AmInvestment Bank

Thematic Report

30 Sep 2025

ESG - BIODIVERSITY

Sustaining Life On Earth

Gan Huey Ling, CFA
gan-huey-ling@ambankgroup.com
+603 2036 2305

Rationale for report: Sector Update

Key Indicators

2025F CPO Price:
RM4,250/tonne

Stock Universe

Johor Plantations
TP: RM1.72
Rec: BUY
Upside/Downside: +21.1%

Genting Plantations
TP: RM5.84
Rec: BUY
Upside/Downside: +21.4%

Kim Loomg
TP: RM2.91
Rec: BUY
Upside/Downside: +24.9%

IOI Corp
TP: RM4.05
Rec: HOLD
Upside/Downside: +2.5%

TSH Resources
TP: RM1.29
Rec: HOLD
Upside/Downside: +12.2%

KL Kepong
TP: RM20.70
Rec: HOLD
Upside/Downside: +1.2%

SD Guthrie
TP: RM4.89
Rec: HOLD
Upside/Downside:-6.7%

Investment Highlights

Biodiversity is life on earth. It is important as humans depend on animals and plants for food, medicine and shelter. According to WWF's Living Planet Report 2022, wildlife population in the world has declined by an average of 69% in the 50 years from 1970 to 2018. According to the Living Planet Report 2020, nearly three billion animals were killed or displaced by Australia's bushfires in 2019 and 2020. In India, 19% of amphibians are threatened or critically endangered. The main causes of biodiversity loss are habitat loss, overpopulation, climate control, pollution and invasive species. To mitigate biodiversity loss, certain practices can be implemented. These include sustainable management of fishing and agriculture, regenerative agriculture, land restoration and intensification of conservation efforts. Individuals can recycle and reduce wastage such as food and clothes.

- **Malaysia has a National Biodiversity Policy.** Malaysia first announced the National Policy on Biological Diversity in 1998. The policy was then reviewed and introduced as the National Policy on Biological Diversity 2016-2025 in 2016. The latest is the National Policy on Biological Diversity 2022-2030, which was launched in October 2023. There are five goals, 17 targets and 61 action plans in the National Policy. The policy aims to synergise Malaysia's development plans with international frameworks such as the UN's Sustainable Development Goals that were adopted in 2015. This is to ensure the continuity and sustainability of Malaysia's natural resources.

- **Indigenous communities and biodiversity are inter-related.** The indigenous people have deep knowledge of the forest and depend on it for livelihood. Malaysia is in the process of formulating the Orang Asli or Indigenous Peoples Development Policy, which aims to strengthen the rights of indiegenous people in areas like customary land, education and health. A key aspect is the commitment to the Free, Prior and Informed Consent process, whereby consent must be obtained from the indigenous people before any activity is undertaken on their land. The policy is expected to be submitted to the Parliament in 2025F.

- **No clearing of new land for palm oil.** Malaysia's highest deforestation rate was recorded from 2000 to 2012. This was about 1.4% to 1.6% per year. Since then, the country's deforestation rate has declined. In the palm oil sector, Malaysia does not clear or deforest new areas for development. However, logging and clearing of land for rubber plantations are allowed. Clearing of land for rubber plantations is subject to environmental considerations such as the Environmental Impact Assessment. Logging is allowed in areas classified as Production Forests in the Permanent Forest Reserves, subject to approvals from the state authorities.

Biodiversity is life on earth

Biodiversity is life on earth

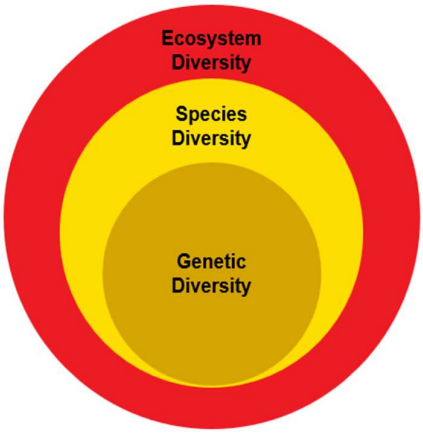
Biodiversity is the variety of life on earth. Biodiversity consists of plants, animals, microorganisms and the many ecosystems on earth. There are three types of biodiversity i.e. genetic biodiversity, species biodiversity and ecological biodiversity *(see Exhibit 1)*.

