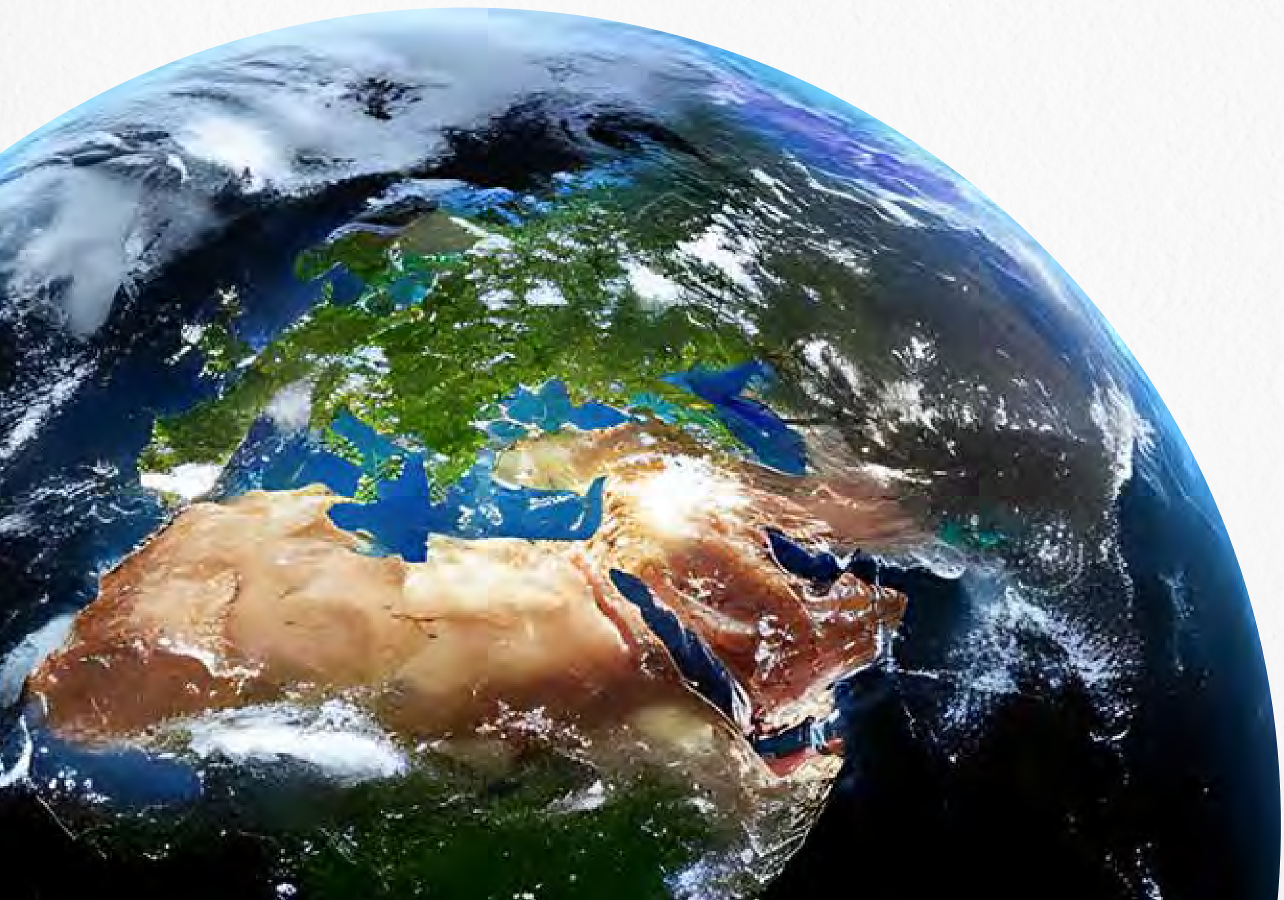
Suruhanjaya Sekuriti
Securities Commission
Malaysia

OXFORD CENTRE FOR ISLAMIC STUDIES

16TH SC-OCIS ROUNDTABLE

Guardians of the Earth: Climate Action Through the Lens of Maqasid Al-Shariah

30 September 2025
Kuala Lumpur



SC – OCIS ROUNDTABLE

The Securities Commission Malaysia (SC) and the Oxford Centre for Islamic Studies (OCIS) have collaborated to create an international platform for a discourse on topical issues and challenges faced in bringing Islamic finance into the mainstream.

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16th SC-OCIS Roundtable 2025
Guardians of the Earth: Climate Action Through the Lens of Maqasid Al-Shariah
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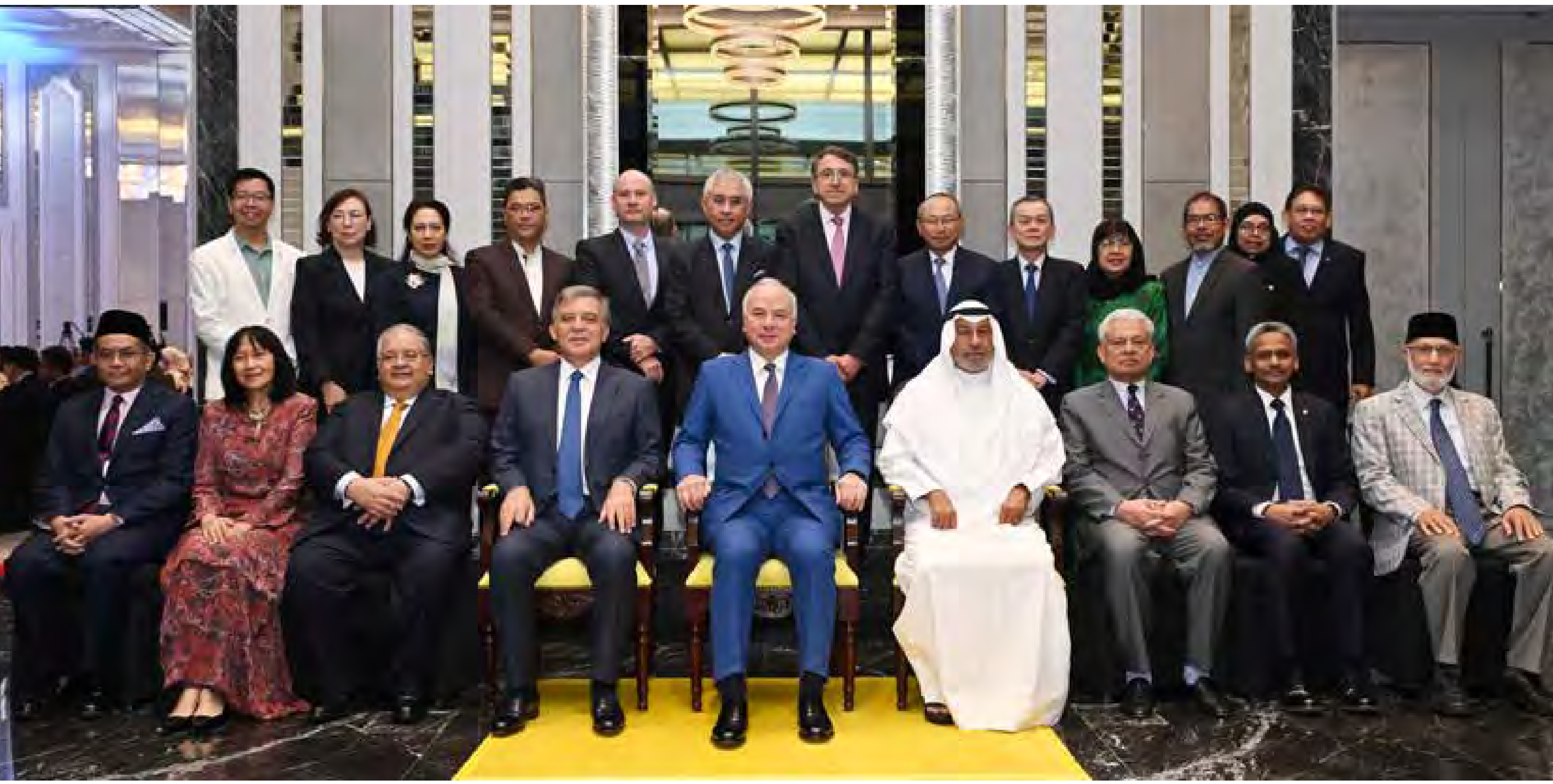

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OPENING ADDRESS

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Executive Chairman,
Securities Commission Malaysia

His Royal Highness Sultan Nazrin Muizzuddin Shah, Ruler of the state of Perak Darul Ridzuan and Royal Patron of Malaysia's Islamic Finance Initiative,

His Excellency Dr. Abdullah Gül,

His Highness Sheikh Dr. Mohammad Al-Sabah,

Dato' Sri Abdul Rasheed Ghaffour, Governor of Bank Negara Malaysia,

Dr. Farhan Nizami, Director, Oxford Centre for Islamic Studies,

Excellencies,

Tan Sri Tan Sri, Dato' Dato'

Distinguished guests and speakers,

Ladies and gentlemen.

Welcome to the 16th edition of the SC-OCIS Roundtable (Roundtable). We are delighted and truly grateful to His Royal Highness, Tuanku Nazrin Muizzudin Shah for gracing today's Roundtable. On behalf of all the participants here, we would like to thank Tuanku for being here.

I also like to record my appreciation to my co-host, the Oxford Centre for Islamic Studies, (OCIS), who has been a steadfast partner in advancing this platform with the Securities Commission Malaysia, (SC Malaysia). Congratulations on turning 40 (the centre celebrated its 40th anniversary of establishment in 2025) and we are proud to be part of that journey for the last 16 years.

As always, our Roundtable is enriched by the presence of associates and allies with shared interests. My sincere thanks to all guests who have travelled from near and far and for making the time for this dialogue.

The Roundtable theme, this year, is the Guardians of the Earth: Climate Action Through the Lens of Maqasid Al-Shariah. When I heard the title for the first time, I remarked it sounded more like a Marvel movie title than a workshop, echoes of Guardians of the Galaxy.

However, in reflection, the title and theme of this Roundtable is consistent with the Marvel Universe in the sense that we now need people to stand up and be heroes. We should all be standing up and reclaiming the centuries-old moral responsibility to address what we have done collectively to the planet. It is no longer a distant threat. Left unchecked, it risks disrupting economies, destabilising communities, and it will test our long-term resilience.

Therefore, beyond investing in transition to low carbon energy and addressing adaptation and mitigation needs, we also need to address climate resilience. Climate resilience enhances the capacity of assets and systems to endure, adapt or transform. They reduce risks, prevent maladaptation, and support sustainable development, generating wide public benefits. And more importantly, it will help us as a society to bounce back from disasters. Japan who lives in earthquake zone is a good example of a resilient country. Through their planning, rehearsal and design, they have shown their ability to rise from rubble, time and time again.

However, climate action demands more than investments. That is why this Roundtable shifts the focus to the less glamorous but essential drivers for change: the basics of fiduciary duty, accountability, and embedding sustainability. These are the levers that translate values into mandates, board decisions into outcomes, and ultimately, capital into actions that matter.

For regulators, the challenge is two-fold. Firstly, to preserve market integrity and stability in the face of climate risks. Secondly, to channel capital towards solutions that protect lives, livelihoods, and ecosystems.

On both market integrity and capital mobilisation, the SC Malaysia has taken proactive steps. In collaboration with Bank Negara, the Joint Committee on Climate Change (JC3) has communicated steps for better climate risk management. Through initiatives like the Climate Finance Innovation Lab (CFIL), we are encouraging blended climate finance solutions to deliver impactful action.

Equally important, Islamic finance has been identified as a strategic enabler. That is why *sukuk*, rather than conventional bonds, was prioritised under the SC's Sustainable and Responsible (SRI) Framework. The Framework has since been extended to include *waqf* projects, as well as sustainability-linked *sukuk* to facilitate net zero transition.

This is no coincidence. Islamic finance is inherently asset-linked, risk-sharing, and anchored in justice. Furthermore, the five general objectives of the *Shariah* – preservation of life, posterity, intellect, dignity and wealth – require us to secure benefits and prevent harm. The objective of Islamic finance, therefore, is not just to intermediate capital flows but to safeguard creation and serve the greater good.

Malaysia is well-placed to make this possible. Our capital market stands at RM4.2 trillion, or just under USD 1 billion of which around 62% is Islamic. We contribute roughly one-third of all global *sukuk* issuances, and about 80% of our listed companies are designated as Shariah-compliant. This depth gives us the platform to pilot Maqasid-aligned disclosures, covenants and outcome-linked structures at meaningful scale.

Advancing Fiduciary Duty, Accountability, and Sustainability

Ladies and Gentlemen.

When we speak of fiduciary duty in the *Maqasid* sense, it is not a single obligation, but it is layered series of expectations and applied differently across the ecosystem.

Board members, for example, must set strategies that safeguard not only shareholder returns, but also look to the intergenerational use of resources. This ensures business models do not create harm in the long term.

Senior management translates these commitments into operating policies and risk management practices, embedding climate and sustainability factors into planning, stress tests, and remuneration.

Investors and fund managers owe a duty to evaluate investments not just for financial returns, but also whether they advance or undermine the objectives of *Shariah*.

Regulators too must in turn develop rules, incentives, and disclosures that make such accountability visible and enforceable. The aim is for markets to reward long-term stewardship over short-term gains.

Shariah scholars and advisers shoulder the responsibility to certify structure not only in form but in substance. This ensures Islamic finance is distinct from conventional finance in aligning finance more with human welfare and planetary balance.

The next question is, to what extent do these duties apply in practice. Embedding *Maqasid* cannot be open-ended; it must be guided by materiality, proportionality, and enforceability. For boards, they should give due consideration to *Maqasid* outcomes in strategy and capital allocation. It should be an obligation rather than a narrative.

For management, the challenge lies in deciding the extent that *Maqasid* shapes their risk appetite and KPIs. Investors too must question how far mandates should embed outcome-linked results and how trade-offs are disclosed.

Regulators too must balance between requiring compulsory *Maqasid*-aligned disclosures, employing a 'comply-or-explain' model, or other approaches depending on market readiness, while still leaving space for innovation.

Finally, for Shariah advisers, after determining the substance, how can this be explained to the stakeholders.

Global evidence reinforces this. The United Nations Environment Programme Finance Initiative (UNEP FI) and Principles for Responsible Investment (PRI) highlighted that ignoring long-term ESG drivers is a failure of fiduciary duty. Yet adoption is uneven with many investors still not fully integrating ESG considerations into their decisions. This is why guardrails and practical metrics are essential next steps.

Malaysia has moved from intent to implementation. Under the National Sustainability Reporting Framework (NSRF), Main Market public-listed companies, with market capitalisation above RM2 billion, begin climate-related reporting this year. The rest of the Main Market will follow in 2026, and subsequently, ACE Market PLCs and large unlisted companies in 2027.

In June this year, the International Financial Reporting Standards (IFRS) Foundation recognised Malaysia's adoption of International Sustainability Standards Board (ISSB) Standards with limited transition: the only ASEAN country acknowledged. To assist corporate adoption and readiness, a suite of tools and capacity-building programmes under the PACE initiative – short for Policy, Assumptions, Calculators and Education – have been rolled out.

Alongside efforts to embed sustainability, what is sorely missing domestically is the right de-risking structures, blended finance mechanisms and disclosure guardrails. This can accelerate the mobilisation of capital into adaptation, mitigation and resilience projects.

Closing

In closing, I am confident that this Roundtable can spark the ideas, solutions, and structures needed to drive impactful climate action and sustainability. This is where philosophy meets practice.

Over the course of the day, I hope we can focus not just on what should be done, but on what can be implemented – standards, pilots, and pathways that industry, policy makers and scholars can carry forward.

With that, I would like to once again thank His Royal Highness and those who made the time to be here. I look forward to our discussions today.

Thank you.

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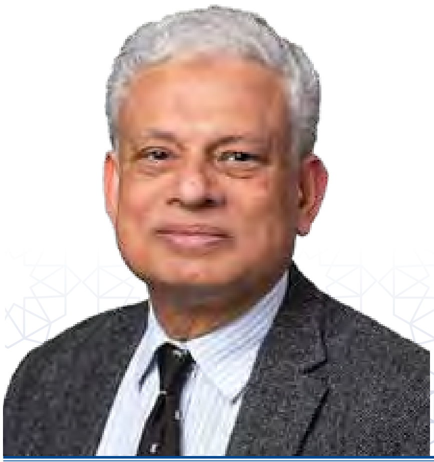
WELCOME REMARKS



DR. FARHAN NIZAMI

Director,
Oxford Centre for Islamic Studies UK

Your Royal Highness Sultan Nazrin Muizzuddin Shah,

His Excellency Dr. Abdullah Gül,

Your Highness - Dr. Sheikh Mohammed Sabah.

Dato' Mohammad Faiz Azmi - Chairman of the Securities Commission Malaysia

Distinguished participants,

Ladies and gentlemen,

It is a real pleasure for me to join you here in Kuala Lumpur for the 16th SC-OCIS Roundtable on the topic of the Guardians of the Earth: Climate Action Through the Lense of Maqasid al-Shariah.

I would like to begin by thanking His Royal Highness for his continuing support and for encouraging and enabling these important discussions over these last 16 years. I am also grateful to the SC Malaysia's Chairman and to his team for the commitment to this initiative and for all their hospitality and help in organising these events — and indeed, to all the participants for being with us today.

The theme of this Roundtable draws attention to the urging escalating reality of the climate crisis and its impact to humankind. We know that this crisis calls for alternative paradigms for climate accountability. These paradigms must be rooted in ethics, justice and long-term stewardship — key principles that shape *Maqasid al-Shariah*. I'm greatly heartened that the SC Malaysia, under aspiration five, envisions the type of fiduciary responsibility that ensures the duty of care, not only to shareholders, but also to the broader community, future generations and the natural environment.

Humanity may gain much from such. If Muslims claim concern for the environment as an implicit maxim, they do so from the premise of religion. The need to preserve the relationship with God - encompasses and motivates the other maqasid. But religion is neither explicitly of corporate social responsibility objectives nor United Nations Sustainable Development Goals (UNSDG).

It is the holy list. This may be a stumbling block - but given the practical form of *maqasid*. The indications of successful performance for financial institutions are often quantitative. There is a larger set of questions to be asked about the *maqasid* and implementation of policies and practices - that can help further economic prosperity while also safeguarding the Earth

From the human perspective, the Earth system constitutes a 'knight's plan' - a vast capital resource provided interest-free; you will find the Earth serviceable. It supplies our provision, clothing, tools, means of transport, etc. - we find it robust and prolific, yet delicate, subtle, complex and diverse. The climate crisis through the devastation caused by flooding, drought, extreme heat and cold — in one way or another, impacts us all. But it is often most devastatingly effect towards the world's most vulnerable communities, and many of these communities are located in Muslim majority regions.

At this time of ecological and environmental crisis, we must develop a robust framework for meeting unprecedented challenges. Islamic Finance offers a sound and ethical foundation from which to build lasting and more responsible ways of ensuring the long-term welfare of our local and global communities.

Islamic traditions have much to offer - environmental activism such as the revival of traditional Islamic techniques for the preservation of land and water resources. The designation of *'hima'* -protected areas; as well as *'falaj'* - another rainwater harvesting method.

Islamic teachings are rooted in universal moral values. They urge every responsible person to act with awareness and integrity in matters entrusted to them, so that we improve the value of what we pass on to succeeding generations. The fundamental Islamic principle relevant for good environmental practice is an important engagement. Human beings are not outside of nature, its patterns and processes.

