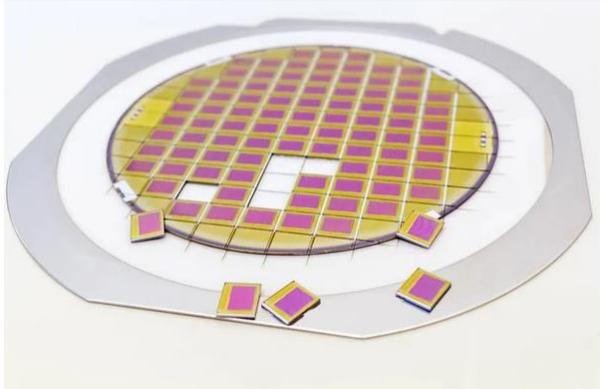
Water usage in the back-end semiconductor manufacturing is relatively less intensive but also important as outsourced semiconductor assembly and test (OSAT) players receive the wafers from customers in its complete form which require going through a dicing and grinding process, separating each die before it can be packaged. The dicing and grinding process uses UPW to cool the diamond blade that is rotating at 30,000 RPM as well as rinsing off fine silicon particles.

Exhibit 3: Wafer dicing and grinding using UPW



Source: Disco Corporation

Exhibit 4: Post-dicing



Source: Depositphotos

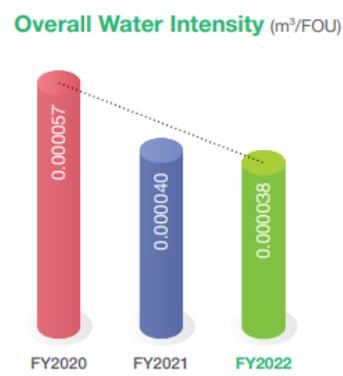
We identified three main local OSAT players, namely INARI, MPI and UNISEM to evaluate their respective practices pertaining to water usage and wastewater management. INARI being the largest OSAT locally by virtue of market capitalisation utilises 754,491m³ worth of water in its latest financial year (FY22; June YE), representing a 3% YoY decline while its revenue grew 8.3% YoY for the same reporting period. This is also represented in Exhibit 6 where its overall water intensity (m³ / factory output unit) has been falling over the past three years, thanks to better efficiency and recycling efforts. More importantly, we learnt that the group’s wastewater management discharge quality is compliant with the respective countries’ regulation it operates in, being Malaysia’s Environmental Quality (Industrial Effluents) Regulations 2009, the Philippines’ Water Quality Guidelines and General Effluent Standards (DENR Administrative Order no 2016-08) and China’s Integrated Wastewater Discharge Standard (GB8978-1996) illustrated in columns (a), (b) and (c) in Exhibit 7.

Exhibit 5: INARI water consumption



Source: Inari Amertron

Exhibit 6: INARI water intensity (m³ / factory output unit)