Genetic biodiversity is the diversity or variety of genes within the same species. For instance due to genetic biodiversity, there are different types of cats, oil palm or durians.

Species diversity is the variety of species in a certain area. For example, there are different types of plants and animals in a rainforest.

Ecological biodiversity is the variety of ecosystems in a certain area and the interaction between the ecosystems. For instance, Malaysia has marine and rainforest ecosystems. Species diversity is a component or subset of ecological biodiversity.

EXHIBIT 1: TYPES OF BIODIVERSITY



Source: Ministry of Natural Resources, Environment and Climate Change

Biodiversity is important as it supports life on earth. Every species is part of a cycle of life, which supports the human population. The pollination of the oil palm fruit is led by weevils. Peatlands absorb carbon, which is harmful for the environment. Plants are used to make medicines and supplements.

According to the World Health Organisation (WHO), more than 75% of global food crops rely on pollinators. Also, more than 50% of medicines are derived from natural sources, including antibiotics from fungi and painkillers from plants.

Biodiversity loss has intensified over the years

Biodiversity loss has intensified over the years

Biodiversity loss is the decline or reduction in a plant or animal species or disappearance of an ecosystem.

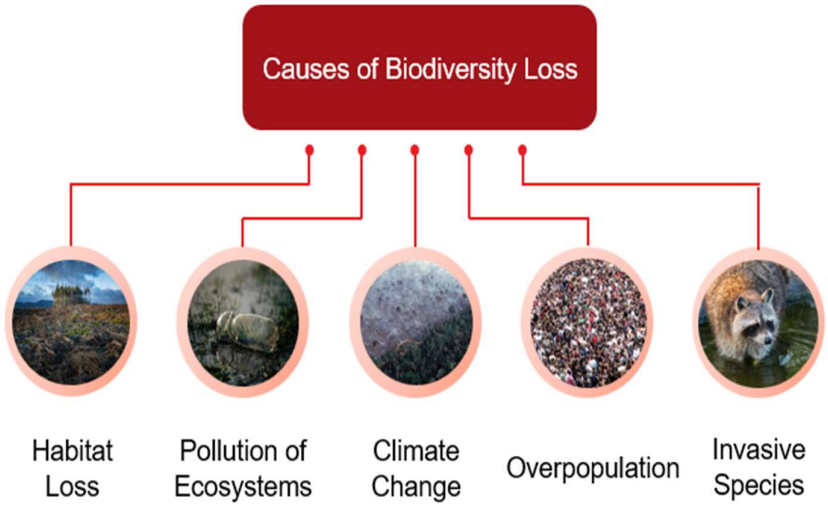
According to the United Nations (UN), 4% of mammals lose their habitats and 70% to 90% of coral reefs disappear for every 1.5°C increase in temperature. About 14% of the world's coral reefs were lost from 2009 to 2018 due to climate change.

According to the Living Planet Report 2024 by World Wildlife Fund (WWF), there has been a 73% decline in the average size of the monitored wildlife population in the 50 years from 1970 to 2020. The steepest decline in the monitored wildlife population took place in Latin America and the Caribbean, Africa and Asia Pacific.

In Malaysia, a rise in temperatures affects rice production. The National Policy on Biological Diversity 2022-2030 estimates a rice production economic loss of RM162.5mil for a 2°C increase in temperature.

Causes of Biodiversity Loss

EXHIBIT 2: CAUSES OF BIODIVERSITY LOSS



Source: Ministry of Natural Resources, Environment and Climate Change

There are many causes of biodiversity loss

According to the Living Planet Report 2024, habitat loss and degradation were the main threats to wildlife population. This was followed by overpopulation, invasion species and diseases. Other causes of biodiversity loss are pollution and climate change *(see Exhibit 2)*.