Therefore, it is our duty to take care of our environment in every area of our activity - including finance and economics. The focus of this Roundtable, I hope, will go a long way into helping us set a course towards a more responsible guardianship of the Earth - through the application of Islamic finance principles.

Undoubtedly, we will return to the questions we have asked at previous Roundtables: How can profits and values be balanced? And how to maintain the matter in a relentlessly competitive international financial system - which is arguably based more on profits than on principles.

Conversations such as this - are not only worthwhile, but urgently necessary in the present moment. There is a need to initiate an ongoing process - exploring the right questions and relevant values, objectives, principles and the precedence in Islamic tradition - that will enable us to resolve environmental issues actively.

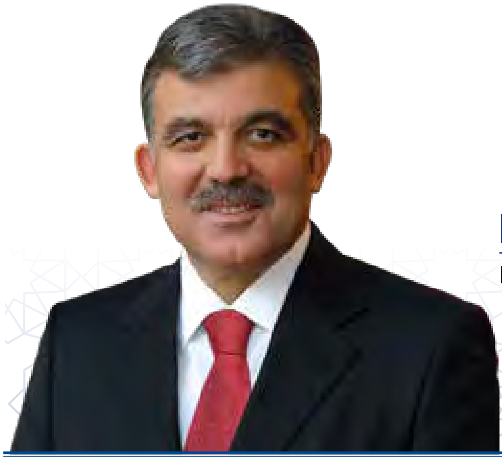
What is imperative is that our discussions are translated into action - wherever possible, with their view to implement for the greater good. It is of the utmost importance that we make available to the global marketplace – a clear policy proposal founded on Islamic environmental ethics and *Maqasid al-Shariah* so that they can be understood, supported and implemented in the world at large.

There are many positives to be gained from meaningfully recovering a sense of our indebtedness and independency, and the humility that comes with it - so that we learn to tread more quietly and gently on the Earth. This is a very important area of inquiry, and for the Centre, we are placing a high priority of this. One of our recent projects is on science, technology and environment. In fact, in a few weeks' time, we'll be organising a conference in Oxford, jointly with the British Academy - on Faith and Climate; and those who are in Britain at that time, I hope you might be interested in participating.

Thank you once again for your participation in this important event and I am very grateful that all of you have joined us this morning. To the participants, we look forward to a very fruitful discussion.

Thank You.

LEADERSHIP INSIGHTS



HE ABDULLAH GÜL

Former Prime Minister of Türkiye

His Royal Highness Sultan Nazrin Shah,

His Highness Sheikh Mohammed Al-Sabah,

Excellencies,

Ladies and Gentlemen,

It is a privilege to be here in your company. I am grateful to His Royal Highness Sultan Nazrin Shah for his initiative to host these events on the occasion of the 40th anniversary of OCIS. Thank you for inviting us and for your hospitality.

Malaysia is a country that is close to my heart. I made visits in the 80s and 90s, first as an economist, and then as a politician. Lastly in 2003, I came to Malaysia as the Minister of Foreign Affairs of the Republic of Türkiye. Following a gap of more than twenty years, returning to the beautiful city of Kuala Lumpur is even more impressive.

This city is a great example of what our shared traditional values can achieve when supported by a modern economic vision and a drive for global integration. I would like to shortly contribute to today's discussion by making two main points.

First, it remains of essential importance that Muslim countries continue deepening cooperation on economic activities, investments, trade and development. The Standing Committee for Economic and Commercial Cooperation (COMCEC) running under the Organisation of Islamic Cooperation (OIC) is an enabling tool. During the course of my presidency, I chaired this committee for seven years and witnessed its potential.

The COMCEC can serve as a basis for improving economic cooperation within the Islamic world. We need to designate concrete goals and act. Much has been accomplished, but more needs to be done.

An example that comes to the mind is the lowering of customs duties between Muslim countries. This would boost trade and have a positive effect on the spirit of cooperation. It would also create a real point of convergence that goes beyond rhetoric within the Islamic world.

My second point is regarding Islamic finance and banking practices. These methods are meaningful in presenting alternatives to conventional banking practices. However, Islamic banking needs to be able to operate in a competitive, realist and integrated way within the modern financial system. Central banks, researchers, scholars and practitioners need to develop it deeper. Otherwise, Islamic banking could remain a branding, without meaningful impact.

The Islamic Development Bank (IsDB) is a good example of success. It supports the development of its members using different financial techniques. Additionally, it contributes to theoretical works on the principles of Islamic banking.

I must also note the highly valuable contributions in this sector of the Malaysian finance institutions such as BNM and the SC Malaysia. In fact, Malaysia's leadership in giving life to Islamic banking is much appreciated. I hope that these efforts will continue and become a growing international trend.

While thinking about economic development of Muslim countries, we must not forget the basics. Strong institutions and clear rules for all are what make democracies growing and resilient economies. Good governance, the rule of law, transparency and accountability are required. These are essential for strong economic policies and results.

Ladies and Gentlemen,

I cannot conclude my words without mentioning the humanitarian tragedy that still unfolds in Palestine. Despite all the international efforts, Israel's genocide has not stopped. Israel occupied the Palestinian lands, massacred its people, and expanded the illegal settlements. These settlements are a conscious policy to make the occupation permanent and irreversible.

Let me summarise what is happening in Palestine in one word: this is an invasion. The world is witnessing complete destruction there. Israel's aggression is without limits or respect for any kind of international or humanitarian law.

The Muslim world must further unite in leading the way for a meaningful global reaction. We need to unite and make a bold move, like King Faisal of Saudi Arabia did in 1973. The only way to stop the Palestinian tragedy is for the Muslim countries to create a bold agenda and show the world that they are ready to act. Only then, will those who still support Israel change their course of action.

Finally, let me emphasise the importance of the OCIS. This year we are celebrating the 40th anniversary of the Centre. In July, we convened in the United Kingdom with the participation of His Majesty King Charles. Now we meet in Malaysia as the guests of His Royal Highness Sultan Nazrin Shah. The Centre's forty years of success is no small achievement, especially when thinking about the present period of global turmoil.

Today, the voices of radical thoughts on all sides of the spectrum are becoming louder. It has an ever-growing role to play in presenting Islam to the world and to the West in its real and best form. We must continue breaking prejudices.

Keep in mind that the Centre might not have come to life in Oxford in today's conjecture. We remain grateful to those who had the foresight to found it forty years ago. Our duty now is to increase its reach and deepen its work.

Together, we must aim for brighter futures, while studying the past and shaping the present.

Thank you.

SPECIAL ADDRESS

HRH SULTAN NAZRIN MUIZZUDDIN SHAH

Sultan of Perak, Malaysia
Royal Patron for Malaysia's Islamic Finance Initiative

It gives me great pleasure to be here at the 16th Roundtable of the Securities Commission Malaysia and the Oxford Centre for Islamic Studies. This annual event bridges two locations and institutions that are very close to my heart. Indeed, ever since the inaugural Roundtable back in 2010, it has been my pleasure to return and to see it thrive year after year. This year, I would like to extend a special welcome to the Trustees of the Centre, His Excellency, President Abdullah Gül and His Highness Sheikh Mohammed Al-Sabah who have travelled from Türkiye and Kuwait to be with us. It is wonderful to have you here, and to welcome you to Malaysia.

Since its inception, the SC-OCIS Roundtable has never shied away from tackling challenging topics of global importance, from social impact to stewardship and ethics, to restoring humanity in finance; and its discussions are always characterised by the rigour that one would expect from two such institutions. This year, the Roundtable is addressing perhaps its most important topic yet, and one to which I feel a strong personal connection: that is, climate action, and our collective role as Guardians of the Earth.

Before I share some thoughts on this most pressing of subjects, I would like to take a moment to mention the very special anniversary that we are celebrating this year. 2025 marks 40 years since the Oxford Centre for Islamic Studies was established in that city of dreaming spires. From its somewhat humble beginnings in a temporary wooden home on St Cross Road - what Malaysians call a *pondok*, the Centre has grown and flourished as a multi- disciplinary research hub renowned around the world. I would like to acknowledge the guiding role played by the Centre's Founding Director, Dr. Farhan Ahmad Nizami, whose leadership over the entire 40-year period has helped the Centre become what it is today.

The centre's permanent premises, next to Magdalen College is a fitting monument to this success. Designed by the world's leading Islamic architect – Professor Abdel-Wahed El-Wakil, it is one of the most breathtaking buildings in the beautiful city of my alma mater. A perfectly crafted blend of the Oxford college quadrangle layout, with the form and style of classical Islamic architecture, the Centre is a tribute to two ancient traditions of knowledge, and to what can be achieved when we bring them together. So, as we explore humanity's most pressing crisis in our discussions, I urge us to take the Centre's building, and other architectural feats, as our inspiration to be creative and to dream big, in our collective problem-solving.

As I reflected on this milestone anniversary in the context of our theme, I found myself wondering what the climate outlook looked like 40 years ago. What were the most pressing environmental concerns back in 1985, and how has the situation changed in the decades since?

One of the most significant climate news stories of 1985 was the discovery of a hole in the ozone layer over Antarctica. Caused by a build-up of the Chlorofluorocarbons (CFC) gasses then widely used in refrigerators and aerosols, this ozone hole posed an unprecedented threat to human, animal and plant life alike, by reducing our protection from the sun's harmful ultraviolet rays. Scientists had been concerned about ozone depletion since the 1970s, and alarm bells had already been sounded. But this discovery of a hole was the watershed moment: the wake-up call. An irrefutable sign of humanity's damaging impact on the planet.

The hole in the ozone layer continued to grow, but eventually, as a result of the rapid international action taken back in the 1980s, it began, ever so slowly, to shrink. The Montreal Protocol of 1987, which dramatically phased out the use of CFCs on a global scale, is hailed as one of the most successful environmental treaties of all time. Ans so, this is a story from which we can take heart: it shows that, with bold, collective action, it is possible to turn the tide, and to reverse the harm we have inflicted on the planet. But it is also a stark reminder of just how long it can take for climate action to bear fruit, and to undo the damage we have done. Four decades have passed since the discovery of the ozone hole, and it is only just beginning to shrink.

The other major climate headline from that year was the mysterious mass deaths in Scandinavia and North America of fish in the rivers, and trees in the forests. This turned out to be due to acid rain, produced from clouds of sulphur dioxide released from coal-burning plants, which then travelled long distances. Despite years of denial and resistance, this climate issue has also been tackled successfully, in some parts of the world at least. Sulphur dioxide emissions have fallen globally since the 1980s, due largely to regulations in Europe and North America, such as the 1990 amendment to the United States' Clean Air Act. Acid rain remains a problem, however, particularly in Asia and Africa – just one reminder of how unequally environmental issues play out around the world.

The two climate issues I have referenced here – the ozone hole and acid rain – offer some cause for optimism. They show that humanity has been able to reverse environmental damage through policies that trigger widespread action and change. Yet the ozone layer and acid rain - these two semi-success stories - are anomalies in the broader and terrifying trend of climate deterioration. Since the 1980s, each decade has been warmer than the previous one. Sea levels are rising at their fastest pace in three millennia. And CO_2 emissions are higher than they have been at any time in the last 800,000 years, as far as we can measure this.

And we are seeing the consequences of this in real time: extreme weather, forest fires, storms, tsunamis, drought and famine. An estimated 3.3 billion people are classed as highly vulnerable to climate change – at risk of everything from food insecurity, to a lack of clean water, to climate-change related disease and environmental disaster.

And it is, of course, the poorest who are most in danger: who feel the consequences most severely. In Africa, agricultural productivity growth may have shrunk by as much as a third since the 1960s due to climate change. Pakistan, still scarred by the catastrophic floods of 2022, was struck again last month, with over 1.5 million people affected. In the Middle East and North Africa, water scarcity now threatens social stability and economic growth. And for the many Muslim nations that lie in climate-vulnerable zones, the stakes are also especially high.

Meanwhile, against this backdrop of imminent threats to life itself, the target set in the 2015 Paris Agreement of limiting global heating to 1.5 degrees Celsius is all but slipping away. We are currently on course for nearly double that amount; and even 1.5 degrees is only a mitigation measure, and not a good or safe amount of global heating. It is simply that 2 degrees or above would be even worse.

The situation is dire. Time has almost run out. And this is all the more frustrating because we know that when we do act boldly, when we act rapidly, when we act together, we can effect positive change. But a major obstacle we face today, unlike in the 80s, is that climate issues have become more politicised with each passing year. Climate change should be beyond partisanship. Yet it has become something of a political football. As such, we do not have the global consensus that is so desperately needed.

This is why we need new thought leadership and direction- setting to tackle climate change effectively. And it is why it is up to us all: including those of us gathered here today. Our purpose here today is to consider climate action through the lens of Maqasid al-Shariah the spirit, and not only the letter, of Islamic law.

Fifteen years ago, in a speech to mark the 25th anniversary of the Oxford Centre for Islamic Studies, His Majesty King Charles emphasised the ‘sense of reverence’ for the Earth and Nature that Islam instils. It is that same ‘sense of reverence’ that must now inspire us to act. As the Quran teaches us, humans have been entrusted as *khalifah*, or indeed guardians, with a duty of care over the planet. And as the famous Hadith says, “The Earth is green and beautiful, and God has appointed you his guardians over it”. We have a God-given responsibility to protect the planet and everything on it, for now and for the future: a duty to keep the Earth ‘green and beautiful’ for generations to come. It is a call to action which I believe resonates, regardless of faith or creed: since if climate change concern is beyond political partisanship, then it must be beyond religious differences as well. Through the lens of *Maqasid al-Shariah*, the path is clear. This is not a Marvel movie, but to invoke the theme of our Roundtable this year, we are Guardians of the Earth, and we must act together to save it.

So, what can we do to make the difference that is needed? How can we use the tools and platforms at our disposal to contribute to the sweeping change that is required? That, of course, is the overarching question posed by this year's Roundtable – and I have no doubt that the answers will be many, varied and inspired. But allow me to share a few thoughts.

From a business and finance perspective, it is crucial both that we regulate, and that we invest, in our efforts to tackle climate change. We must ensure that climate-related risks are better integrated into financial modelling and investment decisions. We must, at the very least, heavily incentivise green practices from businesses, such as the use of clean energy and recyclable materials. I have faith that consumers will help to lead the charge in this area, making decisions about which businesses to use and support based on their eco-credentials.

But it is not enough to set rules and restrictions that act as cautionary measures. Any good businessperson knows that it is also vital to invest, thoughtfully and sensibly, if you are to thrive. And for the sake of our planet, it is vital that we invest collectively in innovative solutions that help to combat climate change – such as carbon sequestration. And we must also, crucially, invest in tools and defences that help us withstand its now inevitable consequences. Around the world, humanity is already feeling the full force of climate change, and we must find ways to adapt – through flood defences, climate resilient crops, and other strategies to help communities manage the environmental threats.

This is where I believe Islamic finance can play a leading role. Now a US$5 trillion industry worldwide, the growing Islamic finance sector has the tools and the resources needed to support the necessary investment in climate action. The SC Malaysia's pioneering work here in Malaysia, in creating a Sustainable and Responsible Investment Sukuk framework, has led to a proliferation of Green Sukuk bonds for environmental projects. Around US$15 billion was raised in this way in 2024, funding everything from solar farms, to sustainable transportation, to improved waste management infrastructure, and, increasingly, biodiversity programmes. Indeed, Green Sukuk have been identified by the United Nations Development Programme as a key financing solution for sustainable development. As a world leader in this area, I hope that Malaysia can continue to set an example for other countries in the Islamic world and beyond.

Limiting climate change and managing its impacts are both incredibly expensive endeavours. Developing countries require an estimated US$387 billion by 2030 to fund their adaptation measures. With an estimated US$360 billion shortfall, we need not only radical solutions, but a wholesale attitude shift. The Earth is our most precious asset, and each and every one of its citizens is a valued shareholder. This is how we must be thinking – and how we must encourage those less open to climate action to think – if we are to stand any chance of turning the tide in time.

And as well as investing in known solutions, we must always strive to approach this urgent problem with an innovative and analytical spirit. We must ensure that our green technology is really solving the problem, rather than simply shifting or transferring it. Already, we see solar panels being wastefully discarded; wind farm construction poisoning seas; and electric vehicle batteries using rare minerals extracted in environmentally destructive conditions. We must never assume that we have done enough. Rather we must always remain bold and curious, asking, “What if...?”, “What about...?”, and “What next?”. I know that we have several special talks on architecture today, and on how innovative and ingenious approaches can help us to literally build green: to build for the future. Now more than ever, we need our greatest minds on this task of literally and figuratively building a greener future. And I have no doubt that some of those minds are in this room today.

Distinguished guests, ladies and gentlemen,

I began by talking about climate history in 1985, when the OCIS was founded. And I want to end by referring to another pivotal event from that year, the landmark testimony to the US Congress by the famous American scientist and writer, Carl Sagan (d. 1996), highlighting the dangers of climate change and the greenhouse effect. He calmly presented the evidence; acknowledged the challenges of making sweeping change overnight; and set out practical ways forward, including greater investment in renewable energy, and the reduction of government subsidies which then existed on fossil fuels[1]. That so much of Sagan’s speech remains relevant today is a troubling sign of how slow we have been to act on his salient warnings. But rather than end on that note, I want to finish by repeating Carl Sagan’s inspiring closing remarks. He said:

“What is essential for this problem is a global consciousness, a view that transcends...the generational and political groupings into which, by accident, we have been born. The solution to these problems requires a perspective that embraces the planet and the future because we are all in this greenhouse together.”

May this call to action inspire all of us, today and beyond, as we work to save our planet and its future, together.

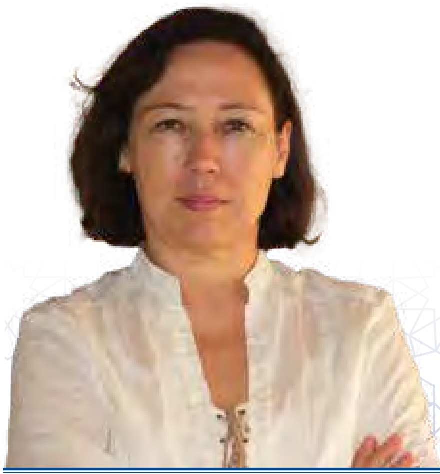
[1] Carl Sagan, ‘Carl Sagan Testifying before Congress in 1985 on Climate Change’, The Analysis (5 January 2022).

SPECIAL TALK 1: DESIGNING FOR DIVINE STEWARDSHIP: ARCHITECTURE, ETHICS, AND ENVIRONMENTAL RESPONSIBILITY

Serina Hijjas
Architect and Director,
Hijjas Architects & Planners

SPECIAL TALK 2: FROM GREEN BUILDINGS TO GREEN CIVILISATIONS - THE ARCHITECT'S ROLE IN PROTECTING THE EARTH

Dato' Dr. Ar. Ken Yeang
Architect, Ecologist, Author



SERINA HIJJAS

Architect and Director,
Hijjas Architects & Planners

His Excellency Dr. Abdullah Gül,

Dato’ Mohammad Faiz Azmi, Chairman, Securities Commission Malaysia,

Dato’ Sri Abdul Rashid Ghafur, Governor of Bank Negara Malaysia,

Dr. Farhan Nizami, director of the Oxford Centre for Islamic Studies in United Kingdom.

Distinguished guests, ladies and gentlemen.