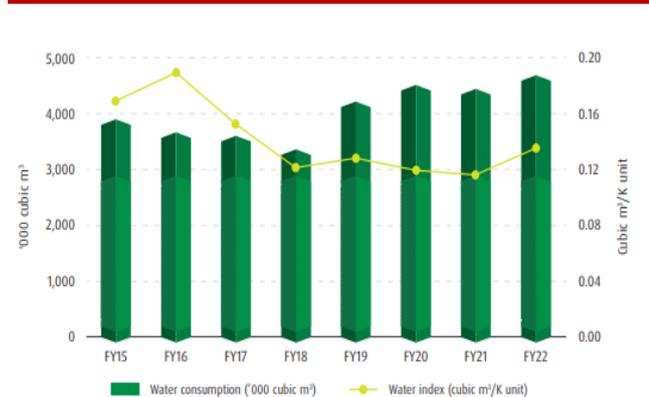
Source: Inari Amertron

Exhibit 7: INARI wastewater discharge quality												
Wastewater discharge quality	Unit	Malaysia				Philippines			China			
		FY2020	FY2021	FY2022	(a)	FY2020	FY2021 & FY2022	(b)	FY2020	FY2021	FY2022	(c)
Temperature	°C	NA	NA	NA	40.0°C ^(a)	25.0	Waste water discharged is treated by a licensed third party service provider ^(d)	22.0-32.0°C	NA	NA	NA	NA
pH	-	7.9	7.6	7.0	5.5 - 9.0	8.9		6.0 - 9.5	7.2	7.3	7.7	6.0 - 9.0
BOD5	mg/L	NA	NA	NA	NA	1.0		<50.0	86.5	18.9	57.0	<300.0
COD	mg/L	38.4	30.7	16.4	<200.0	NA		<100.0	231.0	37.0	111.0	<500.0
Suspended solids	mg/L	11.5	9.2	7.2	<100.0	2.5		<100.0	89.0	4.0	48.0	<400.0
Oil and grease	mg/L	NA	NA	NA	NA	1.0		<5.0	0.2	0.2	0.4	<20.0
Ammoniacal Nitrogen	mg/L	NA	NA	NA	NA	0.1		<0.5	44.7	8.6	40.0	<45.0

Source: Inari Amertron

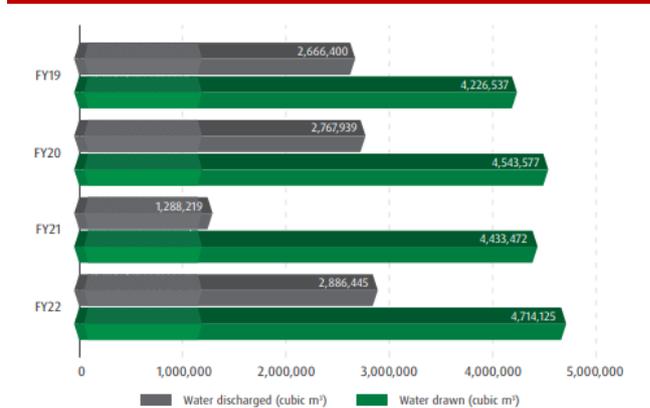
MPI being the second largest OSAT consumes 4,714,125 m³ in its latest financial year (FY22; June YE). While this represents a 6.3% YoY increase in water consumption, it is well justified by the group’s increased capacity which resulted in 21.5% YoY jump in revenue for the same reporting period. The group has reported lower water discharge compared to water drawn over the past four year thanks to its water recycling initiative. With regards to its wastewater management, the group is also compliant with both Malaysia’s Environmental Quality (Industrial Effluents) Regulations 2009 as well as China’s Integrated Wastewater Discharge Standard (GB8978-1996) for its plants with respective countries. All of its factories are equipped with real-time water discharge monitoring to ensure that the wastewater (containing metals, toxic chemicals and organic compounds) generated from the dicing and etch process is properly treated before being discharged.

Exhibit 8: MPI water consumption ('000 m³) per K units



Source: Malaysian Pacific Industries (MPI)

Exhibit 9: MPI water discharged vs water drawn (m³)



Source: Malaysian Pacific Industries (MPI)

UNISEM’s water consumption trended 2% lower YoY to 1,195,000 m³ of water in its latest financial year (FY21; Dec YE) while revenue for the same period rose 20% YoY, indicating improved efficiencies. Similar to INARI and MPI, the group is also governed by local wastewater discharge regulations in both Malaysia’s Environmental Quality (Industrial Effluents) Regulations 2009 and China’s Integrated Wastewater Discharge Standard (GB8978-1996) for its respective plants and has maintained its compliant status consistently. In both its facilities, UNISEM has put in place a rinse water collection systems and dedicated drainage system to reuse a portion of the UPW that is safe and does not contain any hazardous substance, for other industrial purposes and irrigation. On average, UNISEM has recycled 5.8% of the water withdrawn over the past three years.