Habitat loss is main cause of biodiversity loss

Habitat loss and degradation refer to the destruction of the environment, where plants and animals used to live. Habitat loss and degradation are caused by urbanisation, agriculture, extraction of mineral resources and deforestation. Non-human causes of habitat loss include natural disasters such as volcano eruptions, floods or tsunamis.

Overpopulation results in clearing of land for food and shelter

Overpopulation results in a loss of biodiversity as areas are cleared to build houses and plant food crops. An example is Papua New Guinea (PNG), whose population climbed from 1.5mil in 1950 to 10.6mil in 2024. A 2022 UN report said that 66% of population of known animal species in PNG declined during the period with 623 plants and 481 animals listed as critically endangered, endangered or vulnerable.

Invasive species are usually introduced by humans

Invasive species are harmful species of plants and animals that are introduced into the ecosystems or environment by humans. According to the National Geographic, invasive species often lack predators or parasites and can quickly outcompete the native species for

food and water. Through travel movements, trade flows and sometimes as a form of biocontrol, invasive species find their way into new countries or environment.

In Malaysia, the Kariba weed, which is native to Brazil is now found in the lakes and paddy fields. The weed grows into a thick floating mat on top of the water surface, which blocks aqua native plants from light and oxygen. Another example is the introduction and proliferation of cane toads in Australia, which have affected native animals and plants.

Higher temperature affects vegetation and marine life

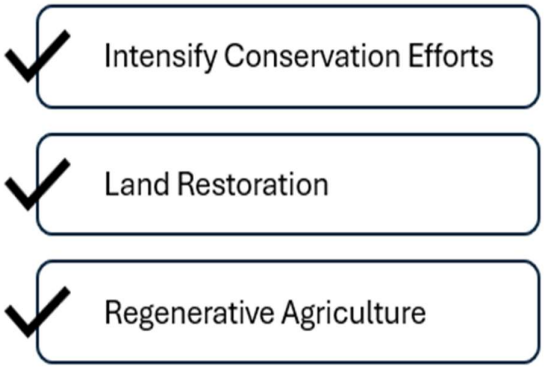
Climate change occurs when there are higher temperatures and increased frequencies of drought, floods or fires. A rise in water temperature affects marine ecosystems while drought results in the degradation of certain plant and animal species. For example, an increase in sea water temperature results in the loss of coral reefs.

Pollution affects ecosystems

Pollution can come in many forms such as air or water pollution. The air is polluted when there are ammonia, nitrogen oxide or suphur dioxide. Ammonia comes from agricultural activities such as using fertiliser while sulphur dioxide comes from the burning of fossil fuel such as coal.

How to mitigate biodiversity loss?

EXHIBIT 3: HOW TO MITIGATE BIODIVERSITY LOSS?



Source: Ministry of Natural Resources, Environment and Climate Change

Intensify conservation efforts

To reduce biodiversity loss, the causes have to be addressed. The main cause of biodiversity loss is the loss of habitat resulting from agriculture and urbanisation. Hence if peatlands and virgin rainforests are protected, this would reduce biodiversity loss. The general society can also do its part by cutting wastage such as food and clothes *(see Exhibit 3)*.

Under the Kunming-Montreal Global Diversity Framework Plan in 2022, about 30% of the planet and 30% of degraded systems are to be placed under protection by 2030F. According to the UN, only 17% of land and 8% of marine areas are protected currently. The Plan also proposes ncreasing financing for biodiversity projects in developing countries. In addition to these, member countries are to come up with national biodiversity strategies and action plans and set targets to match the goals.

Land restoration to reduce biodiversity loss

Ethiopia has restored some degraded farmland and hillsides by using soil and water conservation techniques such as terraces, trenches and tree planting. According to the UNDP (United Nations Development Programme), the country's efforts included the construction of more than 2,000km of terraces and more than 63,000 basins to capture rainfall and prevent erosion. Ethiopian farmers have also adopted climate-smart practices such as drought-resistant crops and moisture conservation.