Unlike previous speakers, I rely on visuals to explain what I do, what I have been doing at the start of my profession. This subject was given to me - Designing For Divine Stewardship In Architecture With Ethics And Environment. I must say that I never thought of it in that way. I just thought about building sustainably right from the beginning, from my experience of working in London and then coming back to Malaysia.

In Malaysia, the architectural journey I have inherited from my father[2] reflects an evolution in priorities. During his time, the central theme of architecture was identity - defining who we are and expressing our cultural and national character through design. In my generation, however, the focus has shifted. Sustainability has become the true calling. As we have heard from all speakers today, climate change is no longer a distant concern but an urgent reality. I was particularly inspired by His Royal Highness's insights on the ozone layer, a topic I often use to begin my talks. It's because, for the everyday person, concepts like carbon emissions or greenhouse gases can seem abstract. To reach the layman, we must translate these global issues into something visible and relatable - something they can see, feel, and understand in their daily lives.

At this point in history, humanity has already exceeded seven of the nine planetary boundaries that define our planet's safe operating space. These include the atmosphere, stratosphere, biogeochemical flows, biosphere integrity, freshwater use, land-system change, and what scientists now call novel entities. You may ask-what are novel entities? They refer to pollutants and materials previously unaccounted for in nature, such as plastics that have entered our soil, water, and even our bodies. Studies now show traces of microplastics in our food, vegetables, and bones - a powerful reminder of how human activity permeates every layer of life on Earth.

The 1980s marked a critical turning point, both for the planet and for me personally, as it was when I began my architectural practice. Data from the University of Reading's 'Climate Stripes' visualisation clearly shows that global warming accelerated sharply during this decade, driven by the rapid rise in greenhouse gas emissions. In Malaysia, our own climate patterns reflect the same trend. Temperatures have been rising steadily, and we now experience extreme weather events more frequently. In fact, at Bayan Lepas, we have recorded local temperature increases of up to 1.5 degrees Celsius. This is not a projection. It's already happening. These are the realities that compel us, as architects and citizens, to rethink how we design and live on this planet.

The real change we have yet to fully experience is the speed of warming. We are beginning to feel the 1.5 degrees Celsius rise. Urban heat islands are intensifying, droughts are becoming more frequent, and for the first time, Sabah declared a state of emergency due to drought. This is alarming for a country that uses about 220 liters of water per person each day. These are early warnings of what accelerated climate change truly means for Malaysia.

I often refer to this as the path of sustainability, one driven entirely by climate change. When I began architecture some forty years ago, none of the planetary boundaries had been breached. Today, almost all have - from the atmosphere and biosphere to freshwater and land systems. Only two remain intact, and even those are under pressure. In Malaysia, our "climate stripes"[3] data show temperature increases of around 1.0 degree Celsius, and in Bayan Lepas, we've already recorded 1.5 degrees Celsius, a clear sign of escalating local heat.

[2] A pioneer architect in Malaysia, Hijjas Kasturi is widely acknowledged as the father of Malaysian architecture, Hijjas is credited for some of the most iconic buildings in the country including the banking company Tabung Haji, and the Menara Maybank and Menara Telekom skyscrapers - Tatlerasia.com.

[3] The climate stripes were created by Professor Ed Hawkins at the University of Reading in 2018. They show clearly and vividly how global average temperatures have risen over nearly two centuries - World Meteorological Organisation.

During the pandemic, many of us saw blue skies and cleaner air, and we hoped nature would recover. But despite that pause, global CO_2 levels continued to rise. I have followed NOAA's readings for 15 years, and the trend has never slowed. Even with global lockdowns, the concentration kept climbing. The United Nations now warns that the climate futures we once imagined are already here. So, as designers and planners, our focus must shift - from simply creating green buildings to building resilient and adaptive cities.

On the ground, we can already feel these changes: higher humidity, heat stress, worsening floods and droughts, and a decline in biodiversity. Our oceans are warming and becoming more acidic, threatening food supplies and marine balance. Even our air quality worsens as temperatures rise - a one degree Celsius increase in a humid climate compound both heat and pollution, directly affecting human well-being.

And then there's that critical number: 430 parts per million (PPM) of CO_2. When I began my career, scientists warned us never to exceed 300 PPM. Today, we're almost 50% higher. If we continue at this pace, the world will blow through its entire carbon budget within years. This is why I constantly tell developers and decision makers that we must shift our thinking - away from short-term consumption toward long-term sustainability. The future of our cities depends on how we act now to conserve, adapt, and rebuild within planetary limits.

According to the IPCC, to have any chance of limiting global warming to 1.5 degrees Celsius, we must halve global greenhouse gas emissions by 2030 - just four years from now and reach net zero by 2050. But the reality is, we have already accelerated past that safe trajectory.

The evolution of green building mirrors this journey. In the 1970s, after the energy crisis, architecture began focusing on energy efficiency. The 1980s brought environmental awareness and a more holistic design approach. By the 1990s, the emergence of the Sustainable Development Goals introduced global standards, certifications, and a broader understanding that sustainability extended beyond buildings - it included people, systems, and resources.

In the 2000s, sustainability moved into the mainstream. The 2010s saw the rise of high-performance and intelligent buildings, such as the SC Malaysia, emphasising energy efficiency and data-driven management. Now, in the 2020s, our focus has shifted toward climate action and carbon neutrality - how to design net zero, circular, and regenerative ecosystems. The conversation is no longer about green design as an option, but about resilience and adaptation as imperatives.

We now ask: How can our buildings become carbon-neutral? How do we design for regeneration, reduce embodied carbon, and embed circularity in materials and resources? We are entering an age where architecture will evolve beyond smart buildings into AI-integrated systems, responsive and self-regulating-built forms that actively contribute to climate balance.

This, in essence, aligns deeply with Islamic principles. The environment is *amanah* - a trust; and humanity's role is *khilafah*, stewardship of the Earth. Our duty extends beyond functionality; it is a moral and spiritual responsibility to ensure the well-being of life for generations, not merely for the future or for now. We once spoke of designing for the future-but that future is already here.

So, what can we learn from the past? There is much wisdom in traditional and vernacular architecture. Think of Hassan Fathy[4]'s approach - architecture without architects which taught us about passive cooling, orientation, and natural ventilation. In Malaysia, we've adapted similar ideas in projects such as Penang South Islands and the Johor Fintech Masterplan, aligning streets to capture prevailing sea breezes. These same principles guide how we collect and conserve water, and how we now elevate buildings to counter rising sea levels.

Our ancestors-built homes on stilts. Today, we must do the same for our coastal cities-raising developments by 1.5 meters to adapt to future sea-level rise. These lessons from the past are not relics. They are blueprints for resilience. The wisdom of our traditions, combined with the innovation of our time, will determine how well we build, sustain, and protect the Earth we have been entrusted with.

On the theme of contextual wisdom, what you see on the right is a 100-year-old traditional Malay house. It was carefully dismantled and reassembled in the backyard of our home - built entirely without nails. When we began reconstructing it, we discovered a coin buried beneath the *tiang seri*[5], the central pillar of the house, marking it as a century old. This tradition of building with meaning reflects how deeply craftsmanship was tied to culture and sustainability. The use of timber joinery, once common in Malaysia, is now being revived globally, particularly in Europe, as a symbol of sustainable architecture. What was once ordinary practice here has become a model for environmentally responsible design.

From this, we learned a profound truth about tropical Malaysian architecture - our heritage structures were never built from stone but from timber, a living material that returns to the Earth. The concept is what we now call 'cradle-to-cradle' - we plant, we build, and eventually, nature reclaims it. This cycle of renewal embodies the sustainability our ancestors practiced intuitively. We drew from this philosophy when designing the Malaysian Pavilion in Dubai, where we celebrated the same spirit of life, decay, and regeneration through locally inspired materials and circular design principles.

Traditional wisdom, whether drawn from Malay, Islamic, or historical architecture, has always aligned with what we now term sustainable design. It emphasised durability, material honesty, passive cooling, and harmony with nature. Islamic architecture, in particular, perfected techniques such as wind catchers, courtyards, shading, and water harvesting - all forms of natural regulation that reduced energy use while enhancing comfort. The challenge today lies in reconnecting with that wisdom, as modern architecture often prioritises profit, speed, and consumption. Even during the pandemic, we witnessed how consumption habits particularly through e-commerce - reinforced a culture of waste and resource depletion, deepening our social and environmental fragmentation.

Bridging this gap between traditional wisdom and modern challenges requires a shift in mindset - one inspired by the Maqasid al-Shariah, the higher objectives of Islamic ethics. This means moving beyond mere efficiency toward holistic well-being.

[4] Hassan Fathy was an Egyptian architect, artist and poet who had a lifelong commitment to architecture in the Muslim world. Hassan Fathy devoted himself to housing the poor in developing nations and deserves study by anyone involved in rural improvement - Archnet.org.

[5] The *'tiang seri'*, a freestanding pillar without any joints, is the main pillar of the house and is in the main section – museumvolunteersjmm.com.

At Hijjas, we distilled this philosophy into a simple yet powerful framework: People, Planet, and Place. It took over 35 years of practice to refine this approach. It is supported by our 'green, blue, and orange' principles - representing nature, water, and energy/climate resilience. Each project we design seeks to integrate:

- Sustainable materials and resource cycles;
- Water conservation and biodiversity;
- Nature-based solutions that restore ecosystems;
- Health, well-being, and community design that serve real human needs;
- Clean energy and circular systems for long-term resilience.

Every site has its own context - and so our designs respond to that environment, culture, and community purpose.

Let me share one example - the SC Malaysia building, one of my earliest major projects after Telekom Malaysia. Although its appearance is contemporary rather than traditional, it was conceived as a holistic, environmentally responsive structure, well ahead of its time. The vision was supported by a client who understood sustainability not as an aesthetic but as a responsibility. The building incorporated daylight harvesting, natural ventilation, and underfloor cooling systems, reducing energy demand significantly. In essence, it was our early attempt to merge modern design with Malaysian identity and culture, proving that high-performance architecture could be both culturally grounded and environmentally conscious.

The *tengkolok* or *tanjak*, a traditional Malay headgear worn by men on formal occasions, is a powerful symbol of respect, culture, and heritage. The design of this building was inspired by that form - a subtle architectural expression of identity. As I revisited these slides, I recalled the design process more than 25 years ago. Another key reference was the Balai Besar Kedah, an 18th-century stately building with elegant, slender German columns that anchor gracefully into the ground. These cultural and historical inspirations remind us that identity remains central to our design philosophy - not through direct imitation, but through interpretation and spirit.

This building, completed in 1999, was one of the first energy-efficient government buildings in Malaysia, outperforming even some of the pioneering green designs by Ken Yeang at that time. Located at a prominent crossroads, the building is visible from all directions, and transparency became its defining concept. Though many questioned the extensive use of glass in a tropical climate, the intention was deliberate - to symbolise openness while addressing heat gain through intelligent environmental systems.

In the tropics, daylight is abundant - we have sunshine almost every day of the year, often until after seven in the evening. Yet, during the 1990s, daylight harvesting was rarely discussed in Malaysia. We wanted to change that mindset, to design a building that celebrates our climate instead of resisting it. The design integrated a thermal flue system, which channels warm air through a vertical cavity, allowing it to rise and exit naturally while drawing in cooler air from below. This system acted as a thermal buffer between the external heat and internal comfort zones.

The building also introduced underfloor air-conditioning, making it only the second full-scale project after Telekom Malaysia to adopt this approach. This allowed us to raise indoor temperatures comfortably, reducing the excessive cooling levels common at that time - when offices were routinely kept at 17 degrees Celsius. Later, Putrajaya set a new national standard, recommending 23 degrees Celsius for office spaces - a turning point in how we designed and cooled our buildings more sustainably.

These strategies proved their value. The project went on to win the ASEAN Energy Efficiency Award, recognising it as one of the most environmentally responsive buildings of its era. When it was first completed, the building consumed about 139.8 kilowatts per week - roughly 30% less energy than comparable buildings in 2001. By 2003, continuous improvements to its cooling systems reduced energy use by 45%, equivalent to 105 kilowatts per week. This demonstrated that meaningful energy savings were achievable in Malaysian conditions even two decades ago.

Today, with solar panels now installed on the roof, the building achieves up to 55% energy and cooling savings - showing how iterative innovation can extend a building's performance over time. This principle of continuous improvement is one we've applied in other projects as well, such as the Hershey industrial facility in Johor. Initially Certified Silver under Green Building Index (GBI)[6], Hershey has since advanced to Gold and is now targeting Platinum, proving that businesses are recognising both the environmental and economic value of sustainability. In a nation still working to balance renewable and fossil energy, such progress is essential - showing that green design is not a luxury, but the foundation of Malaysia's architectural future.

Sasana Kijang was designed as a green building, and what makes it unique is its passive orientation. The building is aligned on a south-facing axis, allowing controlled daylight and minimal heat gain. On the shorter east and west sides, glasses are protected by deep overhangs to shield the interiors from direct sun. In Malaysia, passive design always begins with orientation - followed by shading and roof treatment. You will notice that many of our low-rise buildings feature large overhangs, reminiscent of vernacular Malay architecture, where roofs act as natural canopies. This same philosophy guided Sasana Kijang, which was later nominated for the Aga Khan Award for Architecture[7].

The design's identity draws inspiration from the siput gerus, a traditional shell once used as currency, discovered through the building's Numismatic Museum. Its oval footprint reflects this form, creating a soft, contextual presence on site. The concept extends into the building's warisan, or heritage, represented by three distinct pavilions - *Pusaka*, *Seni*, and *Pustaka*. *Pusaka* symbolises heritage and houses the museum; Seni represents art, with Bank Negara's extensive art collection; and *Pustaka*, the resource centre, signifies knowledge. Together, they form a continuum of culture - heritage, art, and learning - all expressed architecturally. The rear of the building, solid and stone-clad, represents permanence and strength, balancing the openness of the facade.

[6] The Green Building Index (GBI) is Malaysia's industry recognised green rating tool for buildings to promote sustainability in the built environment (ie. GBI Rating : Certified, Silver, Gold & Platinum) – www.greenbuildingindex.org.

[7] The Aga Khan Award for Architecture is given every three years to projects that set new standards of excellence in architecture, planning practices, historic preservation and landscape architecture. The Award seeks to identify and encourage building concepts that successfully address the needs and aspirations of societies across the world, in which Muslims have a significant presence – the.akdn.

The building's facade also reinterprets the songket motif, a nod to Malay textile heritage. The traditional weaving pattern was transformed into a pixelated geometric design, applied across surfaces in stone, glass, and titanium. Sasana Kijang remains one of the few buildings in Southeast Asia - apart from Singapore - to feature titanium cladding, a rare and refined material that reflects craftsmanship and innovation.

Inside, careful environmental design was balanced with artful geometry. The building's most distinctive feature is the nautilus staircase, a spiralling form that opens upward through the atrium. It was notoriously difficult to draw but became one of the most photographed architectural elements - even appearing in countless visitor selfies. While some interior spaces may feel overly cool today, ongoing discussions with engineers continue to fine-tune the building's mechanical and environmental performance, much like our approach with the SC Malaysia building.

At the upper levels, *Seni* houses the art gallery, while Pustaka anchors the opposite end as a centre for research and learning. Here, I often reflect on the concept of *waqf*, an enduring Islamic tradition of endowment. In essence, *waqf* involves dedicating assets for communal benefit - removing them from private ownership so their returns may serve education, welfare, or spiritual causes perpetually. In Malay architecture, *wakaf*[8] (wakaf pavilion), also refers to a small kiosk or gazebo-like platform by the paddy field, a humble resting space for farmers.

Historically, *waqf* has supported mosques and schools, ensuring they remain functional for future generations. But today, I believe this principle should expand - to include public infrastructure, especially those that build resilience and adaptation within communities. Imagine transit stations, community halls, and green spaces developed as *waqf* assets - serving society indefinitely, beyond ownership or profit. This evolution of *waqf* could redefine how we design and finance future-proof, people-centred architecture, rooted in faith, ethics, and sustainability.

Not many people realise this, but we served as the master architect for the first line of the KTM-MRT station network. Our role was to unify the overall concept and design direction, as there were multiple engineers and architects involved, each with differing approaches. After studying transport systems around the world, one principle became clear - a single line should have a cohesive architectural identity.

We drew inspiration from the concept of *waqf* - the idea of public endowment. Traditionally, a *wakaf* pavilion is a small structure offering rest and shade. Though our station design stretched 120 metres in length and 25 metres wide, it shared the same spirit - a public space dedicated to community benefit. We envisioned stations not merely as transit points, but as public plazas, places of rest, gathering, and connection. Each major stop could host facilities such as tourist information, public toilets, a surau, small retail kiosks, and even police beat - creating a sense of place rather than a sense of task.

[8] 'Wakaf' is a square pavilion an open structure with four to twelve timber columns, a pyramidal roofed and a hipped gable design, usually made with a low platform for sitting or lying down and is meant for travellers, local or otherwise, as temporary shelter for resting, napping and as a prayer space - HAJI-MOHIDDIN, HAJAH,MAS,NOORAINI (2015). WAQF DEVELOPMENT IN MALAYSIA AND SINGAPORE: A COMPARATIVE STUDY , Durham e-Theses.

We also planned the roof structures to support solar panels and rainwater harvesting, anticipating future energy and water needs amid growing urban density and resource scarcity. Unfortunately, not all of these ideas were implemented at the time, but they remain part of our long-term vision for community-oriented infrastructure that blends design, sustainability, and inclusivity.

In tropical climates like Malaysia, passive design becomes essential. However, natural ventilation is challenging inland, as consistent winds occur mainly near coastlines or lakes such as in Putrajaya. Our solution was to maximise shading and control glare to reduce urban heat gain, using architecture itself as the first line of defence against rising temperatures.

That philosophy also inspired the design of the National Energy Centre, also known as the Energy Vortex. The idea was to create a self-shading building, since high-performance glazing was too costly. We achieved this by inverting the roof, allowing the structure to shade itself naturally while maximising light and ventilation. The circulation spaces are naturally ventilated, and at its heart lies a courtyard micro-forest, designed to grow and cool the interior environment.

The building has just been completed and is now entering its performance monitoring phase. Early projections show a 39% on-site energy reduction, compared to conventional baselines - though still trailing the SC Malaysia building, which reaches 55%. Nevertheless, these projects together demonstrate that Malaysia can lead by example, proving that passive design, contextual thinking, and sustainable innovation are achievable within our tropical environment.

The issue of urban heat islands is now one of the most visible signs of climate change in our cities. Thanks to Think City, we now have time-lapse heat maps of Malaysian cities showing how surface temperatures have risen drastically over time. This image of Johor from 2005 shows that, as urbanisation expands, green land disappears - and with it, our natural cooling systems. Today, 75% of Malaysians live in cities, leaving only 25% outside them - the lucky few who still enjoy cooler environments.

As concrete replaces greenery, urban heat builds up quickly. The absence of parks, trees, and open spaces means more tarmac, more reflection, and trapped heat. Singapore, for example, is responding to its severe heat island effect by transforming into a 'City in Nature.' In Malaysia, we must follow suit - not merely by planting trees, but by integrating nature into every aspect of our urban and architectural planning.

By 2018, the heat mapping showed a worrying spread of red zones. We all want development, but we must ask: where are our green spaces? Sir David Attenborough[9] once said during the pandemic, "The day we could no longer go out into nature was the day the world changed." We must never repeat that mistake with the climate. Without nature, urban life becomes fragile - environmentally and psychologically.