Exhibit 10: UNISEM water consumption and wastewater management

		FY 2019	FY 2020	FY 2021
Unisem Ipoh and Unisem Chengdu	Water Withdrawal by source (thousand m³)			
	Third-party	3,016	3,062	3,094
	Water Discharge by destination (thousand m³)			
	Third-party	1,689	1,547	1,899
	Water Consumption (thousand m³)	1,328	1,515	1,195

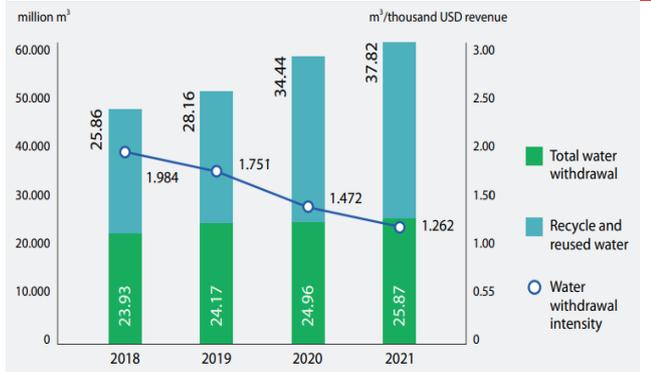
Compliance with effluents and wastewater discharge regulations: • Standard B under EOA (Industrial Effluents) Regulation 2009 • Integrated Wastewater Discharge Standard (GB8978-1996)			
KPI & Target	FY 2019	FY 2020	FY 2021
Performance			
Unisem Ipoh	Compliant	Compliant	Compliant
Unisem Chengdu	Compliant	Compliant	Compliant

Source: Unisem

A comparison to global practices. To provide a better perspective, we broaden our view to include the practices from a global player such as ASE Technology Holdings (ASE) which commands c.25% of global market share, making them the largest OSAT company with an annual revenue of c.TWD \$570b (or RM84.5b). ASE’s approach to water usage and wastewater treatment is relatively more extensive compared to Malaysian OSATs. The group utilises assessment tools developed by the World Resource Institute (WRI) as well as NASA’s climate data to conduct its water risk analysis in order to determine the appropriate response strategies for each of its facilities worldwide. ASE has invested US\$1.13m over the past seven years in research to develop new treatment technologies in collaboration with academic institutes. This includes studies on recycling of high-concentration chemical waste, monitoring of aquatic environments, groundwater recovery methodology, aquatic ecology, and health risk evaluation. As a result, ASE currently has 15 facilities that are capable of classifying chemicals and treating each one independently with the best approach. This explains the group’s efficiency in terms of water withdrawal intensity which is below 2.0 over the past four years with the latest data for 2021 standing at only 1.262 (see Exhibit 11).

In comparison, we ran an analysis with similar parameters for both UNISEM and MPI (see Exhibit 12) and it clearly shows that both companies’ water withdrawal intensity were at double digits a few years back and only recently trended lower to 8.2 and 8.3, respectively. We believe the large variance could be explained by the lack of technology and resources available among local players to achieve such efficiencies. Moreover, the likes of ASE has had a head start in such areas many years ago while Malaysian companies are only at the early stage of this ESG journey.

Exhibit 11: ASE water withdrawal intensity (m³ / '000 USD revenue)



Source: ASE Technology Holdings

Exhibit 12: UNISEM and MPI water withdrawal intensity (m³ / '000 USD revenue)



Source: UNISEM, MPI, Kenanga

Changes to our ESG rating. Upon gathering further insights of the three companies (INARI, MPI, UNISEM), we fine-tune our rating under the “waste disposal / pollution control” criteria as follows:

- i. INARI – The group’s practices in relation to its water usage and wastewater disposal have been satisfactory over the past three years with YoY improvements. Upon further research, we also learnt that its practices are fairly consistent in comparison with peers. As such, we recalibrated its “waste disposal / pollution control” criteria rating to 3 stars (previously 4 stars) to be in line with the likes of MPI and UNISEM. However, we acknowledged INARI’s extensive disclosure of its wastewater management by keeping its 3-star (vs. peers of 2.5-star) rating under the “disclosure and transparency” criteria.
- ii. MPI – We maintain a 3-star rating under the “waste disposal / pollution control” criteria as its practices are compliant with the regulations of the countries it operates in.
- iii. UNISEM – Similar to MPI, we also retain a 3-star rating under the “waste disposal / pollution control” criteria for UNISEM given its consistent adherence to the wastewater disposal regulation in both Malaysia and China.