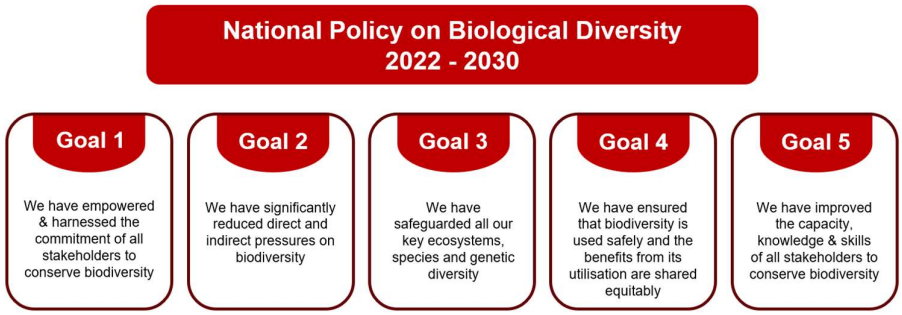
Regenerative agriculture helps too

Regenerative agriculture is farming that focuses on soil health to help conserve the eco-system. According to Regeneration International, regenerative farming methods include minimising the ploughing of land. This keeps carbon dioxide in the soil and improves water absorbency. Rotating crops and moving cattle to different pastures also help to maintain soil health.

According to the World Economic Forum, greenhouse gas emissions from agriculture in the EU could be 6% lower in 2030F if a fifth of farmers adopted "climate-smart" agriculture such as regenerative farming. Globally, regenerative farming has already been practised in certain parts in Australia, Asia and Latin America.

Malaysia's National Policy on Biological Diversity 2022 to 2030

EXHIBIT 4: THE FIVE GOALS IN THE NATIONAL POLICY ON BIOLOGICAL DIVERSITY



Source: Ministry of Natural Resources, Environment and Climate Change

Biodiversity is not new

Malaysia formulated the first National Policy on Biological Diversity in 1998. The policy was then reviewed and introduced as the National Policy on Biological Diversity 2016-2025 in 2016. The current National Policy on Biological Diversity 2022 to 2030 was introduced in October 2023.

Malaysia is one of the 17 megadiverse countries in the world. It has about 15,000 species of vascular plants i.e. plants that have functions that can circulate water and minerals throughout. Malaysia also has 306 species of mammals, 742 species of birds and 2,068 species of freshwater and marine fish.

About 55% of Malaysia's total land area remains forested i.e. national parks, stateland forests, permanent reserved forests and wildlife sanctuaries. Famous conservation areas include Maliau Basin and Danum Valley in Sabah.

The National Policy on Biological Diversity 2022 to 2030 has five goals and 17 targets

The five goals are (1) getting the commitment of all stakeholders to conserve biodiversity, (2) reducing direct and indirect pressures on biodiversity, (3) safeguarding all of the key

ecosystems, (4) ensuring benefits of biodiversity are shared equitably and (5) improving the capacity, knowledge and skills of the stakeholders to conserve biodiversity *(see Exhibit 4)*.

The 17 targets are to be achieved by 2030F and they are aligned to the Kunming-Montreal Global Biodiversity Framework Targets.There are 61 action plans in the National Policy.

Some of the targets include the incorporation of biodiversity conservation in township planning by 2030F, sustainable management of agrifood, agricommodity and fisheries production by 2030F and the restoration of degraded ecosystems by 2030F (*see Exhibit 5)*.

EXHIBIT 5: SOME OF THE TARGETS & ACTION PLANS IN THE NATIONAL POLICY ON BIOLOGICAL DIVERSITY

Source: Ministry of Natural Resources, Environment and Climate Change

Some of the action plans include strengthening the Free, Prior and Informed Consent process in projects that affect indigenous people and local communities, ensuring that development zones in local district plans avoid Environmentally Sensitive Areas and ensuring infrastructure developments have measures to avoid and minimise habitat fragmentation and wildlife roadkills.