[9] Sir David Frederick Attenborough is a British broadcaster, biologist, natural historian and writer. He is the voice of natural history programmes for the past 70 years. He has brought the natural world into our living rooms and classrooms through award-winning natural history programs such as Life on Earth, The Private Life of Plants and The Blue Planet – www.bbc.co.uk.

Our measurements in Malacca showed that tarmac can reach 46 degrees Celsius, while shaded areas still hit 42 degrees Celsius because of heat stored in the ground. With tree cover, temperatures drop significantly. This is why nature-based solutions matter - they are not symbolic, they are survival tools. The ecology of architecture is now about merging design and technology with living systems.

This principle shaped the Heriot-Watt University Malaysia Campus, where we adopted an 80% greenery target inspired by Norman Foster[10]'s idea that future buildings should devote most of their surface to green. We oriented the buildings north-south, designed a double roof with green cover, and elevated structures to preserve open land for water flow and expansion. The result was a 50% energy reduction on site, achieved through passive cooling, cross ventilation, and ecological planning. We continue to advocate increasing Malaysia's landscape allocation from 10% to at least 20%, learning from Singapore's approach to large-scale greening.

On a smaller but equally meaningful scale, our coastal and mangrove projects show the same principles. In one resort development, we retained 60% of the site's trees, building lightly on land embraced by sea and forest. The structures are elevated to allow for carbon sequestration, and all species used are indigenous. Yet, even with such care, we have seen the reality of climate change first-hand - higher tides, erosion, and stronger winds that have uprooted trees. We are already living the consequences of global warming.

Looking to the future, one of our new projects - an Islamic Complex - combines sustainability with cultural heritage. Drawing from Malaysia's vernacular mosque architecture, the design interprets traditional roof tiers and courtyards - *riwaq*[11], *iwan*[12], and *sahn*[13]- in a modern way. The layout weaves together three courtyards named Islam, Iman, and Ihsan, inspired by the concept of corak sekampung - the woven fabric of community. The building will serve as a centre for *waqf*, zakat, and *shura*, housing institutes for Islamic Studies, Arabic Language, and Coexistence. It reinterprets the three-tiered roof *(tiga layar tampuk)* into a contemporary form - honouring heritage without imitation.

At the heart of all these works lies a deeper reflection - how do we advance sustainability and net zero goals in line with both ESG and Maqasid al-Shariah? ESG focuses on governance and performance, while Maqasid provides the moral and ethical foundation - preservation of life, intellect, wealth, progeny, and faith. When we merge these two, we find not just environmental compliance, but a spiritual and social imperative for stewardship.

Sustainability, therefore, is no longer an environmental target alone - it is an ethical journey. From cooler cities and greener buildings to culturally grounded design, our path forward depends on how quickly we align our actions with these principles. To restore balance, we must accelerate adaptation, design regeneratively, and embed stewardship as the essence of our urban future.

[10] Norman Foster (born June 1, 1935, Manchester, England) is a British architect known for his sleek modern buildings – www,Britannica.com.
[11] Riwaq is a roofed arcade or colonnade found in Islamic architecture. It typically surrounds the courtyard (sahn) of a mosque or similar structure, creating a shaded, covered passageway that links interior and exterior spaces and supports circulation, social interaction, and climatic comfort. – Wikipedia.org.
[12] Iwan. In Islamic architecture, a vaulted space used as an entrance, or, if closed at one end, a hall facing a court in a madrasa or mosque.- Encyclopedia.com.
[13] sahn. Court in a mosque, often surrounded by arcades, and with a fountain (meda) in the middle (e.g. Mosque of Ibn Tulun, Cairo (876–9) – Enclyclopedia.com.

Let me end with an example of cradle-to-cradle design - the Malaysian Pavilion. The concept was inspired by our tradition of *usung rumah*[14], the community act of moving an entire house from one place to another. It reflects how Malaysians build lightly on the land and in harmony with nature. The pavilion adopted this idea, designed to touch the ground gently, echoing our stilt houses, the canopies of trees, and the spirit of the rainforest.

What made this pavilion remarkable was its temporary yet sustainable character. It was a building for transience, designed for disassembly and reuse. Every component was assessed for its embodied carbon, with 75% of materials reused or recycled after the Expo. It became the first net-carbon pavilion ever built for a world exposition. Though modest in scale, it represented Malaysia's commitment to net zero development and the potential of timber construction as the future for sustainable cities.

Among our other projects, one particularly meaningful experience was being invited to design for Mecca - the only Malaysian and Asian firm among seven international architects selected. Our design respected the cone of vision toward the *Kaaba*[15], ensuring that no structure rose above the sacred centre. It was a reminder that architecture must always serve humanity's spiritual and ethical purpose, not ego or dominance. As stated in an IIUM paper I often refer to, 'the environment is deeply connected to the Islamic philosophy of man as *khalifah* - a vicegerent entrusted with the care of Earth'.

In closing, I return to Professor Muhammad Yunus[16]'s vision of a World of Three Zeros - zero poverty, zero unemployment, and zero net carbon emissions. It is ambitious, but it reminds us that sustainability must benefit the entire ecosystem, not just human society. Every decision we make - in design, planning, and policy - must repair rather than harm.

And as His Royal Highness, Sultan Nazrin Shah, has wisely noted, it takes 30 years to repair the Earth after what we do today. That truth must guide our actions. Let us design, build, and live with humility - as stewards, not owners - ensuring the world we hand over is more resilient, equitable, and whole.

Thank you, Your Royal Highness Sultan Nazrin Shah, His Highness Sheikh Dr. Mohammed Al Sabah, and His Excellency Dr. Abdullah Gül, for the honour of sharing this platform. It has been a privilege to speak on the responsibilities we all share - as architects, as citizens, and as caretakers of this planet.

[14] Usung rumah or house lifting is a cooperative practice of moving a wooden house from its old location to a new desired position. It is a practice found throughout the Southeast Asian region. – wikipedia.org.

[15] Ka'bah is an Arabic word meaning the sacred cubic structure at Islam's holiest site. It is the qibla, the direction Muslims face during prayer. Muslims perform Tawaf by circling the Ka'bah during Hajj and Umrah rituals. – www.jibreel.app.

[16] Recipient of the 2006 Nobel Peace Prize, Muhammad Yunus is internationally recognized as the founder of microcredit and as the father of social business. For more than 30 years, he has successfully worked to meld capitalism and social responsibility – UNhabitat.org.

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DATO' DR. AR. KEN YEANG

Architect, Ecologist, Author

Thank you for having me here today. I'm delighted to share some of the work I've been doing - work that, in many ways, I've been passionate about since I was young. Today, I'll be talking about green design - what it means, why it matters, and how it can help shape our future. I hope you'll find this session both informative and useful.

When I speak of green design, I'm referring to the design of the built environment - our cities, our towns, and our buildings based on the mimicry of natural ecosystems. The goal is to create constructed ecosystems, systems that function in harmony with nature rather than against it. This principle of designing by imitating nature's systems has been the foundation of my work for many years.

Now, to set the context: humanity today is like being in a single boat. There's only one Earth, and we are all on this same vessel navigating a turbulent sea - the environmental crises we currently face. But this boat is leaking, and we must act quickly to fix it.

To survive and steer this boat safely, we need two things: information and direction - which tell us where to go; and the means and tools which help us get there. In my view, the guiding framework that provides this information and direction is Applied Ecology, because the health and survival of our planet depend entirely on the balance and integrity of its ecosystems.

How do we make all this work in practice? My approach is rooted in biomimicry - the imitation of nature's processes and systems to design solutions for human society. More specifically, the ecosystem itself serves as the prototype for this mimicry. Through biomimicry, we can redesign and reconstruct our built environment so that it functions as a constructed ecosystem - one that regenerates rather than depletes.

Let's look first at Applied Ecology, the scientific foundation of this approach. The Earth is covered by a thin, fragile layer known as the biosphere, which sustains all life. Within this biosphere exist countless ecosystems, each functioning as part of an interconnected web. To truly design sustainably, we must understand not only what happens locally, in our immediate environment, but also globally, across the entire planet.

Ecosystems exist within a hierarchical structure - from organisms, to populations, to habitats, to communities, to biomes, and finally to the biosphere itself. Each level is interconnected, forming a continuum of life and interaction. An ecosystem consists of both biotic (living) and abiotic (non-living) components that work together in dynamic balance.

Of course, we don't always see these complex relationships with the naked eye. When you look out your window and see a patch of grass, it may seem simple - but beneath that surface lies an intricate web of processes, organisms, and interactions, all working together to sustain life.

This is the essence of green design - understanding these hidden systems, learning from them, and applying their logic to the way we build and live. These are very complex processes taking place in nature - processes that are mostly invisible to the human eye. Yet, they are constantly happening all around us. Unless you have an ecological background or are eco-literate, you wouldn't realise the depth of interactions and systems at play.

Within this vast web of nature lies human society. We are, after all, one of the many species that inhabit this planet but unlike others, we are the most intelligent, and perhaps more importantly, the most powerful. No other species on Earth possesses the incredible ability we have to reshape landscapes, alter seas, change the climate, and manipulate air and water systems. Our use and overuse of fossil fuels is one of the clearest examples of this immense influence.

Humans also create. We make things far more than any other species in existence. We build cities, infrastructure, and homes. We manufacture toys, tools, and technology from skyscrapers to smartphones. But the problem is that we create without adequate concern for the environment. This unrestrained creation has led directly to environmental disruption, and that, in turn, is the crisis we now face.

In principle, we don't have much time left. Scientists warn that by 2030, the Earth's temperature could rise from 1.5°C to 2.5°C, and within the next 20 years, the air quality could become so poor that human life will struggle to survive without significant technological assistance. So, what do we actually do that drives this crisis? We consume and construct - we produce electricity, erect buildings, grow food, and carve out land for roads and impervious surfaces. These activities sustain our way of life but also damage the planet.

The next crucial factor in ecological design is energy. We are, quite simply, addicted to it. We cannot live without energy; every moment we switch on a light, start a car, or power a device, we are relying on it. Therefore, energy use must be central to how we design for the future.

Then, of course, there's water - the essence of life. When astronomers search the skies for signs of life on other planets, the first thing they look for is water, because where there is water, there is the potential for organic life.

Altogether, these are the five critical factors that must be considered in ecological design. The challenge of design is to bio-integrate all these factors - energy, water, materials, life systems, and human needs - into a single, harmonious whole. This is not easy; I haven't achieved it fully myself, but it remains part of my lifelong personal mission.

At present, the relationship between our buildings and nature is largely defined by technology interacting with nature, a one-sided relationship. What we need is nature-to-nature integration; where our built environment functions as part of the ecosystem. The way to achieve this is through biomimicry - imitating the systems and intelligence of ecology itself.

To do this, we must understand and emulate the key attributes of ecosystems to imitate, augment, and intensify them within our designs. This is the true challenge of ecological design. My own work has achieved only part of this vision, but it provides a framework for what needs to be done.

Let's begin by looking at the first key element - biological structure. As mentioned earlier, ecosystems are made up of both biotic (living) and abiotic (non-living) components - one organic, the other inorganic. However, if we look at our current built environment, such as the buildings we occupy or the cities we live in, they are dominated by inorganic, abiotic materials - concrete, steel, and glass. Major cities like New York or Tokyo, for example, are overwhelmingly abiotic systems.

To truly imitate ecosystems, we need to restore balance by integrating more biotic elements of life - into our cities. But this doesn't mean simply planting trees or adding greenery for decoration. True bio-integration requires combining the living and non-living elements into a single, organic whole, where every part contributes to the health and resilience of the system.

So how do we actually achieve this balance between nature and the built environment? I call this approach creating micro-habitats in built form. There are several ways to design these habitats. The first method is to concentrate everything in one location, creating a single, large green area - like Central Park in New York, where all the greenery is placed in one central space. The second is a dispersed pattern, where green areas are scattered throughout the city - much like the garden squares in London or Georgia. The third is what I call the stepping-stone relationship, where patches of greenery are placed in proximity to each other, allowing species to move between them, even across impervious surfaces. Ideally, however, these green patches should be connected, forming continuous green corridors - like a spine or spiral - so that movement and exchange between habitats can occur naturally.

In summary, there are six basic spatial patterns for ecological design, and among them, the last two - those that connect micro-habitats - are the most effective and most preferred. When habitats are connected, they allow species to move freely between areas, share resources, and create larger, more stable ecosystems with greater resilience and longevity.

Now, let me share some examples of how these ideas are applied in my work. To create micro-habitats, we use green sky courts, vertical gardens, green roofs, atriums, and green linkages that connect buildings to surrounding natural landscapes. These green elements should not only connect horizontally at the ground level but also vertically - from the ground up to the rooftops.

One project that demonstrates this concept was a competition design for Waterloo Road in Singapore. The idea was to use a spiral pattern wrapping around the building's exterior, connecting greenery from the base to the top. This design, completed in 1999, envisioned sky courts filled with vegetation, forming part of a constructed ecosystem. Although that project represented an early stage of development in this concept, the idea has since evolved and advanced further in later works. In this design, bridges connect adjacent rooftops, allowing the greenery to spread from one building to the next. Over time, this approach becomes a mechanism for greening entire cities, linking rooftops, façades, and open spaces into one continuous green network.

Another example is the DiGi Data Centre in Petaling Jaya, where we experimented with green walls that wrap around the building. The greenery continues along the façade, linking from one side of the building to another, while the rooftop features photovoltaic panels that supply renewable energy to the interior spaces. This design represents the idea of continuous vegetation — a living skin that helps cool the building and supports biodiversity.

We then took the concept further in a project at One-North, Singapore, where instead of just vertical greenery, we introduced a green ramp that winds around the building façade. The ramp includes walkways, enabling maintenance access without disturbing office users, while also serving as a sequestering system that removes contaminants from the air. The ramp climbs one floor per level, and when stretched out, forms a 1.3-kilometer-long linear park - possibly the longest elevated linear park in the world.

Along the way, sky courts punctuate the structure, providing breathing spaces for users - places to relax, meet, or simply enjoy the greenery. From a distance, the building stands beside towers designed by Mr. Kisho Kurokawa, the architect of KLIA, showcasing a harmony between architecture and ecology.

Inside the building, you'll find sky courts, mid-level gardens, and rooftop gardens, all connected in a continuous flow of vegetation. These spaces are functional, social, and ecological — providing shade, improving air quality, and enhancing well-being. We've also implemented eco-cells, devices that bring vegetation, natural light, air, and water back into dense urban developments. For example, in Hong Kong's waterfront project, the eco-cell integrates natural ventilation and cooling. The building's roof operates naturally, allowing openings during rain to regulate temperature. These systems reduce the need for air conditioning by channeling cool air through natural means.

In Singapore, buildings are assessed by a greenery index, which measures the ratio of built-up greenery to the total site area. While the minimum requirement is 6, one of our buildings achieved an index of 12.2, effectively doubling the greenery expectation - a clear indication of ecological integration in design. We also conduct biodiversity studies, such as one in Kuala Lumpur, where we analysed local flora and fauna. Being located 2.9 degrees north of the equator, Malaysia is one of the most biodiverse regions in the world, and it is vital that our urban development's support that richness.

In Putrajaya, along the route to the Prime Minister's Office and the Millennium Monument, we integrated greenery and ecosystems as part of the city's identity. These projects illustrate how urban planning and ecology can co-exist meaningfully.

Finally, this diagram shows how we design habitats within developments. First, we identify potential habitats to recreate. Then, we select faunal species - birds, butterflies, insects that we want to reintroduce. Next, we choose floral species that attract and sustain those fauna. By doing so, we rebuild ecological relationships — the interaction between flora, fauna, and habitats - ultimately increasing biodiversity and enhancing the ecological value of urban developments.

Thank you very much.

SESSION 1: ETHICAL AND EFFECTIVE: REDEFINING CLIMATE POLICY FOR FINANCIAL SECTOR

CHAIR

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RESPONDENT 1

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RESPONDENT 2

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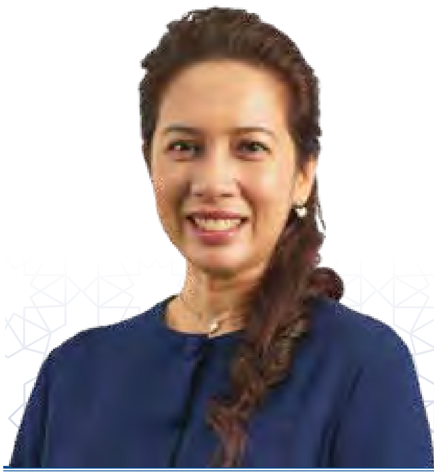
Questions & Answers

Key Takeaways

CHAIR



DATIN SERI SUNITA RAJAKUMAR

Council Member,
Climate Governance Malaysia

Thank you very much. It has indeed been a great morning so far, and I hope the upcoming sessions will continue to be just as engaging. Our next session is titled 'Redefining Climate Policy for the Financial Sector – Whether It Is Ethical and Effective.' Before inviting our speakers and interventionists, allow me to share some brief opening remarks. We have three speakers in this session.

When does regulation intersect with purpose? It's an important question because traditional regulation has often been binary. As markets mature, we are shifting from prescriptive rules to principle-based approaches, balancing tensions such as flexibility versus enforceability, voluntary versus mandatory frameworks as Dato' Faiz mentioned this morning – the balance between short-term risk mitigation versus long-term transition planning. The challenge lies in applying these standards across market players with differing priorities and levels of maturity.

In boardrooms, decision-making has also evolved. Board packs typically contain historical data, but there is now an increasing need to identify and manage emerging and unknown risks - what we call dynamic materiality. This urgency is amplified by the growing momentum around reporting and disclosure, which increases accountability, particularly for independent and non-executive directors.

Disclosure, however, is a double-edged sword. When organisations make forward-looking statements on climate stress tests, scenario analyses, or strategies to manage uncertainty and data gaps, they signal their level of understanding or lack thereof - about these risks. Done well, disclosure can build trust with stakeholders. But as businesses grow in complexity, and as their risk profiles expand, regulatory paradigms must also evolve.

All key actors, including regulators, must anticipate these shifts. Capital markets are inherently forward-looking; they will price these risks into valuations. We must therefore remain resilient to emerging risks that could have systemic impacts on the financial system - the lifeblood of any thriving economy. So, why are we discussing redefining climate policy for the financial sector in terms of ethics and effectiveness? Historically, the purpose of business was narrowly defined decades ago, even a Nobel laureate argued that a company's sole responsibility was to maximise profits. But today, we must ask deeper questions.

Take coal plants, for instance - most in our region are only 12 to 15 years old. Investors remind us that financing them was never illegal. Yet, the global scientific consensus now makes it clear that we must decarbonise. Affordable alternatives exist today. While coal plants are not illegal, they are increasingly seen as stranded assets, and investors have long known this. Some seek to de-risk by securitising revenues or divesting after moratoriums.

This raises crucial questions:

- Is investing in assets likely to become stranded a viable and sustainable business model?
- Is investing in businesses misaligned with societal values sustainable?
- Should boards, as stewards of their organisations, be held accountable if they fail to identify, manage, or mitigate these risks?

These questions matter because stakeholders—from youth to Non-Governmental Organisations (NGOs), scientists, and even the International Court of Justice—are calling for change. While such investments may not be illegal, they pose serious reputational and financial risks.

Finally, although businesses are often seen as political, we must reconsider this assumption when discussing purpose. If a business activity or transaction is clearly unjust, destructive, or harmful, should the board be accountable for profiting at all costs? Should boards and executives also advocate for policy reforms that discourage unsustainable or unethical practices - whether in carbon-intensive sectors, environmental destruction, or even conflict-related profiteering?