We learnt that all three companies: (i) have exhibited YoY improvements in terms of water usage efficiency where its consumption is compared against its revenue generated, (ii) are compliant to wastewater disposal regulations in the respective countries it operates in such as Malaysia’s Environmental Quality (Industrial Effluents) Regulations 2009, the Philippines’ Water Quality Guidelines and General Effluent Standards (DENR Administrative Order no 2016-08) and China’s Integrated Wastewater Discharge Standard (GB8978-1996) which is important to ensure the hazardous chemicals does not contaminate the environment, and (iii) has plans for improving their water recycling effort.

There are still challenges when it comes to peer comparison as the data presented by each company is based on different categorisation as each company has its own preference when it comes to the parameters used and matrix presented. However, INARI is seen to have more extensive disclosure when it comes to wastewater management as it detailed out every aspect of the component’s target and achievement while UNISEM and MPI do not. On the other hand, UNISEM and MPI do provide details on its water withdrawal intensity which is aligned to the practices of global players such as ASE. While the efficiency rate is still far from the likes of ASE, Malaysian companies have the latecomer advantage where it can model after the practices of global players and enhance those practices. With the adjustments made, we maintain an overall 4-star ESG rating for INARI and MPI while UNISEM’s overall ESG rating is kept at 3 stars.

Appendix

MPI					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	★
	Corporate Social Responsibility	★	★	★	★
	Management/Workforce Diversity	★	★	★	
	Accessibility & Transparency	★	★	☆	
	Corruption-Free Pledge	★	★	★	★
	Carbon-Neutral Initiatives	★	★	★	☆
	SPECIFIC	Foreign Worker Welfare	★	★	★
Supply Chain Auditing		★	★	★	☆
Waste Disposal / Pollution Control		★	★	★	
Energy Efficiency		★	★	★	☆
Work Site Safety		★	★	★	★
Digital Transformation		★	★	★	☆
OVERALL			★	★	★

Source: Kenanga

INARI					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	★
	Corporate Social Responsibility	★	★	★	★
	Management/Workforce Diversity	★	★	★	
	Accessibility & Transparency	★	★	★	
	Corruption-Free Pledge	★	★	★	★
	Carbon-Neutral Initiatives	★	★	★	☆
	SPECIFIC	Foreign Worker Welfare	★	★	★
Supply Chain Auditing		★	★	★	☆
Waste Disposal / Pollution Control		★	★	★	
Energy Efficiency		★	★	★	
Work Site Safety		★	★	★	
Digital Transformation		★	★	★	★
OVERALL			★	★	★

Source: Kenanga

UNISEM					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	☆
	Corporate Social Responsibility	★	★	★	☆
	Management/Workforce Diversity	★	★	☆	
	Accessibility & Transparency	★	★	☆	
	Corruption-Free Pledge	★	★	★	
	Carbon-Neutral Initiatives	★	★	★	
	SPECIFIC	Foreign Worker Welfare	★	★	★
Supply Chain Auditing		★	★	★	☆
Waste Disposal / Pollution Control		★	★	★	
Energy Efficiency		★	★	★	
Work Site Safety		★	★	☆	
Digital Transformation		★	★	★	
OVERALL			★	★	★

Source: Kenanga

D&O					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	★
	Corporate Social Responsibility	★	★	★	☆
	Management/Workforce Diversity	★	★	★	
	Accessibility & Transparency	★	★	☆	
	Corruption-Free Pledge	★	★	★	★
	Carbon-Neutral Initiatives	★	★	★	☆
	SPECIFIC	Foreign Worker Welfare	★	★	★
Supply Chain Auditing		★	★	★	☆
Waste Disposal / Pollution Control		★	★	★	
Energy Efficiency		★	★	★	☆
Work Site Safety		★	★	★	
Digital Transformation		★	★	☆	
OVERALL			★	★	★

Source: Kenanga

KGB					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	☆
	Corporate Social Responsibility	★	★	★	☆
	Management/Workforce Diversity	★	★	☆	
	Accessibility & Transparency	★	★	★	
	Corruption-Free Pledge	★	★	★	
	Carbon-Neutral Initiatives	★	★	★	★
	SPECIFIC	Foreign Worker Welfare	★	★	★
Supply Chain Auditing		★	★	★	☆
Waste Disposal / Pollution Control		★	★	★	
Energy Efficiency		★	★	★	
Work Site Safety		★	★	★	
Digital Transformation		★	★	☆	
OVERALL			★	★	★