Some key indicators include the implementation of policies to empower indigenous people and local communities by 2030F, the reporting on biodiversity conservation initiatives by all public-listed companies by 2030F and the certification of 50% of the forestry sector under sustainable management schemes by 2030F (*see Exhibit 6)*.

EXHIBIT 6: THE KEY INDICATORS IN THE NATIONAL POLICY ON BIOLOGICAL DIVERSITY

Action 1.1	Action 1.2	Action 4.1	Action 4.2	Action 5.1	Action 5.2
By 2030, the public awareness levels on the importance of biodiversity has increased compared to 2024 levels	By 2030, the number of children and youths participating in biodiversity conservation activities has increased by 50% compared to 2024 levels	By 2030, biodiversity conservation has been embedded into the country's investment and financing frameworks	By 2030, relevant and effective biodiversity safeguards have been embedded into the infrastructure, commercial, industrial, energy, and health sectors	By 2030, forestry laws and regulations have been reviewed to support biodiversity conservation and contribute to climate change adaptation	By 2030, 50% of the forestry sector has been certified under sustainable management schemes (e.g. MTCS and FSC)
Action 8.1	**Action 9.1**	**Action 9.2**	**Action 14.1**	**Action 17.1**	**Action 17.2**
By 2030, the National Framework for Protected Area has been established and operationalized	By 2030, an ecosystem vulnerability map and ranking has been developed for utilisation	By 2030, at least 200,000 ha of degraded sites are being actively restored	By 2030, the public awareness levels on ABS has increased compared to 2024 levels	By 2030, at least RM500 million has been mobilised for biodiversity conservation through annual public funds	By 2030, private financing contributions into national / state conservation trust funds have increased

Source: Ministry of Natural Resources, Environment and Climate Change

National Biodiversity Policy is to be reviewed every four to five years

The Federal Government is expected to play a leading role in the implementation of the Policy. The policy recommends a dedicated team to be set up to monitor, coordinate and report on the progress. Other key players include the state governments, private sector, general public and indigenous communities.

The main agencies in Sabah and Sarawak are the Sabah Biodiversity Centre and Sarawak Ministry of Natural Resources and Urban Development. In the private sector, the Policy envisions a National Biodiversity Roundtable to monitor and implement the action plans.

Online monitoring system is in progress

An online monitoring system will be used to monitor the targets and indicators of the Policy. Progress of the implementation will also be reported every four years to the Convention on Biological Diversity (CBD), which is under COP (Conference of the Parties to the UN Framework Convention on Climate Change).

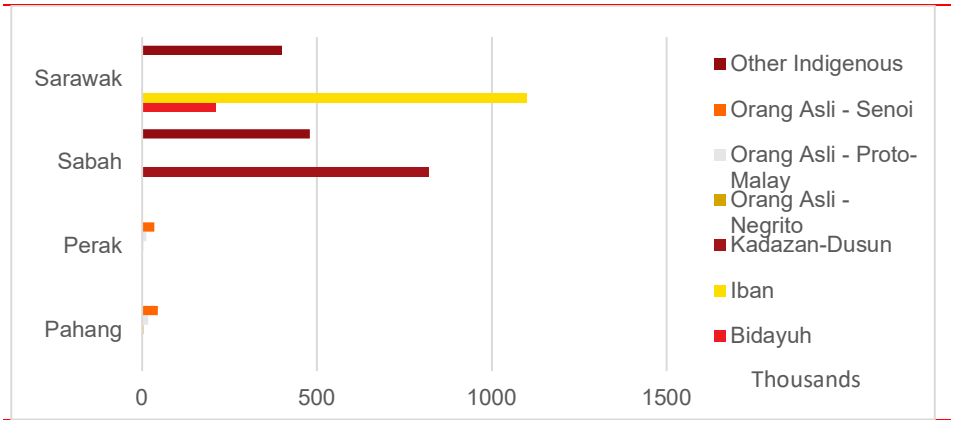
We believe that the online monitoring system is still in progress. According to MyGovernment, an ICT initiative has been taken to develop the Malaysian Biodiversity Information (MyBIS) and Access to Biological Resources and Benefit Sharing (MyABS) Systems. These will be part of the Biological Sources One Stop Centre.