And correspondingly, should regulators respond by shaping measures that future-proof capital markets and reinforce that profiting 'at all costs' is unacceptable? As the SC Malaysia Chairman said earlier, this is truly where philosophy meets practice. With that, I'm delighted to welcome our first speaker of this morning's session, Dr. Renard, to discuss Redefining Climate Policy for the Financial Sector.

PRESENTER

DR. RENARD SIEW

Group Head, Corporate Sustainability,
Yinson Holdings Berhad
President, Malaysia Carbon Market Association (MCMA),
Climate Advisor, CENT-GPS

Good morning, everyone. It's a privilege to kickstart the conversation today. My aim is not to deep dive into every detail, but rather to highlight some key nuances and considerations when we talk about redefining climate policies and what they mean for the financial sector.

The Need for Climate Policies

Referring to today's theme, 'Guardians of the Earth', just as superheroes have their weapons and shields, climate policies serve as instruments to redirect capital flows toward low-carbon investments, enhance climate disclosures, and strengthen governance frameworks to attract private investments in clean energy, infrastructure, and innovation.

The Organisation for Economic Co-operation and Development (OECD)[17] in 2021 offers an excellent framework on transition finance - showing how multidisciplinary this area is. It covers taxonomies for transition, pathways to net zero, strong transition policies, data measurement and verification, and the evolution of carbon markets as tools to support this process.

[17] abbreviation for Organization for Economic Co-operation and Development: an international organisation whose members are countries with advanced economies and whose aim is to encourage economic growth around the world – Cambridge Dictionary.

Global Drivers and Challenges

Globally, there is a growing need for resilience amid geopolitical and economic uncertainty. With some of the global macro-economic trends that are coming from the US - Asia, particularly Southeast Asia, is well-positioned to leverage this moment for competitive advantage. There is also a moral and economic imperative to address climate justice and inequalities affecting vulnerable groups - especially those in developing countries struggling to rebuild livelihoods after climate-related disasters.

While climate financing and loss and damage are recurring topics at COP meetings, there is still a gap between commitments and delivery. For instance, the New Collective Quantified Goal (NCQG)[18] aimed to mobilise US$300 billion annually by 2035, but progress has been slow.

Simultaneously, artificial intelligence and the digital economy - driven by companies like Google and Microsoft bring both opportunities and new emission risks. In Malaysia, projects such as the Johor - Singapore Special Economic Zone and the rise of data centres will require careful policy and regulatory oversight.

Evolution of Climate and Sustainability Frameworks

Investor expectations for sustainability are not new - they date back to faith-based ESG movements in the 1890s. In 1987, the Brundtland Commission introduced the term ‘sustainability’ triple bottom line, followed by the UN Principles for Responsible Investment (PRI) in 2006, with US$4 trillion in assets under management. Today, climate policies and disclosures are more critical than ever. Just last year, the EU’s 2040 target set for a 90% reduction in greenhouse gas emissions exemplifies this commitment.

In Malaysia, National Climate Change Policy 2.0 (NCCP 2.0) is central to mobilising climate finance and establishing robust carbon market policy and carbon pricing as a key enabler. The National Sustainability Reporting Framework (NSRF) aligns with IFRS S1 and S2 and TCFD recommendations. The rollout begins with companies above a RM2 billion market cap and extends to non-listed entities.

Notably, Sabah has launched the Climate Change and Carbon Governance Enactment 2025, with plan to establish the Sabah Climate Action Council, mandatory GHG reporting, carbon budgeting, climate registry and climate fund to support climate mitigation and adaptation. Similarly, Sarawak’s Environmental Bill 2023 which effective March 2024—introduces its own carbon registry, levies for non-compliant entities, and carbon capture and storage (CCS) regulations; which I would say it is quite advanced compared to the global landscape.

Policy Tensions and Balancing Acts

When redefining policies, we must navigate key tensions:

- Voluntary vs. Mandatory – The carrot vs. stick approach. Voluntary initiatives encourage participation, while mandatory ones ensure enforceability. The challenge lies in market readiness.

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[18] The New Collective Quantified Goal on Climate Finance (NCQG) is a new global climate finance goal that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) shall set from a floor of US$100 billion per year, prior to 2025 – COP29 Updates, www.cgiar.org.

- Flexibility vs. Enforceability – Balancing national NDC targets at country-level with sector and corporate-level capabilities through pragmatic reconciliation. Should corporates define their own transition pace, or should it be enforced?
- Short-term vs. Long-term horizons – Determining realistic timelines for phasing out fossil fuels and achieving net zero, supported by measurable milestones.

Malaysia also have what we called a hybrid model - exemplified by Bank Negara Malaysia's Climate Risk Management and Scenario Analysis (CRMSA) that uses both baseline and stretch targets, blending flexibility with accountability.

Ethical Guardrails

Three ethical dimensions must guide policy design:

- Intergenerational fairness - Today's policies should not become tomorrow's burdens. So, we really have to think about how. You know, these policies do not unfairly burden the future generations.
- Distributional impacts - Climate policies affect public listed companies, SMEs, workers, and communities differently; just transition strategies must ensure fairness.
- Integrity and trust - Robust verification and disclosure mechanisms are crucial to prevent greenwashing and ensure the credibility of ESG claims.

Designing climate policies also requires a systems approach—understanding interdependencies across supply chains, infrastructure, and energy use, to avoid carbon lock-ins or delayed transitions.

The Role of Carbon Markets

As President of the Carbon Market Association, I must emphasise that, as Fatih Birol of the International Energy Agency said, "Without carbon markets, there is no net zero." The Malaysia's Bursa Carbon Exchange (BCX) - the world's first Shariah-compliant carbon exchange has held three auctions so far, featuring both nature-based (Kuamut Rainforest Conservation) and tech-based (Langkap Biogas) projects. Carbon markets are essential for pricing carbon effectively, but carbon credits are not a license to pollute. A proper hierarchy must be followed - carbon reduction (low-hanging fruits); investment in renewable technologies (CCUS, direct air capture); carbon compensation using high-quality credits.

There's been a lot of developments in this space, one being the compliance versus voluntary carbon markets. And so far, I think that also been signals that eventually carbon tax will be introduced, and potentially an emissions trading scheme. Emerging frameworks such as the ASEAN Common Carbon Framework (ACCF) aim to harmonise methodologies and claims guidance for corporates. Recent studies, including CIMB's Shariah alignment report, contribute to developing credible, ethical carbon trading systems. While carbon markets are not the sole solution, they are a key pathway to bridge the US$3.36 trillion global financing gap identified by the IPCC.

RESPONDENT 1

PROFESSOR DATO' DR. ASHRAF MD HASHIM
Shariah Advisory Council Member,
Securities Commission Malaysia

I have six key points to share after reviewing the comprehensive 30-page presentation by Dr. Renard Siew. It is indeed very thorough and insightful.

Alignment with Maqasid al-Shariah

Number one is the alignment with *Maqasid al-Shariah*. There is no doubt that everything we are doing aligns with the *Maqasid al-Shariah* - the protection of life, wealth, and posterity. Allah (s.w.t) reminds us in the Quran:

"And do not cause corruption on the Earth after its reformation, and indeed, Allah commands you to render trusts to whom they are due, and when you judge between people, judge with justice."

The chosen theme, Guardians of the Earth, is deeply connected to our purpose of creation. Allah (s.w.t) mentioned on the day of our creation:

قَالَ رَبُّكَ لِلْمَلَٰٓئِكَةِ إِنِّي جَاعِلٌ فِي ٱلْأَرْضِ خَلِيفَةً

"And when your Lord said to the angels, 'Indeed, I will place upon the Earth a *Khalifah* (vicegerent)'."

Thus, as *Khalifah*, we are entrusted not only with responsibility toward fellow human beings, but also toward all creations on Earth.

Distributional Impacts and Justice

Number two, the presentation also highlights distributional impacts - ensuring that no community is left behind. This reflects the Shariah principles of justice and removal of hardship *(raf' al-haraj)*. Allah (S.W.T) commands:

"Indeed, Allah commands justice, good conduct, and giving to relatives, and forbids immorality, bad conduct, and oppression."

Therefore, policies such as carbon pricing must avoid *zulm* (injustice) by balancing costs between high-income emitters and vulnerable communities. Mechanisms like just transition funds and targeted subsidies are consistent with Shariah's call for fairness.

Avoidance of Gharar (Uncertainty and Deception)

Number three, the avoidance of *gharar* (uncertainty) in carbon market. The presentation rightly stresses the need to prevent greenwashing and ensure integrity in carbon markets. In Shariah, contracts that involve *gharar* (excessive uncertainty) or *tazyif* (misrepresentation) are prohibited.Allah (S.W.T) says:

"Do not consume one another's wealth unjustly, but only in lawful business by mutual consent."

Thus, carbon trading mechanisms must ensure transparency, verifiability, and honesty, or risk falling into the category of buying *al-gharar*, which undermines Shariah legitimacy.

Amanah (Trust) and Accountability

Number four is *amanah*. The concept of trust (*amanah*) and accountability is central to climate disclosures and ESG reporting. As our Chairman mentioned, the phases of mandatory disclosure reflect the Shariah values of truthfulness and integrity. Allah (S.W.T) says:

"Oh you who believe, fear Allah and speak words of appropriate justice."

Therefore, transparent and verifiable ESG disclosures embody the spirit of *amanah* in our stewardship of resources and responsibilities.

Intergenerational Responsibility (المسؤولية الاجتماعية)

Number five, the presentation also emphasises intergenerational fairness, which aligns with the Shariah principle: لَا ضَرَرَ وَلَا ضِرَارَ - "Do not harm and do not reciprocate harm." The Prophet (s.a.w) said:

"A Muslim is one from whose tongue and hand other Muslims are safe." Meaning a Muslim should not harm others verbally or physically.

This responsibility extends not only to people of our time but also to future generations. Climate finance, therefore, should prioritise clean energy and resilience, ensuring that today's private gains do not become tomorrow's public losses.

Individual Responsibility as Vicegerents

Lastly, while collective action is powerful, individual responsibility is equally important. As vicegerents of Allah, each of us will be accountable for our actions. The Prophet (s.a.w) said:

"If the Hour of the *Kiyamah* (Day of Judgment) is established while one of you has a seedling in his hand, and he is able to plant it before it comes, let him plant it."

We must not be helpless. Each person can and should act within their capacity - whether through recycling, reducing waste, or making conscious daily choices. Those with greater power and influence can do more, but everyone has a role to play.

RESPONDENT 2

NIK SHAHRIZAL SULAIMAN

Partner,
PwC Malaysia

I have three main points to share based on my reflections after listening to his presentation.

Dr. Renard mentioned the National Sustainability Reporting Framework (NSRF), and I want to touch on its implementation challenges and how we can work together to ease the transition toward compliance.

The NSRF, which adopts the IFRS Sustainability Disclosure Standards, requires a high level of knowledge and technical expertise to implement. Unlike other disclosure standards, this one demands proficiency in quantifying the financial effects of climate risk, conducting scenario analysis, modeling, and formulating strategic responses to address sustainability risks and opportunities.

From my observation, there are different levels of readiness across the industry. Regulators are doing an excellent job in promoting knowledge sharing, but I believe we must train more sustainability specialists. Sustainability officers today can no longer focus solely on disclosure standards. They must understand risk management, the business impacts of climate and sustainability risks, and the methodologies for setting targets - for instance, knowledge of the Greenhouse Gas Protocol is now essential when dealing with emissions.

These are the new competencies required in the field. Without building sufficient expertise, our progress and maturity in sustainability practices may be hindered. Hence, my first point is the urgent need to develop more trained sustainability professionals in Malaysia.

My second point relates to economic inequality, which Dr. Renard also highlighted - a topic very close to my heart.

We cannot ignore what has happened in our country in recent years. Take flood risks, for example - both their severity and frequency have been increasing. Each time such events occur, it is the low-income households who suffer the most. This is because they have limited financial buffers and belong to one of the most underinsured segments of society.

At the same time, as Malaysia transitions toward a green economy, new economic opportunities are emerging. However, these opportunities require specific knowledge and skills to be fully leveraged. Therefore, we must ensure equality in access to knowledge so that the benefits of economic transition are shared across all communities.

Additionally, we need to consider mechanisms such as inclusive insurance schemes - to help low-income households better manage economic and climate-related risks.

My third and final point concerns carbon pricing mechanisms, as mentioned by Dr. Renard.

Currently, the government and regulators are exploring models such as emissions trading systems (ETS), cap-and-trade, and carbon taxes. From a corporate behavior perspective, I believe it is important that these mechanisms eventually become mandatory.

While disclosures play an essential role in encouraging responsible behavior, we must also ensure that emissions are priced correctly. Accurate carbon pricing will allow these costs to be integrated into strategic decision-making within the economic sector.

In short, my three key points are:
- The need to develop more sustainability expertise to support effective NSRF implementation;
- The importance of addressing economic inequality and ensuring equal access to opportunities in the green transition; and
- The necessity of mandatory carbon pricing mechanisms to align corporate behavior with sustainability goals.

Thank you very much.

QUESTIONS & ANSWERS

QUESTION 1

Dato' Mohammad Faiz Azmi

If I look at carbon markets from an ASEAN perspective, it's disappointing - people are still asking for US$10 per metric ton. I asked a scientist how many barrels of oil you burn to emit one ton - they said 2.28 barrels. At US$60 per barrel, burning 2.28 barrels generates roughly US$150, yet you get US$10 to abate your conscience. Clearly there's a disconnect. Globally, regulators have been scolded for not regulating this market. We are preparing a case to prescribe carbon credits as a regulated asset — that's in the works. My open question is: what else can I do to make that price go up? Because US$10 doesn't cut it.

Second, I'm unclear on the interaction between voluntary carbon markets and compliance markets - one seems regulated and the other not, when essentially, it's the same thing. International standards say you need a registry, agreed standards, agreed verifiers - many building blocks are missing. Prescribing carbon as a security aims to ensure those blocks exist.

Also, states are moving at different speeds e.g., Sarawak passed an Act but hasn't applied a levy yet. Is that levy based on ISSB-type data or unique Sarawak data? We must prevent arbitrage between states. Ultimately, federal policy matters - they set the NDC targets internationally.

Finally, regulators set taxonomies and frameworks, but why is application limited? Are there not enough projects to finance? Or are current taxonomies not attractive? Beyond setting frameworks, what else should regulators do to get projects and banks to use them? That subset you described (linked bonds) is only a small subset of green instruments. Green financing frameworks (where proceeds fund renewables) have proven more successful. Appetite isn't there yet - but seriously, are there other things beyond tax exemptions to make it attractive? If it's such a good business idea, why base the business model on government incentives?

ANSWER 1

Dr. Renard Siew

On application and sustainability-linked instruments, Yinson was one of the early issuers of Sustainability-linked Bond (SLB)/*Sukuk Wakalah*. On the global landscape, many SLB targets and aspirations have failed. The step-up coupon penalties when targets are missed can be punitive financially. That raises questions - were we overly ambitious when setting targets? Few leaders were willing to step up.

Companies that fail SLB targets get public name-and-shame coverage, which hinders appetite to be early movers. Unless there is some legal protection for forward-looking statements, which I think Australia has a clause, companies fear reputational and financial downside.

On green bonds where proceeds are earmarked for renewable projects, those have been more successful. Appetite still isn't broad - incentivisation (not only tax) may be key to increase uptake.

One point to drill into is risk exposure. Companies truly fail targets and get splashed in news. The downside of failing is high. If there is a solution to protect early movers (legal or regulatory safeguards for forward-looking targets), more companies might step forward.

Ahmad Shahriman Mohd Shariff
From a bank perspective, it's similar to Islamic finance uptake. Issuers ask - what economics do I get? It becomes a pricing conversation. If economics don't work, corporates choose not to do it. If we shift to compliance (penalties for non-compliance), the conversation would change - carbon tax or levy could be the economic driver. It's now very incentive-based like Islamic micro-finance. When there was incentive to do Islamic, then everybody will jump in to the context that had incentives.

Datuk Zainal Izlan
In terms of non-tax incentives, I know it may sound repetitive, but I believe the key lies with our GLICs (Government-Linked Investment Companies) and large domestic institutions. These entities need to provide leadership in driving sustainable finance.

If they were to insist on subscribing only to green bonds or green sukuk - and not traditional instruments, it would send a strong market signal. Perhaps this could be supported through better pricing for green instruments, if possible.

Such a move would encourage more corporates to issue green or sustainability-linked instruments, instead of leaving it entirely to market forces. In other words, some degree of moral leadership from major investors could help accelerate the transition toward sustainable financing.

Datin Seri Sunita
It will remain a fad unless at a national level carbon is priced, emission reporting is mandated, and we have a rigorous GHG baseline. We need clear net zero targets (peaking and reduction timelines), sector identification, zero-deforestation commitments, etc. Without a raft of signals, it remains a fad and investors won't press issuers on sustainability metrics.

Q QUESTION 2

Abdul Kader Thomas
I'd like to stretch this in a different direction on policy. For me, the carbon elephant in the room is Artificial Intelligence (AI), and there are ethical policy issues that I think are largely unaddressed globally. If you think about it, what's the long-term cost of AI compared to the short-term gain? Looking at immediate issues today - temperatures near some data centres (for example, a facility in Tennessee) have risen by over one degree Celsius since operations began; water supplies near a Meta facility in sub-urban Atlanta have nearly been exhausted; air quality around many AI facilities is worse than before they were built. AI also appears to have negative employment implications, and traders' rights are often undermined by AI systems. Within this list, at least three of the five complaints are climate-related.

My question is: given these climate and ethical impacts, how should policy respond? What do Dr. Renard and the other panellists think?

ANSWER 2

Dr. Renard Siew

I've been contemplating this whole concept of AI, which also came up in my presentation as one of the megatrends that could potentially lead to higher emissions instead of reducing them.

There are global initiatives trying to address this. One notable example is the Climate Neutral Data Centre Pact, a coalition of companies like Microsoft and Google that have committed to maintaining a Power Usage Effectiveness (PUE) of 1.5 or lower, or risk being removed from the alliance. This shows there is genuine intent to make the sector as green as possible.

In Malaysia, this debate surfaced during my recent visit to Iskandar Malaysia, where the Johor–Singapore Special Economic Zone aims to become a carbon-neutral hub for data centres. The key issue, however, is: where these companies will source their carbon credits from? There's growing emphasis that credits should be domestically generated, but local supply is limited to meet current demand.

At this point, we are still trying to determine what options exist to manage AI's environmental impact while ensuring sufficient carbon offset mechanisms. I heard recently that some local authorities have set very high entry requirements for companies establishing carbon-neutral data centres. For example, they require at least Platinum-grade certification.

While that's commendable, it also raises the barrier to entry and makes it difficult for new players to set up operations, even if their goal is to achieve carbon neutrality or net zero. The challenge is finding a balance between ambition and practicality.

Nik Shahrizal Sulaiman

I've worked with a number of companies on defining its sustainability initiatives. They were doing all the right things - retrofitting old equipment, installing solar panels, reducing energy use. I told them, 'You must have great sustainability aspirations.' The response was, 'We're not doing this for sustainability; we're doing it to save costs.' The lesson here is that financial implications matter. This is what makes the IFRS Sustainability Disclosure Standards so important. Unlike previous disclosure frameworks, they focus on the anticipated financial effects of sustainability and climate risks.