Source: Kenanga

LGMS					
	Criterion	Rating			
GENERAL	Earnings Sustainability & Quality	★	★	★	
	Corporate Social Responsibility	★	★	★	
	Management/Workforce Diversity	★	★	★	☆
	Accessibility & Transparency	★	★	★	
	Corruption-Free Pledge	★	★	★	
	Carbon-Neutral Initiatives	★	★	☆	
	SPECIFIC	Occupational Health & Safety	★	★	★
Protection of Customer Data		★	★	★	★
Cybersecurity		★	★	★	★
Energy Efficiency		★	★	★	
Digital Transformation		★	★	★	
OVERALL		★	★	★	

Source: Kenanga

24 November 2022

KESM						
	Criterion	Rating				
GENERAL	Earnings Sustainability & Quality	★	★	☆		
	Corporate Social Responsibility	★	★	★		
	Management/Workforce Diversity	★	★	☆		
	Accessibility & Transparency	★	★	☆		
	Corruption-Free Pledge	★	★	★		
	Carbon-Neutral Initiatives	★	★	☆		
SPECIFIC	Worker Welfare	★	★	★		
	Sustainability Certification	★	★	★		
	Waste Disposal / Pollution Control	★	★	☆		
	Energy Efficiency	★	★	★		
	Work Site Safety	★	★	★		
	Digital Transformation	★	★	☆		
OVERALL		★	★	★		

Source: Kenanga

JHM						
	Criterion	Rating				
GENERAL	Earnings Sustainability & Quality	★	★	☆		
	Corporate Social Responsibility	★	★	★		
	Management/Workforce Diversity	★	★	★	☆	
	Accessibility & Transparency	★	★	☆		
	Corruption-Free Pledge	★	★	★		
	Carbon-Neutral Initiatives	★	★	★		
SPECIFIC	Worker Welfare	★	★	★	☆	
	Sustainability Certification	★	★	★		
	Waste Disposal / Pollution Control	★	★	★		
	Energy Efficiency	★	★	☆		
	Work Site Safety	★	★	★	☆	
	Digital Transformation	★	★	★		
OVERALL		★	★	★		

Source: Kenanga

SKP						
	Criterion	Rating				
GENERAL	Earnings Sustainability & Quality	★	★	★		
	Corporate Social Responsibility	★	★	★		
	Management/Workforce Diversity	★	★	☆		
	Accessibility & Transparency	★	★	☆		
	Corruption-Free Pledge	★	★	★		
	Carbon-Neutral Initiatives	★	★	☆		
SPECIFIC	Worker Welfare	★	★	★		
	Sustainability Certification	★	★	★		
	Waste Disposal / Pollution Control	★	★	☆		
	Energy Efficiency	★	★	★		
	Work Site Safety	★	★	★		
	Digital Transformation	★	★	☆		
OVERALL		★	★	★		

Source: Kenanga

PIE						
	Criterion	Rating				
GENERAL	Earnings Sustainability & Quality	★	★	★	☆	
	Corporate Social Responsibility	★	★	★		
	Management/Workforce Diversity	★	★	☆		
	Accessibility & Transparency	★	★	☆		
	Corruption-Free Pledge	★	★	★		
	Carbon-Neutral Initiatives	★	★	☆		
SPECIFIC	Worker Welfare	★	★	★		
	Sustainability Certification	★	★	★		
	Waste Disposal / Pollution Control	★	★	☆		
	Energy Efficiency	★	★	★		
	Work Site Safety	★	★	★		
	Digital Transformation	★	★	☆		
OVERALL		★	★	★		

Source: Kenanga

GHL						
	Criterion	Rating				
GENERAL	Earnings Sustainability & Quality	★	★	☆		
	Corporate Social Responsibility	★	★	★		
	Management/Workforce Diversity	★	★	☆		
	Accessibility & Transparency	★	★	★		
	Corruption-Free Pledge	★	★	★		
	Carbon-Neutral Initiatives	★	★	☆		
SPECIFIC	Occupational Health & Safety	★	★	★		
	Protection of Customer Data	★	★	★	★	
	Cybersecurity	★	★	★	★	
	Energy Efficiency	★	★	★		
	Digital Transformation	★	★	★		
OVERALL		★	★	★		