In April 2024, a User Requirement Specification session was organised, bringing together officials from state and federal government agencies and representatives from UNDP Malaysia. The focus of the session was to glean user requirements for the online and monitoring platform.

Currently, Malaysia has a National Forest Monitoring System, which was set up in 1972. It is updated every 10 years. The system consists of two components i.e. short term and long-term monitoring. Under short-term monitoring, geospatial imagery is captured from satellites and this is carried out once every two years. Once every 10 years, a national forest inventory is carried out with personnel collecting samples from the forests.

Role of the indigenous communities in preserving biodiversity

EXHIBIT 7: INDIGENOUS POPULATION



Source: DOSM, JAKOA

Indigenous people and biodiversity are symbiotic

Indigenous people rely on plants and animals for sustenance and livelihood but at the same time, they also act as steward of the environment as the ecosystem would perish if it is not taken care of.

It is estimated that indigenous people account for 11% of Malaysia's population. In Peninsular Malaysia, Orang Asli are mainly in Pahang and Perak. In Sabah, the indigenous people are mainly Kadazans while in Sarawak, the main groups are Iban and Bidayuh.

In a 2023 report by Sunway University, researchers highlighted the contribution of indigenous people to the environment. In the first case study, indigenous people showed their extensive knowledge by correctly identifying the Lumok and Pingan tree species, which were misclassified by Western taxanomy as one species. In the second case study, indigenous people helped reduce poaching activities in the Royal Belum Reserve in Perak by participating in the Menraq Patrol unit. The Jahai indigenous people were paid RM85/day to patrol forests and gather data related to poaching activities.

Conclusion

Biodiversity is important but preservation is challenging

It is undeniable that biodiversity is important. The difficulty lies in striking the balance between economic progress and conservation of the environment. At the Rio Earth Summit in 1992, Malaysia pledged to maintain a forest coverage of 50%. Currently, the forest coverage is 55%.

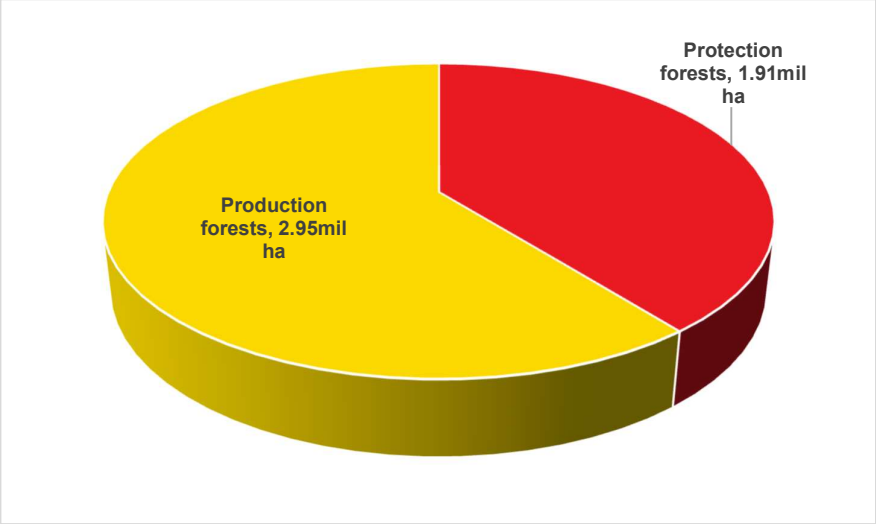
According to the World Economic Forum, which quoted data from Global Forest Watch, Indonesia and Malaysia have managed to keep primary forest loss at record low levels. Malaysia's deforestation rate fell by 57% between the periods of 2015/2017 and 2020/2022. In 2022, Malaysia lost around 70,000ha of primary forest while Indonesia lost about 107,000ha.

No land clearing for palm oil

In Malaysia, there is no new land clearing or deforestation for palm oil so that the forest coverage of 55% can be maintained.