This is vital because it helps investors decide which companies are doing the right thing and helps management make informed strategic decisions. But it's a complex task — translating sustainability risks into financial figures is not easy. In the early stages, we'll see wide variability between companies, even within the same sector, due to differing assumptions and models.

That's why assurance will be critical. We can't have two similar companies showing vastly different financial impacts for the same actions. Verification and consistency checks are necessary.

Now, on AI — I agree that it will be an important component in the near future. But right now, AI cannot quantify the financial effects of sustainability risks. It can highlight key considerations, but it relies heavily on data, which is often context-specific. So, for now, AI isn't ready to replace human analysis in sustainability assessments.

QUESTION 3

Dato' Mohammad Faiz Azmi

How is the convergence between IFRS accounting standards and ISSB sustainability disclosure standards shaping corporate reporting and regulatory expectations in Malaysia?

The convergence of IFRS and ISSB standards marks a major shift in corporate reporting, where sustainability disclosures will soon be inseparable from financial reporting. Companies may eventually be unable to comply with IFRS without adopting ISSB S1 and S2. Forward-looking climate statements — on stranded assets, flood-related costs, or transition risks — will have direct balance sheet implications, requiring companies to make provisions and adjustments that reflect their sustainability exposures.

There remains a clear skills gap between accountants and sustainability officers. Many disclosures are prepared without full understanding of financial impacts. To address this, the Malaysian Institute of Accountants (MIA) and other bodies are encouraged to run cross-disciplinary training — helping accountants interpret ISSB requirements and sustainability professionals understand accounting implications — to ensure consistency and credibility in reporting.

Regulators acknowledge that companies need time to adapt. Instead of immediate penalties, they plan to issue regulatory expectation guidelines assuring that good-faith efforts will not be punished. Over the next few years, collaboration among regulators, industry associations, and companies will be key to achieving coherence and confidence in integrating financial and sustainability disclosures.

ANSWER 3

Tan Sri Azman Mokhtar

Chairman have said many good things - but what really resonated with me today is this idea of building blocks. The house is not quite complete yet, but at least it's being built - the structure is there. Those of us in the business of creating these building blocks - legislation, regulation, and governance - need to keep getting them ready. I'd say our house is maybe 70–80% complete, which isn't bad. But at the end of the day, we can't just keep building; at some point, you need to take a leap of faith and just do it.

Let me share a story about Tan Sri Wahid, who isn't here so I can safely embarrass him in a good way. Back then, he told me he was leaving Telekom Malaysia after being made an offer by the 'yellow bank,' and we spoke for hours. I reminded him, ''You're going into banking, but that's *riba*." He told me, ''Man, I'm going to make a difference." And he did. He went there and made Islamic First a reality. That's what I mean - someone has to break the cycle, the 'chicken and egg' problem we always talk about in Malaysia. Someone has to be the rooster who makes the first move. That's leadership.

To Datuk Izlan's point, I agree that GLICs and corporates like Yinson need to take that leap of faith. You can't wait for everything to fall into place - it never will. Whether it's carrot or stick, the horse itself must be strong and ethical. If we had waited for perfect pricing or incentives, Islamic finance would never have taken off. I remember chasing bankers out of meetings, telling them, "Don't come back with anything LIBOR-based." We launched convertible sukuk based on Telekom's dividend rate instead — and it worked. Same with Sukuk Ihsan. It wasn't easy to convince people, but we proved it could be done. The point is, leadership requires conviction, not just compliance.

And finally, Project Chronos, as you remember, Dato' Faiz - that was our attempt (in Khazanah) to measure true value, beyond financial returns. We worked with PwC to quantify not just profits, but economic, social, and environmental value - what we now call ESG. We were ahead of our time, but it was important to show that value isn't only about money. It's also about values. That's the direction we must continue building toward. To those working on the building blocks — keep going. But ultimately, it takes leadership and courage to finish the house and make all of this real.

QUESTION 4

Dato' Mohammad Faiz Azmi

During the discussion with the industry, there was a pitch of an idea, and the Minister (of Finance) said, "It sounds great, but it doesn't sound very Islamic." He then told us, "Can you guys stop making wrappers?" — meaning, stop taking conventional instruments and just repackaging them as Islamic products. He said, "That era is over. I want you to create genuinely different kinds of products, not just keep coming up with wrappers." And I have to say, that comment resonated with me.

He also made another important point — that part of the problem is we're still thinking within the same risk framework, the one set by Basel. That's why banks can't engage in true risk-sharing, because under Basel rules, it's treated as a capital deduction, not risk-free. The minister said, "Then invent your own risk framework. Why do you need to sit in theirs?"

And I thought, he's right. I was talking to the Governor about this the other day, and I said, "Maybe the right place to put that new risk framework isn't in the banks — it should be in the capital markets." So, what if we gave a licence to an entity that could only take money from high-net-worth individuals and said, "Go forth and be a Bridger." That might just be the start of something new. I am prepared to create new licenses in the capital market side.

If we're going to move from just making wrappers to creating something truly different, then we need a new kind of framework — a new building block altogether. And honestly, I can't expect the banks to take the lead on this, for various reasons. But the capital markets are a different story; we're open to innovation.

ANSWER 4

Tan Sri Azman Mokhtar

As I reflect on this, we always talk about financial innovation, but often what we really see is regulatory arbitrage. After the Lehman[19] crisis, conventional banking became tightly regulated under Glass-Steagall[20] and Basel[21] - and for good reason. But look at what has happened since: the private equity industry has shifted into shadow banking, and now a third of it is private credit. So I ask: why can't Islamic finance do the same?

If we're constrained by the conventional banking framework - and even Islamic banking faces similar limits - we should move beyond that. Islamic finance actually has three arrows in its bow: banking, sukuk,

[19] On September 15, 2008, Lehman Brothers Holdings, Inc., the fourth-largest U.S. investment bank, sought Chapter 11 protection, initiating the largest bankruptcy proceeding in U.S. history. The demise of the 164-year old firm was a seminal event in the global financial crisis - Yale School of Management.

[20] The Glass-Steagall Act of 1933 forced commercial banks to refrain from investment banking activities to protect depositors from potential losses through stock speculation. Glass-Steagall aimed to prevent a repeat of the 1929 stock market crash and the wave of commercial bank failures - Investopedia.

[21] The Basel Framework is the full set of standards of the Basel Committee on Banking Supervision (BCBS), which is the primary global standard setter for the prudential regulation of banks - BIS.

and equity. But in Malaysia, we mostly focus on the first two, which are still credit-based instruments. Equity remains underused, even by GLICs and large corporates like PETRONAS, especially when it comes to climate adaptation and mitigation financing. Add to that philanthropic capital, and there's huge potential for blended finance - the true 'alchemy' of financial innovation

And if I may add, even universal banks with asset management arms are still operating as if they're stuck 30 years in the past. It's time to innovate — to rethink how we deploy capital and use the full spectrum of Islamic finance tools.

Professor Dr. Mehmet Asutay

Just to add briefly to Dato' Faiz's point and the Minister's comment, I think this goes back to what we call institutional logic - and the difficulty of aligning institutional frameworks like banks with broader goals such as climate action and sustainability. There's an inherent inconsistency, especially when we talk about Islamic finance, which carries added ethical and social objectives. This is why non-banking institutions, like those in the capital markets, are so important.

To illustrate this, I often share an anecdote from the early days of Islamic finance. When Dubai Islamic Bank was first established, Sheikh Lootah proudly brought the royal decree to the regulator - a Scottish gentleman who told him, "I understand you want to do something Islamic, but a bank may not be the right institution to achieve that." He suggested creating investment companies instead, as they better align with Islamic principles. But Sheikh Lootah, caught up in the excitement of the time, went ahead with establishing the Islamic bank.

That same institutional mismatch still exists today, particularly in sustainable finance and climate policy. We are expecting banks to deliver outcomes that are not naturally aligned with their institutional structure or logic. Hence, the future innovation and real progress will likely come from Islamic capital markets and non-banking financial institutions, which can operate with greater flexibility to fulfil both Islamic and sustainability objectives.

QUESTION 5

Professor Dr. Engku Rabiah Adawiah Engku Ali

Thank you to the presenters and respondents. I have a rather basic question regarding the topic of redefining climate policy. Sometimes, when we design such policies, there seems to be a conflict of interest between climate objectives and social welfare. For example, take the plantation sector — if we impose restrictions to protect the climate, it could negatively impact the income and livelihoods of people working there. So, my first question is: how do we prioritise and design policies that protect the climate while still preserving the interests of society?

My second question relates to carbon credits and the net zero concept. From an Islamic perspective, we have the principle of لَا ضَرَرَ وَلَا ضِرَارَ — meaning, no harm and no reciprocating harm. You cannot cause harm unless avoiding it would result in a greater harm. So, when we talk about polluters using carbon credits to offset emissions, shouldn't there be a requirement for them to prove that their activities are unavoidable — that not doing them would cause more harm?

Otherwise, if polluters have a choice but still continue harmful practices while using carbon credits to 'net off,' wouldn't that be a form of greenwashing? My question is whether current carbon credit policies include such a safeguard to prevent this kind of misuse or ethical loophole.

A ANSWER 5

Professor Dato' Dr. Ashraf Md Hashim

From a Shariah point of view, there are many legal maxims that can guide us in addressing this issue. One relevant principle is يُتَحَمَّلُ الضَّرَرُ الخَاصُّ لِدَفْعِ الضَّرَرِ العَامَّ — which means, a specific harm may be tolerated to prevent greater harm to the public.

In practice, however, the real challenge lies in implementation. We must carefully weigh the harms and benefits, both to specific groups and to society at large. While Shariah provides clear guidance, effective decision-making requires accurate data and cross-sector collaboration. Therefore, balancing these priorities demands that policy makers, Shariah scholars, and data experts work hand in hand to ensure fairness and practicality in application.

KEY TAKEAWAYS

Climate Policy Must Redirect Capital and Build Governance

Private investment is central to the transition. Policies should explicitly shift capital toward low-carbon projects, strengthen disclosure and verification, and create governance that channels finance into clean energy and innovation. Transition taxonomies, measurable baselines, and carbon pricing (markets or taxes) are necessary building blocks; but they only work if paired with robust reporting and enforcement to prevent greenwashing.

Hybrid Regulatory Design Balances Ambition and Readiness

Malaysia's pragmatic 'basic and stretch' approach through voluntary incentives alongside minimum mandatory requirements recognises differing maturities across firms. Hybrid models where baseline obligations with aspirational targets help manage readiness gaps while encouraging leadership. Policy should be flexible enough to scale (short vs long horizons) but clear on milestones and accountability.

Equity, Justice and Ethical Guardrails are Non-Negotiable

Climate policy must protect vulnerable communities, workers in fossil sectors, and future generations. Instruments like just-transition funds, targeted subsidies, and distributional assessments are essential to avoid undue burden. Shariah and ethical frameworks reinforce principles of fairness, trust (*amanah*), and avoidance of uncertainty (*gharar*), which must inform market design and disclosure integrity.

Carbon Markets are a Pathway - Not a Permit to Pollute

Carbon credits and exchanges can help close finance gaps but must be high quality, sequenced through reduce, replace, then offset - and embedded in a hierarchy that prioritises emission cuts first. Clear registries, agreed standards, verifiers, and potentially deeming credits regulated assets will raise prices and credibility; without these, markets risk undervaluation and arbitrage between jurisdictions.

Leadership, Innovation and Capacity Building Unlock Markets

Supply (projects), demand (investor interest), and expertise (accountants, sustainability specialists, verifiers, etc) must come together. Leadership from GLICs, major corporates and capital-market actors can break the 'chicken-and-egg' impasse; regulatory innovation (new capital-market licenses, blended finance, bespoke risk frameworks) and training for practitioners are critical to turn frameworks into finance and projects into impact.

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SESSION 2: INVESTING IN RESILIENCE: UNLOCKING CAPITAL FOR CLIMATE PROJECTS

CHAIR

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PRESENTER

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RESPONDENT 1

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RESPONDENT 2

Bilal Parvaiz
Chief Executive Officer,
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Questions & Answers

Key Takeaways

CHAIR

TAN SRI AZMAN MOKHTAR

Chairman,
Malaysia International Islamic Finance Centre
(MIFC) Leadership Council

The way I'll try to frame Session 2 is based on a very good concept paper. If this morning we heard extremely insightful speeches from His Royal Highness, Dato' Faiz, Dr. Farhan, President Gül, and Serina, then Session 1 was about policy and building blocks - regulation, law, incentives, and the necessary sticks. Our session now, titled 'Investing in Resilience: Unlocking Capital for Climate Projects,' focuses on how to move from policy to action - essentially, how to mobilise finance and investments for climate solutions. We assume the 'building blocks' are being put in place, and now it's time to discuss how money and markets can make those foundations work — including areas like carbon markets and adaptation projects.

We are privileged to have with us today a diverse panel: a multilateral policymaker - Paul, representing the OECD's climate adaptation framework; an eminent scholar in Islamic finance, Professor Dr. Mehmet, a familiar face at the SC-OCIS Roundtable; and a banking practitioner, my dear brother here, Bilal who literally keeps me on my toes because he's taller than Professor Jomo. The session will follow a structured format - brief presentations, followed by responses and discussions around three guiding questions. The essence of this session is practical: what can finance actually do to enable real climate action?

Conceptually, I'd like to link this discussion with the unifying concept of the Guardians of the Earth with principle of justice (adl) — as found in the Quran, in Surah An-Nisa, verse 58 which means give the trust to the *ahli*, to those who are qualified; alongside *amanah* (trust) and *ahli* (competence). These values define stewardship - the idea that we are vicegerents (*khalifah*) of the Earth, entrusted to govern with justice and responsibility. As Dr. Yusuf al-Qaradawi wrote in his work on environmental conservation in Islamic law, *Surah al-A'raf*, Allah (s.w.t) say, "Do not corrupt the Earth after it has been set right." This balance between justice, trust, and responsibility — underpins sustainability.

In *Surah ar-Rum*, verse 41 'corruption has flourished on land and sea as a result of people's actions'. So, this thing about the *amanah* and the vicegerents. In the Malaysian context, of flood defenses for example, what to do with the agriculture crops is something that we should look forward to. In that regard, justice extends to intergenerational justice and climate justice. While adaptation is often local and short-term, and mitigation is global and long-term, both must work hand in hand. As one professor said at COP28, "Carbon knows no geography," to which I replied, "Yes, but carbon remembers history." The responsibility of nations differs because emissions have historical roots. So, as we try to restore the concept of *islah*[22], restoration in Islam, not just reform, restoration for to build back, because the Earth was kept actually perfect, and then the hands of men we tend to corrupt it.

In this spirit, our session will explore how finance can serve as a tool of justice, bridging rich and poor nations, and ensuring fair climate adaptation and mitigation. Finally, let me extend the metaphor used earlier - if regulation is the stick and incentives are the carrot, then leadership is the horse. A good horse responds not just to incentives or punishment but to vision and purpose. Leadership, therefore, is key. We cannot wait for perfect systems or complete frameworks. Change requires courage, conviction, and stewardship - especially from those in finance and technology, the true agents of change today. With that, let's begin. Paul, over to you for your presentation.

[22] *Islah* or *Al-Islah* is an Arabic word, usually translated literally as 'reform' (but contextually referring to 'restore'), in the sense of to improve, to better, to put something into a better position, correction, correcting something and removing vice, reworking, emendation, reparation, restoration, rectitude, probability, reconciliation. – Wikipedia.org.

PRESENTER

PAUL HORROCKS

Head of Unit for Private Finance for Sustainable Development, OECD

Thank you, Tan Sri, and thanks to the Securities Commission Malaysia for the invitation. I'm truly impressed by the dynamism and leadership Malaysia is showing on this issue. I'll begin with a big-picture view and then go deeper into blended finance, sharing insights on how we, as a multilateral institution, are addressing the balance between developed and developing countries, particularly in climate adaptation. The OECD has developed the Climate Adaptation Investment Framework (CAIF), which provides countries with a clear and consistent pathway for adaptation and investment planning. The framework supports policy dialogue, capacity building, and peer reviews. It is already being used in pilot projects, and we would be happy to work with Malaysia as part of this initiative.

Coherent Planning and Governance

To effectively apply CAIF, countries need coherence across all levels of government. It can't just be one ministry or agency - collaboration between the Ministry of Economy, the Ministry of Environment, and financial regulators is essential. For instance, when issuing sovereign green or sustainability-linked bonds, the Debt Management Office must also be involved. Governments need to align regulations, phase out subsidies that undermine climate goals, and ensure the private sector can participate in adaptation efforts. Clear taxonomies and KPIs are crucial for investors to assess risks, returns, and impact. Likewise, insurance and risk-transfer mechanisms like parametric insurance must align with national adaptation plans and budget allocations. These elements ensure that long-term goals translate into real investments.

The Role of Blended Finance and Guarantees

Blended finance is where the public and private sectors meet to fund climate adaptation. Development finance institutions - like the IFC, MIGA, and the U.S. International Development Finance Corporation - play a vital role in creating markets, managing risks, and mobilising institutional investors. Between 2020 and 2023, US$18 billion was directed toward adaptation. There's a lot more to be done in both mitigation and adaptation if we want to increase the overall number of US$180 billion for climate finance, but also in terms of the percentage that's being mobilised in lower middle-income countries and upper middle-income countries. To address this gap, we need to better use debt markets through instruments like green, social, and sustainability-linked bonds. Countries such as Uruguay and Chile are leading examples, issuing sovereign sustainability-linked bonds with measurable KPIs. For Islamic finance, we should also explore 'step-down' mechanisms and other innovations to make these instruments more adaptable. Guarantees - both funded and unfunded — remain one of the most cost-effective tools for mobilising private capital.

Scaling Up and Broadening Adaptation Financing

To scale up financing, countries must mobilise private sector participation and aggregate projects into investable opportunities. Blended finance instruments need to be strategic and targeted, not just focused on upper-middle-income countries or commercially attractive sectors. We must expand adaptation financing to farming, infrastructure, and community resilience. Alternative financing sources like private funds, family offices, and philanthropy should also be tapped. Concessional financing, such as guarantees or subsidies, should be used carefully - only enough to attract private investors without over-subsidising them. Governments should mainstream adaptation by ensuring that all blended finance mechanisms are tied directly to climate resilience goals.

Practical Design, Risk, and Local Mobilisation

In designing blended finance projects, you must define your adaptation theme - whether it's agriculture, urban infrastructure, or water management - and choose the right instrument, be it a loan, equity, or guarantee. Each project should include checks and safeguards to ensure adaptation outcomes are integrated into both design and implementation. A good example is from Kenya, where a Green, Social, Sustainable, and Sustainability (GSSS) bond funded a green university accommodation building, combining climate goals with social impact. At the moment, a lot of blending starts going towards upper middle income countries to easy to mobilise sectors in the sort of more investment, private, more commercially viable sectors, we need to think a bit about adaptation in terms of farming, adaptation for infrastructure, and how we can get more of that private money into those and tapping those alternative sources of finance as well. So that's private funds, high net worth individuals, family offices as well, but also philanthropy, these growing and growing as a source of finance. Local participation is also key - countries must mobilise domestic banks, pension funds, and sovereign wealth funds to align projects with local currency markets and development objectives, reducing currency and political risks.

We also need to address the risks of reversal or project stalling by ensuring a stronger role for domestic financial institutions. Local banks, pension funds, and sovereign wealth funds must be actively involved in adaptation projects, particularly those structured as public-private partnerships (PPPs). This helps align revenue streams with local markets, reduces currency mismatch risks, and ensures projects meet both financial and national development goals. Strengthening domestic participation also builds long-term ownership and resilience within the local financial ecosystem.