Source: Kenanga

☆ denotes half-star
 ★ -10% discount to TP
 ★★ -5% discount to TP
 ★★★ TP unchanged
 ★★★★ +5% premium to TP
 ★★★★★ +10% premium to TP

24 November 2022

Malaysian Technology Peers Comparison

Name	Rating	Last Price (RM)	Target Price (RM)	Upside (%)	Mkt Cap (RM'm)	Shariah Compliant	Current FYE	Core EPS (sen)		Core EPS Growth		PER (x) – Core Earnings		PBV (x)		ROE (%)		Net Div. (sen)		Net Div. Yld (%)	
								1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.						
D&O GREEN TECHNOLOGIES BHD	OP	3.75	3.51	-6.40%	4,639.7	Y	12/2022	8.8	11.3	-1.9%	28.5%	42.8	33.3	5.3	12.8%	1.5	0.4%				
GHL SYSTEMS BHD	MP	0.70	1.10	57.14%	799.1	Y	12/2022	2.1	2.7	-16.4%	30.2%	34.0	26.1	1.5	4.5%	0.0	0.0%				
INARI AMERTRON BHD	MP	2.54	2.85	12.20%	9,481.3	Y	06/2023	10.2	11.5	-3.2%	12.7%	24.9	22.1	3.7	15.0%	9.7	3.8%				
JHM CONSOLIDATION BHD	MP	0.72	0.90	25.00%	401.5	Y	12/2022	5.7	6.7	15.8%	17.7%	12.7	10.8	1.4	11.6%	0.5	0.7%				
KELINGTON GROUP BHD	OP	1.36	1.80	32.35%	874.5	Y	12/2022	7.8	8.1	57.9%	4.0%	17.4	16.8	3.7	23.4%	2.0	1.3%				
KESM INDUSTRIES BHD	MP	7.03	6.60	-6.12%	302.4	Y	07/2023	2.8	8.6	500.0%	208.3%	252.2	82.6	0.8	0.3%	7.5	1.1%				
LGMS BHD	OP	1.26	1.50	19.05%	574.6	Y	12/2022	2.7	3.5	20.4%	29.0%	46.3	35.8	6.8	22.0%	0.0	0.0%				
MALAYSIAN PACIFIC INDUSTRIES BHD	MP	27.60	26.10	-5.43%	5,489.5	Y	06/2023	123.4	152.5	-25.8%	23.6%	22.4	18.1	2.5	11.7%	35.0	1.3%				
P.I.E. INDUSTRIAL BHD	OP	2.56	3.15	23.05%	983.1	Y	12/2022	16.6	19.7	6.0%	18.5%	15.4	13.0	1.7	11.6%	7.0	2.7%				
SKP RESOURCES BHD	OP	1.62	2.10	29.63%	2,531.0	Y	03/2023	11.6	12.4	6.3%	7.7%	14.0	13.1	2.8	21.1%	5.8	3.6%				
UNISEM (M) BHD	MP	2.68	2.75	2.61%	4,323.1	Y	12/2022	14.4	15.3	17.7%	6.2%	18.6	17.5	1.9	10.4%	6.0	2.2%				
Simple Average								18.7	22.9	52.4%	35.1%	45.5	26.3	2.9	13.1%		1.6%				

Source: Bloomberg, Kenanga Research

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Stock Ratings are defined as follows:

Stock Recommendations

OUTPERFORM	: A particular stock's Expected Total Return is MORE than 10%
MARKET PERFORM	: A particular stock's Expected Total Return is WITHIN the range of -5% to 10%
UNDERPERFORM	: A particular stock's Expected Total Return is LESS than -5%

Sector Recommendations***

OVERWEIGHT	: A particular sector's Expected Total Return is MORE than 10%
NEUTRAL	: A particular sector's Expected Total Return is WITHIN the range of -5% to 10%
UNDERWEIGHT	: A particular sector's Expected Total Return is LESS than -5%

*****Sector recommendations are defined based on market capitalisation weighted average expected total return for stocks under our coverage.**

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