However, logging is still allowed. Logging can be carried out in Permanent Forest Reserve in Malaysia. Permanent Forest Reserves are classified into two categories i.e. Production Forests and Protection Forests. Logging is only allowed in Production Forests with the approval of the state authority. Also, the method used in logging is the Selective Management System (SMS) where felling is only on large or suitable trees and thereafter, the area must undergo silvicultural treatment to be restored.

EXHIBIT 8: BREAKDOWN BETWEEN PRODUCTION AND PROTECTION FORESTS IN 2023



Source: Forestry Malaysia

EXHIBIT 9: VALUATION MATRIX

	Share price (RM)	EPS (sen) FY25F	EPS (sen) FY26F	PE (x) FY25F	PE (x) FY26F	Target price (RM)	Upside	FY25F Div yield	Rec
IOI Corp	3.95	21.6	23.4	18.3	16.9	4.05	2.5%	2.8%	Hold
KLK	20.46	90.9	114.1	22.5	17.9	20.70	1.2%	3.2%	Hold
SD Guthrie	5.24	26.4	27.2	19.8	19.3	4.89	-6.7%	3.2%	Hold
Gent Plant	4.81	37.2	38.9	12.9	12.4	5.84	21.4%	5.8%	Buy
Johor Plantations	1.42	11.4	11.5	12.5	12.3	1.72	21.1%	3.9%	Buy
TSH Resources	1.15	10.8	10.8	10.6	10.6	1.29	12.2%	1.7%	Hold
Kim Loong	2.33	17.9	18.2	13.0	12.8	2.91	24.9%	6.9%	Buy

Source: AmInvestment Bank

DISCLOSURE AND DISCLAIMER

This report is prepared for information purposes only and it is issued by AmInvestment Bank Berhad ("AmInvestment") without regard to your individual financial circumstances and objectives. Nothing in this report shall constitute an offer to sell, warranty, representation, recommendation, legal, accounting or tax advice, solicitation or expression of views to influence any one to buy or sell any real estate, securities, stocks, foreign exchange, futures, investment or other products. AmInvestment recommends that you evaluate a particular investment or strategy based on your individual circumstances and objectives and/or seek financial, legal or other advice on the appropriateness of the particular investment or strategy.

The information in this report was obtained or derived from sources that AmInvestment believes are reliable and correct at the time of issue. While all reasonable care has been taken to ensure that the stated facts are accurate and views are fair and reasonable, AmInvestment has not independently verified the information and does not warrant or represent that they are accurate, adequate, complete or up-to-date and they should not be relied upon as such. All information included in this report constitute AmInvestment's views as of this date and are subject to change without notice. Notwithstanding that, AmInvestment has no obligation to update its opinion or information in this report. Facts and views presented in this report may not reflect the views of or information known to other business units of AmInvestment's affiliates and/or related corporations (collectively, "AmBank Group").

This report is prepared for the clients of AmBank Group and it cannot be altered, copied, reproduced, distributed or republished for any purpose without AmInvestment's prior written consent. AmInvestment, AmBank Group and its respective directors, officers, employees and agents ("Relevant Person") accept no liability whatsoever for any direct, indirect or consequential losses, loss of profits and/or damages arising from the use or reliance of this report and/or further communications given in relation to this report. Any such responsibility is hereby expressly disclaimed.

AmInvestment is not acting as your advisor and does not owe you any fiduciary duties in connection with this report. The Relevant Person may provide services to any company and affiliates of such companies in or related to the securities or products and/or may trade or otherwise effect transactions for their own account or the accounts of their customers which may give rise to real or potential conflicts of interest.

This report is not directed to or intended for distribution or publication outside Malaysia. If you are outside Malaysia, you should have regard to the laws of the jurisdiction in which you are located.

If any provision of this disclosure and disclaimer is held to be invalid in whole or in part, such provision will be deemed not to form part of this disclosure and disclaimer. The validity and enforceability of the remainder of this disclosure and disclaimer will not be affected.