Building Scale and Future Direction

To truly transform adaptation finance, we must move beyond small-scale projects toward systemic and standardised solutions that can attract institutional investors. This requires a consistent flow of projects, supported by high-quality adaptation data and measurable benchmarks. Only when investors see a steady pipeline will they commit long-term. At the OECD, we are now developing new Finance Guidance on Climate Change Adaptation, which will be build on the CAIF framework. We aim to collaborate with Malaysia and other partners on peer learning, capacity building, and coordination to enhance adaptation finance globally.

Establishing a Clear Development Rationale

When designing blended finance initiatives, we must first define the development rationale - why are we doing this, and what goal are we trying to achieve? Is it to create a market for adaptation in agriculture, to introduce new climate-resilient crops, or to finance infrastructure projects? Kenya's GSSS bond was issued to fund a green student accommodation building. The project combined social and environmental impact - it was funded through rental income, listed on both the Nairobi and London Stock Exchanges, and attracted international capital. This demonstrates how adaptation projects can also be financially viable, scalable, and socially beneficial - a model that can be replicated in countries like Malaysia.

RESPONDENT 1

PROFESSOR DR. MEHMET ASUTAY

Director,
Durham Centre for Islamic Economics and Finance,
Durham University

The topic we're discussing today is both urgent and complex, particularly when we look at the enormous financing gap that exists for climate action. As Tan Sri mentioned, while we've been debating these issues for years, the real challenge now lies in finding tangible, actionable solutions. Finance sits at the centre of this paradox - it is both the cause and the cure. On one hand, the financial system has contributed to climate and sustainability challenges, yet on the other, it remains our only viable mechanism to mobilise the resources needed to solve those very problems. This creates a catch-22 situation, where we must rely on finance to fix the damage caused by finance itself. In this context, blended finance offers promise, as highlighted earlier by Paul, but it must be applied with purpose and alignment to ethical and sustainable objectives.

Building on that, I would like to share some reflections from a recent COMCEC project we completed - a large-scale study for the Organisation of Islamic Cooperation (OIC). The full report will be released following approval by OIC Ministers of Finance and Economy in November in Istanbul. Preliminary findings were presented 10 days ago in Ankara to representatives from member countries, and the feedback has informed a forthcoming policy document for adoption. The study includes case studies and strategic policy recommendations addressing the financing challenges faced by OIC countries, particularly in adaptation and sustainable development. While time doesn't permit a detailed presentation today, I want to highlight one critical theme that emerged — the urgency of embedding Islamic values into financial decision-making to make Islamic finance more proactive in tackling environmental and social issues.

What I find most inspiring about today's workshop is its title - 'Guardians of the Earth'. This beautifully captures the essence of responsibility in Islamic finance. It reminds us that Islamic finance is not just about financial transactions; it is rooted in a worldview (*tasawwur*) that carries moral and ethical obligations. When one subscribes to this worldview, one cannot claim to operate as an ordinary financial institution without social and environmental responsibility. Too often, Islamic financial institutions defend themselves by saying, 'We are banks, not charities.' But that argument contradicts the very foundation of Islamic finance, which demands alignment between faith, ethics, and economic action. Islamic finance, therefore, must embrace what I call '*Ihsani* Governance' — an approach that expands the notion of stakeholding beyond traditional boundaries, encompassing society, the environment, and future generations. This is what truly defines the role of Islamic finance as a guardian of the Earth.

The Justice cannot be complemented by just having the usual stakeholder, because that Islamic worldview, Guardian of Earth, we require that extended stakeholder considering everything that is around us as a stakeholder, and that's very much raised the institutional logic that I was trying to highlight earlier. The first part of institutional logic will be the value theory. What is your value theory? In other words, this pen in my hand, why is this 10-pounds sterling for instance? Identifying how we price this one because the story very much starts from there. And so, the value theory, when we look at the established notion through capitalism, is very much as long as I can exchange this pen in the market, that would determine the price for me.

However, the extended stakeholder theory was beyond the exchange theory, but the worldview direct to suggest that everything is valuable because Allah created it. And therefore, in our initial equation, we must consider all the stakeholders, including climate, and therefore the efficiency frontier through which Islamic finance is operating. Unfortunately, it's a terribly partial analysis of the issues. Therefore, it's not being able to respond to the problems that we have around us, and that extended stakeholder understanding required directly and equity frontier. It is linked to a long-term solution, but we have to put efforts with the leadership that we have in Malaysia in particular, and Malaysian stakeholders, regulative institutions, including SC Malaysia, is very much committed to develop new ideas.

I think that equity frontier is something that we have to bring on the table to be able to respond to the problems, including environment and climate and sustainable. And therefore, Islamic finance cannot just consider - we are unusual Islamic bank and financial institutions. Therefore, we are not necessarily there to respond to them.

And also, the *Maqasid al-Shariah* of course, the important part of the methodological framework. Why this *Ihsani* Governance or the extended stakeholder has to be considered, and how it can be considered that's important for us to consider. And on top of that, of course, an important part in the session title here - unlocking capital is very important, because it directly calls upon capital to take responsibility. And because when we look at the emerging narrative, the responsibility seems to be pushed on what you call here, Islamic social finance, what I call Islamic social welfare institutions, *waqf*, zakat, etc. So, it's very much the responsibility capitalist pushing or we as stakeholders, we are pushing the responsibility on the social finance, part of social welfare institution.

As the session title rightly points out, capital must take responsibility for the state of our planet. We need to examine how capital can be made accountable, or in his words, 'unloaded,' for the consequences it has helped create. Historically, as Tan Sri mentioned, carbon emissions carry a legacy, but the problem is not only historical. The shifts in global manufacturing and capital movement have deepened the environmental and social asymmetries we face today. Finance has created part of the climate problem - yet the solution must also come through finance. Therefore, capital must assume responsibility, whether voluntarily or through regulatory intervention, to correct this imbalance and contribute meaningfully to sustainable outcomes.

To support this point, recent findings from the OIC Member Countries, using data from the Notre Dame Global Adaptation Index, which measures climate vulnerability across six dimensions - food, water, health systems, ecosystems, habitat, and infrastructure. The data show that OIC countries, many of which are also Islamic finance markets, remain highly vulnerable and underprepared for climate risks compared to non-OIC countries. Whether low-, middle-, or upper-income, these nations largely fall within the 'red zone' of vulnerability and readiness. This underscores the urgency for Islamic finance systems within these regions to act not only as financiers but also as drivers of resilience and adaptation.

Given this context, Islamic finance offers a unique and essential opportunity space to address the climate crisis. Unlike conventional finance, responding to environmental and social challenges is not optional within the Islamic framework - it is a moral and structural obligation. The principles of *Maqasid al-Shariah* and stewardship (*amanah*) inherently require Islamic financial institutions to take an active role in mitigating harm and promoting justice. Therefore, Islamic finance must go beyond being an alternative system — it must be at the frontline of sustainable transformation, fulfilling its role as both a guardian of the Earth and a catalyst for responsible capital mobilisation.

And therefore, we have come up a number of policy responses, how we can deal with, of course, the legal and regulatory frameworks. Again, I cannot go into details, the report will be published soon. And product and market development, how climate risk related, sustainability related, product and market development have to be taken on the agenda as an innovative part of the process, capacity building, awareness and confidence. That's another important policy recommendation that we have to put on the table, which perhaps resembles what Paul as well mentioned here.

In the incentive mechanism, one of the incentives, as we discussed earlier, was the tax incentives. But the representative of the OIC member countries was very much disturbed by that, because it brings fiscal responsibilities. But on the other hand, there's a public good that has to be responded. There's a problem. Of course, there is a symmetry again, Pakistan is suffering but the United States is creating the problem. Regardless of that, there's a public concern here, the sustainability of lives, and therefore, in the end, through negotiation, I managed to get a temporary tax incentive into the policy document. At least that was the solution.

Thank you.

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RESPONDENT 2

BILAL PARVAIZ

Chief Executive Officer,
Standard Chartered Saadiq Bhd

I think we have heard strong insights from the policymakers and Professor Dr. Mehmet, so I will bring in a more practical perspective on what is happening in the financial system - particularly in supporting the climate finance agenda across Asia and ASEAN. My focus is on the innovative financial instruments that are emerging in the market, which demonstrate how blended finance structures can effectively unlock positive, not harmful, capital flows. These structures combine different sources of funding - from sovereigns, multilaterals, and commercial investors - and include risk coverage from insurers, as Paul mentioned earlier. This kind of blended model builds confidence for commercial capital participation, enabling investments that support climate adaptation and sustainable finance opportunities.

Despite current geopolitical headwinds and shifting global priorities, the overall trajectory of the sustainable finance market remains positive, particularly in Asia. A few years ago, Asia was largely following the sustainability movement led by Europe and the Americas, especially in terms of policy, incentives, and carbon frameworks. Europe, for example, is already moving ahead with mechanisms like carbon taxes and border adjustment policies. Yet, even as a latecomer, Asia continues to gain strong momentum in sustainable finance, with steady market growth driven by the rise of green bonds and green loans. These instruments represent the 'use of proceeds' model, where funds are directed towards specific climate-related projects such as electric vehicle (EV) infrastructure or solar energy farms.

In addition to pure green instruments, there is growing interest in sustainability-linked financing, which ties financial performance to sustainability outcomes. Unlike traditional green bonds that simply define how proceeds are used, these instruments integrate measurable sustainability objectives or targets directly into their structure. This makes them more complex, as they require robust frameworks and monitoring systems to ensure accountability. Nevertheless, the development of these instruments reflects the region's progress - showcasing how Asia is moving from policy following to active innovation in sustainable and climate-aligned finance.

Focusing specifically on ASEAN, with data also including Australia, we continue to see positive momentum in the region's sustainable finance market. The total market volume now stands at around half a trillion dollars, and year-to-date figures up to July show that this year will likely outperform the last, which is an encouraging trend. Within ASEAN's 9–10 markets, Malaysia plays an active role on the policy and regulatory front, while Singapore currently leads in issuances for both green and sustainability finance. From a product perspective, the ASEAN market is relatively balanced across green loans, sustainability bonds, and green bonds, each contributing significantly to the region's overall growth in sustainable finance.

Over the years, sustainable finance offerings have become mainstream, with most major banks now able to provide green and sustainability-linked products. This is a positive development, as the scale of financing needed in both emerging and developed markets is too large for any single bank to handle. A collective effort and collaboration across the banking sector are essential. In Standard Chartered's case, we have built capabilities in liquidity management, allowing both retail and corporate clients to invest in sustainable instruments and carbon trading. While Malaysia is still working towards implementing a carbon tax, the infrastructure for carbon trading already exists, enabling clients to offset emissions either due to regulatory requirements or voluntary commitments.

The expansion of sustainable finance continues to be driven by client demand and market opportunity, particularly in emerging markets across Asia, Africa, and the Middle East. Interestingly, as Professor Dr. Mehmet's slide highlighted, the OIC and Muslim-majority countries share similar challenges - a significant capital gap to fund climate and sustainability goals. Standard Chartered Saadiq's footprint covers around 70% of these markets, giving us direct exposure to the opportunities and challenges in these regions. The growth of sustainable finance also depends heavily on a robust and transparent framework, ensuring proper checks and balances. For us, that includes three key pillars: the Green and Sustainable Finance Product Framework, the Transition Finance Framework, and the Sustainability Bond Framework. All are externally verified, with Sustainalytics providing second-party opinions for bond issuances - reinforcing credibility and investor confidence in sustainable financing efforts.

The positive impact are in terms of the assets, about US$24 billion of assets generated, and we have been able to bring out the quantification in terms of the CO_2 safe, which is about 4.06 million tons, as well as the water supply, and also the growth of the portfolios is about 30% plus. Microfinance and supporting small SMEs links to both social framework as well as sustainable finance and the number there is about US$1million.

From a transaction perspective, I have a mix of both Malaysian and global cross border transactions. And here, would be some of the international transactions that have been done which sort of lead the way of what we can do in future in Malaysia.

From a transaction perspective, we have a mix of local Malaysian and cross-border international deals, each offering lessons for future sustainable financing opportunities in Malaysia. A notable local example is Sunway Group's Shariah-compliant Commodity Murabahah financing[23], which integrates ESG elements through performance-linked KPIs. These KPIs target waste reduction and carbon emission control, aligning financial performance with environmental and social impact goals. Two years ago, this structure would have been considered highly innovative, but today it has become standard practice, showing how rapidly sustainability-linked Islamic financing is maturing in Malaysia.

An interesting international example comes from the Bahamas, which implemented a swap-to-debt structure - a financing model where debt is exchanged for green conservation commitments.[24] Under this arrangement, the country received concessionary funding in return for pledges to improve marine and environmental conservation. What makes this transaction unique is the participation of both a development bank and an insurer, which helped build market confidence and attract private capital. Additionally, the deal included incentives linked to natural disasters and pandemics - meaning that if such events occur, the financing terms become even more concessionary. Overall, this innovative structure resulted in about US$500,000 in cost savings over time, showcasing how blended finance and risk-sharing mechanisms can deliver both environmental and financial resilience.

Moving quickly to the next example - Lesotho, a small high-altitude kingdom in South Africa with a population of about three million. The country has developed an innovative government-supported platform that attracts capital from both public and private investors. This capital is used for two key purposes: first, to build domestic renewable energy capacity to meet its own energy demand, and second, to export clean energy to the broader South African region. The approach is both strategic and sustainable - first ensuring national energy self-sufficiency, and then expanding to regional energy supply through green infrastructure.

Like the earlier examples, the Lesotho project is a strong illustration of blended finance in action, where public and private funding are combined to deliver high-impact outcomes. This model is precisely what we need to replicate in Malaysia to achieve the targets outlined under the National Energy Transition Roadmap (NETR) and the National Master Plan. These goals can only be realised through partnerships that include sovereign support, multilateral institutions, and commercial financiers. Initiatives such as Malaysia's Joint Committee on Climate Change (JC3) and the BPMB-led climate funding solutions mark an important first step in aligning public capital with private investment to drive sustainable energy and climate action.

[23] In October 2024, Sunway Group, through its treasury vehicle Sunway Treasury Sukuk Sdn Bhd, inked a landmark US$110 million (approx. RM470 million) sustainability-linked commodity Murabahah structured financing with Standard Chartered Saadiq Malaysia. This deal represents a major step in combining Shariah-compliant financing with Environmental, Social, and Governance (ESG) performance targets in Asia's real estate sector. – thestar.com.my.

[24] In November 2024, The Bahamas implemented a pioneering debt-for-nature conversion (or debt-for-ocean-conservation swap) in collaboration with Standard Chartered to fund marine conservation efforts. Standard Chartered acted as the sole lender and dealer manager, underwriting a new US$300 million loan. – www.iadb.org.

In closing, the message from my side is clear - while the government's climate and energy targets are ambitious and well-defined, achieving them requires collaborative effort. The private and commercial banking sector fully recognises its responsibility in supporting this transition. However, what is crucial now is stronger policy support and institutional backing from both governments and multilateral agencies to help unlock private capital. Such an enabling environment will be essential to channel investment into nascent green technologies and accelerate progress toward our shared sustainability objectives.

QUESTIONS & ANSWERS

QUESTION 1

Dato' Mohammad Faiz Azmi

First, I noticed that in all the presentations, no one mentioned the G word - Governance. I was in the Philippines recently, right in the middle of a demonstration, because the people believed that certain parties had stolen all the flood mitigation money. My thought is this - if we are doing projects of scale and significance, it doesn't really help if corruption or poor governance derails everything. That's why, at the ASEAN level, we are now asking the Philippines, as the incoming chair, to work with Asian Development Bank (ADB) to come up with an ASEAN Governance Standard — one that goes beyond individual countries. It should look at procurement policy, project monitoring, and reporting mechanisms, to make the process transparent and accountable. The idea is that any country seeking project funding must subscribe to this governance code. I actually borrowed this idea from Tan Sri Azman - your little Green Book, Blue Book[25]- but what we're proposing is to scale it up to the ASEAN level to support adaptation projects more effectively.

Second, I want to touch on the idea of first loss guarantees. Across the region, most governments are already heavily indebted or constrained in their ability to provide guarantees or contingencies. So, in the conventional finance world, insurance funds are created to underwrite certain risks within a project. My thought is, what if in the Islamic context, we created a takaful fund instead?

Imagine this - every ASEAN country contributes US$500 million, and then we get Bilal to help pitch to the GCC for an additional US$5 billion. That would create a regional takaful structure, perhaps based in Singapore and denominated in US dollars. Each country would participate both as an insured party and as a takaful member, giving them a vested interest to ensure that the claims remain low.

So, my question is this: Do you think such a model could work? The reality is that most of the money will have to come from outside our region, given the scale of need. But if we collaborate with the GCC or even Central Asian countries, it must reflect the essence of Islamic finance - and a takaful or mutuality-based structure seems to fit that philosophy. What are the pros and cons, or where do you see the challenges? Could this idea of mutuality be applied toward creating a regional Islamic insurance fund that supports climate and adaptation projects? Perhaps we can call it the Guardian Fund.

For instance, if there is a US$1 billion project in Vietnam, the fund could absorb part of the project risk — that's the blended finance element. We could

[25] GLC Transformation Programme was supported by 10 overarching themes of initiatives, commonly referred to as the Coloured Books – Blue Book, Green Book, Red Book, Yellow Book, Silver Book, GLIC M&M, Minda, Orange Book, Purple Book and White Book – Exhibit 4.3 GLC Transformation Programme Progress Review 2013.

also bring in philanthropists to help reduce costs, and in Muslim countries, perhaps even engage religious authorities managing zakat funds to contribute as a form of social gift toward these impactful projects.

A ANSWER 1

Paul Horrocks

I have seen many funds and facilities being established recently, and I think when you mutualise across countries, you essentially create a portfolio effect. That helps address currency-related challenges and improves the scale and diversification of the fund. The larger the fund, the greater its ability to attract institutional investors, and potentially even draw in multilateral sources like the Green Climate Fund or MIGA[26], whose AAA ratings can strengthen the fund's overall credit standing.

Participating countries can also contribute according to their own sovereign ratings, which further enhances the fund's credibility. If the fund itself is large enough, obtaining an independent rating would be advantageous, as it helps determine what types of projects and instruments can be supported.

In fact, we are already engaging with institutions like the Arab Fund for Economic and Social Development, which traditionally provides grants, but is now exploring mobilisation strategies similar to what you've described. For instance, we're currently developing a water project in Jordan that reflects this approach. So, the idea of establishing something at the ASEAN level, while incorporating an Islamic finance element, is very much in line with where global development finance is heading - blending mutualised risk-sharing mechanisms with mobilisation of diverse funding sources to support impactful projects.

Bilal Parvaiz

Chairman, I think your proposal is highly valid and very much aligned with what we've been discussing — to truly unlock capital, we need interventions of this nature. The most powerful aspect of your idea is the possibility of wrapping the proposed fund with a AAA-rated provider, which would immediately address one of the key requirements of major GCC investors.

At present, the ASEAN region is already attracting targeted investments from GCC countries. For example, ACWA Power has invested in Indonesia and signed MOUs with Malaysian GLCs, such as UEM. Both Malaysia and Indonesia, being active Islamic finance markets, are natural destinations for such investments, particularly in sustainability-focused projects.

If we can co-create a regional fund that connects ASEAN and GCC objectives, it could unlock up to ten times more capital than what's currently available. This would be crucial for projects that are only marginally bankable but have strong long-term potential. The real challenge isn't in financing large, investment-grade companies like PETRONAS or ExxonMobil—those will always attract funding. The challenge lies in mobilising capital for emerging, high-impact green projects that are still developing commercial viability. And I believe this kind of innovative, blended structure could serve as a critical stepping stone toward that goal.

[26] Multilateral Investment Guarantee Agency (MIGA), a member of the World Bank Group

Professor Dr. Mehmet Asutay
Indeed, governance is an essential part of this entire debate, and in our research and report, we have addressed this aspect quite extensively. Governance here is not just about corruption, but about the overall coordination and management of climate-related initiatives. When different agencies handle the same subject within their own jurisdictions, it often creates governance risks and leakages, which highlights the need for better inter-agency coordination and oversight.

A particular concern arises in Public-Private Partnerships (PPPs). Whether in the East or the West, including the UK, weak PPP governance can lead to significant welfare issues, undermining rather than serving the public interest (*maslahah*). For climate-related projects, this becomes even more critical. While PPPs and blended finance structures can help address climate risks, if poorly governed, they may create new problems instead of solving existing ones. Hence, strong governance mechanisms must be embedded to prevent unintended negative consequences.

As for takaful, I fully agree with the idea. It can serve as an important instrument to address climate risk through its principle of mutuality, which aligns perfectly with the 'Guardians of the Earth' philosophy. Takaful not only provides financial protection, but also a shared social responsibility framework, suitable for both climate and social welfare objectives. It has particular relevance in natural disaster preparedness, as highlighted in our study. However, a key challenge remains the low penetration of takaful and insurance in the Muslim world, even in the GCC countries. Malaysia is among the more advanced markets, but overall adoption remains limited. Therefore, expanding takaful as a mutual, climate-oriented mechanism could be a major step forward - contributing to product innovation, institutional development, and sustainability-focused financial solutions, even if it begins at a micro level to mitigate the climate risk consequences.

Tan Sri Azman Mokhtar
I just wanted to briefly respond to the Chairman's question — wearing a slightly different hat this time, since ACWA Power was mentioned. I've come out of semi-retirement to advise my old friend Mohammad Abunayyan, as the company has grown into a US$117 billion asset giant, adding 25 gigawatts of renewable capacity annually, and doubling in size every three years. With 44% ownership by Public Investment Fund of Saudi Arabia (PIF), ACWA Power is a major player. And these are not just MOUs - we have US$10 billion worth of committed projects, signed during the ASEAN-GCC Summit, pending regulatory approvals.

For years, Middle Eastern liquidity seemed like a mirage - it existed, but it wasn't flowing. This time, however, there are push factors driving Gulf funds to diversify globally, and pull factors in this region, given Asia's strong growth prospects, provided we get governance right. As Dato' Faiz knows, we've discussed the ASEAN Power Grid, a long-standing yet tangible project dating back decades. The vision is to connect this archipelago - linking Vietnam to Malaysia's east coast, and Sarawak to Peninsular Malaysia, potentially extending to Singapore. There are 18 identified projects, but we need new impetus and fresh capital. If multilateralism - through entities like the World Bank or ADB - is slowing, then perhaps China, via a more transparent and improved Belt and Road Initiative, and the Middle East, through PIF and others, could step up as partners.

On the takaful fund, I agree - mutuality is the core principle. The word takaful itself literally means mutual support. As I discussed with Iqbal Asaria, founder of the Globaltakaful Forum, mutualised insurance is already widespread elsewhere — about 40% of funds in Germany and 15% in the UK operate as mutuals. But in Malaysia, including Syarikat Takaful, the model is entirely shareholder-based, not mutualised. That's a structural issue. When you contribute to a true mutual fund, you're both an insured member and a shareholder. Reintroducing this mutual model could make the takaful concept more authentic and impactful.

Finally, I'd add that while co-investment funds can be useful, the real value lies in well-defined projects. The unit of production is the project, not the fund. If we can sharpen project design - for example, through the ASEAN Power Grid (APG) - size will naturally follow. The real economy must lead, and the financial structures can be designed to support that growth. I believe our region has the potential to achieve that balance.

QUESTION 2

Professor Dr. Engku Rabiah Adawiah Engku Ali

Thank you for the insightful presentations by the presenter as well as the respondents. I would like to just ask or gauge the view of the panel - whether it is feasible or attractive for something like a social-impact fund to fund climate projects with Pay-for-Success payment structure to the investor. Previously, it was used for social intervention, for social projects, but maybe it can be considered as another class of asset to be unlocked for the purpose of climate projects as well - the government who benefitted from the improvement in the climate would be paying to the investors based on the pay-for-success factor.

ANSWER 2

Paul Horrocks

The credit markets play an especially important role because they bring size and liquidity. However, when we look at smaller, more innovative projects — particularly across Sub-Saharan Africa and similar regions — these usually require equity financing, which is expensive and high-risk. It also demands more capital allocation on the balance sheet, making it challenging for international financial systems to support, even though such projects are exactly what we need to drive future development.

So, there's a clear tension between the need for scale and the need for equity. We keep talking about scaling up, but true innovation often starts small and equity-based — we somehow need to balance or 'square that circle' between the two.

And on the pay-for-success model — I think it's excellent and definitely something that should be included in future discussions, though so far, these initiatives have tended to remain small in scale.

Raja Amir Shah Raja Azwa

On the pay-for-success model - let me share from our experience at HSBC. When structuring these types of transactions, we've tried to move beyond relying solely on the obligor's creditworthiness as investor comfort. Instead, we explore whether asset managers would consider creating performance-based funds, where returns are tied to achieving specific success outcomes.

However, the challenge lies in deploying such capital. Despite formal commitments and frameworks like Article 9[27] in Europe, actually mobilising these funds is difficult. That said, there are small but promising examples, such as debt-for-nature swaps, where investors agree to forgo part of their principal in exchange for measurable environmental outcomes - similar to the structure Tan Sri Azman introduced in 2015.

Scaling this up remains tough because investors face fiduciary constraints and can't easily carve out portions of their portfolios for these models. Yet, greater partnership and participation by credit guarantors and sovereign players could unlock progress. For instance, Singapore's FAST-P infrastructure fund recently raised US$510 million, backed by a dollar-for-dollar commitment from the government. This approach — where governments seed and de-risk projects to attract commercial lenders and private capital — is a replicable model, potentially through mechanisms like the Climate Finance Innovation Lab (CFIL).

Ahmad Shahriman Mohd Shariff

Perhaps I'll take this from a slightly different angle. We've been trying to move away from the traditional limitations of banks, because once we start from a banking mindset, our approach naturally becomes debt-based and risk-averse.

One concept we've been exploring - though not yet successfully implemented is using the investment account framework to reposition the bank as a utility. In this model, we would act as a facilitator for investors or philanthropists who have the equity appetite or social aspirations, but lack the infrastructure or capacity to manage and monitor such projects. The bank, then, helps identify opportunities and channels their funds effectively.

While this is not an ideal or permanent solution, it represents a practical middle path. I agree with earlier points that, eventually, we'll need to create a new institutional vehicle - something between a bank and an asset manager that can take on higher-risk, impact-oriented investments more effectively.

QUESTION 3

Abdulkader Thomas

If you recall Bilal's presentation on the Bahamas transaction, it involved a 100% credit enhancement structured in three tranches - the first by the Inter-American Development Bank, the third by AXA Insurance, and the middle tranche funded by a family office.

I think what many of us are overlooking in this sector is the critical role of family offices. Interestingly, many of these investors - particularly in the West, though not necessarily Islamic, are genuinely interested in climate and sustainability-related projects. They are willing participants in both fund structures like the one discussed and in the credit enhancement of specific sustainability or adaptation projects.

This segment of investors represents a valuable, underutilised pool of capital that could significantly support and de-risk blended finance initiatives, bridging the gap between commercial investors and development financiers. Hence philanthropic capital - foundations and family offices has to have a fantastic role to actually unlock further capital.

[27] Article 9 funds under the Sustainable Finance Disclosure Regulation (SFDR), also known as 'dark green' funds. While these funds are intended to have explicit sustainable investment objectives, deploying capital through them has proven challenging, with only about 4% of SFDR funds classified as Article 9. – www.ey.com

ANSWER 3

Paul Horrocks

On philanthropy, we've seen major foundations like the Rockefeller Foundation and the Gates Foundation continue to drive much of this agenda, especially in North America, where the funding volumes are substantial. However, we're now also seeing smaller philanthropic initiatives emerging in Europe, particularly in Italy.

While these may not match the scale of North American funds, they play a crucial catalytic role. These impact investors often act as the first tranche of capital, willing to take on equity-like exposure and pilot new projects. By doing so, they de-risk early stages and pave the way for larger institutional and debt investors to come in later as the market matures.

Tan Sri Azman Mokhtar

The interesting trend I've noticed is that the younger generation - the new guardians of 'old money' are far more open to issues related to climate and the environment.

There's a clear intergenerational shift happening. As younger successors take over the management of wealth, especially within private family offices, they tend to be more conscious of sustainability and social impact. We're seeing this even here in Malaysia, where private sector capital is becoming increasingly attuned to climate concerns.

So, I think it's important to recognise that family office behaviour is not static - the younger generation is driving change, and that represents a promising trend for climate-aligned and responsible investing.

Tan Sri Wahid Omar

I've been reflecting on this topic of unlocking capital for climate projects, and I think it's important to divide it into two categories.

First, there are commercially viable projects - such as renewable energy initiatives that can generate a reasonable rate of return. If a project can achieve, say, a 7% IRR on debt and a 10–11% equity IRR, there's ample capital available globally and domestically to finance it. So, funding isn't really an issue for these bankable projects.

The real challenge lies with non-revenue-generating projects, such as those addressing climate-related disasters or community resilience. In these cases, philanthropic funding and innovative mechanisms like takaful-based models could play a key role. These could function as mutual funds or shareholder-contributed pools designed to compensate communities affected by climate impacts.

We already see similar approaches in wildlife conservation. For example, in tiger conservation, human-wildlife conflict is mitigated through insurance-type schemes, compensating farmers for livestock losses. This model, successfully applied in India and Nepal, could be scaled up and adapted for climate risk management, creating a practical financial safety net for vulnerable communities.

Dato' Mohammad Faiz Azmi

The thing about takaful, much like insurance, is that you don't need the money until you actually need it. Until then, it remains under the control of the takaful or capital providers, which makes it quite an attractive proposition. It's not about funding something and losing control of the money - instead, the fund continues to grow. If you start early enough, the returns can build up the pool.

For example, if we tell contributors that the expected return is 2%, and anything above that can be retained to build future funds, that could be a good way to attract participation. Now, taking up the Professor's earlier point about smaller projects, on 1st January, we're launching our social exchange - Azreen's leading that initiative. Initially, it will handle around RM30–50 million worth of charitable demand, providing a governance framework that reassures investors their contributions are secure. It's a proof of concept.

The next phase involves social impact companies, which are profit-generating but aligned with social goals, followed by a resilience phase. For instance, if Sekinchan floods and neither the federal nor state government can act immediately, the community could appeal for funding directly through the platform. This mobilises nationwide participation rather than relying solely on government aid.

Because, as Tan Sri mentioned, this challenge is bigger than government. Commercial projects will always attract financing - the real concern is with non-commercial ones, like building a seawall, which has no direct return. But interestingly, as the Singaporeans observed, the land behind seawalls increases in value due to protection. So now, in talks with the Selangor State, we're exploring whether the value uplift could partially fund the infrastructure through business rate adjustments.

These are the kinds of blended finance mechanisms we're beginning to explore. We may not urgently need them yet, but if we don't start developing these Islamic finance-based models, like takaful, now - by the time we do, it'll be too late to act.

Professor Dr. Mehmet Asutay
I completely support your enthusiasm for takaful. As a non-commercial entity, not just an instrument, it can address many of the criticisms raised against Islamic banking. It has the potential to achieve both social objectives and commercial returns, and in many cases, could serve the community better than Islamic banks in tackling issues like those we're discussing today.

In fact, even beyond climate discussions - for example, in the UK's exploration of Shariah-compliant student financing - we have proposed takaful as a viable model. This shows how vast and underutilised the potential of takaful really is.

However, I must point out a critical issue. While we aim to achieve climate risk sustainability, there is currently an overreliance on debt markets, which poses not only financial risks but also exacerbates the very sustainability problems we're trying to solve. Data shows that Islamic banks are already highly leveraged, with much of their financing going to consumer and financial market activities, and relying heavily on debt-based instruments like tawarruq - about 94% in Islamic money markets and 65% in Islamic banks. Using the same debt-heavy model to tackle climate risk could create more problems than solutions.

On another note, there's a huge untapped opportunity in family funds and charitable assets. Our research in Saudi Arabia found that family holding companies have vast amounts of money - often hundreds of millions parked in charitable funds, such as *waqf* - but with limited avenues for deployment. These families are not seeking high returns, but rather impact and purpose, yet lack the mechanisms to channel those funds effectively.

This presents a public policy opportunity. In countries like Malaysia, where zakat collection is centralised, a portion could be allocated toward climate-related initiatives. Although I generally oppose over-centralisation of zakat, in the context of climate risk and sustainability, directing these funds strategically could make a real difference. In other countries where zakat isn't centralised, governments can still design frameworks to integrate zakat into climate financing - tapping into an existing ethical financial ecosystem to serve a global need.

Closing Thoughts

Tan Sri Azman Mokhtar

This discussion has truly shown the richness of the Islamic finance tradition and its potential role as Guardians of the Earth. The key takeaway, for me, is that we must embrace the full spectrum of financial instruments - from takaful and philanthropic capital to blended finance. This is the true alchemy and magic of finance, where both Islamic and conventional ideas can be combined for greater impact.

Ultimately, this is a call to action. This session represents the moment where ideas meet implementation - where 'the tyre hits the road.' So, let's move forward together and make it happen.

Thank you once again to SC Malaysia and to all our speakers and participants. A round of applause to everyone.

KEY TAKEAWAYS

Stewardship and Justice must be the Organising Value

Climate finance is a moral responsibility - *amanah*, viceregency and inter-generational justice, and not just a technical problem. That ethical lens rooted in *Maqasid* and the 'Guardian of the Earth' framing demands that finance serve public goods, protect vulnerable communities, and avoid offloading harms to future generations. In practice, this means designing instruments and policies that balance mitigation and adaptation, prevent greenwashing, and embed distributive safeguards just-transition funds, targeted subsidies, social protection.

Strategic Blended Finance is the Practical Bridge

Blended finance was emphasised through guarantees, funded or unfunded wraps, concessional tranches and pay-for-success as the primary tool to mobilise private capital into marginally bankable adaptation projects. Examples cited in Bahamas conservation deal, Lesotho platform, sovereign sustainability-linked bonds that has shown how multilaterals, insurers (MIGA/IFC), philanthropies and family offices can de-risk investments so banks and asset managers will scale up. Crucially, blending must be targeted, time-bound and structured to mainstream adaptation and not just subsidise commercial bank behaviour.

Governance is the Non-Negotiable Enabler

Governance, procurement, project monitoring and transparency were singled out as prerequisites for large-scale finance. Proposals include ASEAN-level governance standards, robust procurement rules, registries and reporting frameworks hence donors, guarantors and investors can trust the pipeline. Without these guardrails, PPPs and pooled funds risk creating welfare losses rather than resilience gains.

Islamic Finance Tools Offer Distinct Comparative Advantages

Islamic instruments are not optional add-ons but central tools; takaful mutualisation for disaster risk pools, *waqf*, zakat and philanthropy fund were able to provide grant-like capital. Sukuk structures including green or impact variants and pay-for-success would be able to align returns with outcomes. The mutuality inherent in takaful and the stewardship ethos in Islamic Finance can mobilise new pools via family offices or endowments, and create culturally resonant blended models for OIC/ASEAN contexts provided structural and regulatory barriers of penetration, tax incentives and product innovation are addressed.

Scale, Standardisation, Data and Leadership Create Markets

Recurring practical prescription will be achieved by moving from one-off pilots to standardised high-quality pipelines so banks will progress to build teams and provide liquidity. To enable benchmarking and replication, sovereign leadership are required to provide seed capital, matching schemes, AAA credit enhancement where possible, utilisation of common taxonomies/KPIs and consistent adaptation datasets. Leadership from GLICs, corporates, micro-finance institutions, family offices and regulators is the catalyst that turns building blocks into sustained flows of capital.

PRESENTATION ON RESEARCH BY VISITING FELLOW

PRESENTER

Dr. Nur Ain Shahrier
SC-OCIS Scholar in Residence 2023/2024

Questions & Answers

PRESENTER

DR. NUR AIN SHAHRIER

SC-OCIS Scholar in Residence 2023/2024

My presentation today focuses on the 'G' in ESG is Governance, specifically Shariah Governance in Malaysian listed firms. The title of my study is ESG: G Means Shariah Governance - Whom You Know Versus What You Know in Malaysian Listed Firms.

Originally, my research aimed to map ESG and *Maqasid al-Shariah*, but halfway through, I found that INCEIF had already published a similar framework. To avoid redundancy, I decided to refocus the research. Given the availability of rich data on boards of directors, I shifted my study toward exploring governance networks and interconnections among directors in Malaysian listed companies.

Concept of Interlocking Directors & Firms and Small World Theory

Before proceeding further, let me explain some key concepts for clarity. The first is the idea of interlocking directors, which occurs when two or more individuals sit together on the same company's board. The second is interlocking firms, where one director serves on the boards of multiple companies, creating a web of connections between those firms. My study looks at both types of interlocks - among directors and among firms - to understand how these relationships influence corporate governance and Shariah compliance.

Another concept I apply is the Small World Phenomenon or Small World Theory, which suggests that any two people in the world are connected through fewer than six intermediaries. In this context, it implies that the network of directors in Malaysia is highly interconnected, where individuals are often linked within a few degrees of separation. This interconnectedness shapes how influence, information, and governance practices circulate within and across Shariah and non-Shariah listed firms.

Concept Illustration

To illustrate the concept, imagine Vernon, who sits as a director on the board of Sara Lee, and Rozanne, who also serves as a director on the same board. This forms an interlock of directors, since both individuals serve on the same company's board. Now, if Sara Lee shares one or more board members with another company, say Manpower, this creates an interlock of firms. In this case, Sara Lee and Manpower are connected through shared directors. Some firms, such as Citigroup, demonstrate a high degree of connectedness, being linked to many other companies - and not just any companies, but influential ones. Similarly, JP Morgan Chase is connected to various firms through its board of directors, representing what is called a first-degree link in the network.

The motivation for this study stems from the critical role of the Board of Directors in overseeing major corporate decisions. In many countries, board members are often political appointees, and in Malaysia - with its dual capital market structure of Shariah and non-Shariah listed firms - this introduces both religious and political dimensions to governance. The study therefore explores how interlocking directorships, where directors sit on multiple boards, might influence corporate performance.

The key research questions are whether there is evidence of a small-world phenomenon within Malaysia's corporate board and director networks, and what impact interlocking boards and director networks have on firm performance. The study applies social network analysis alongside panel data regressions to investigate these questions.

The theoretical foundation of network analysis dates back to Erdos and Renyi (1959), later expanded by De Sola Pool and Kochen (1978), who showed that any two individuals in a society are connected through a short chain of intermediaries. Four major theories underpin this research. Class Hegemony Theory suggests that board appointments often reflect social hierarchies, favoring dominant groups in society. Reciprocity Theory and Resource-Based Theory argue that social connections improve performance by reducing external uncertainty and strengthening supply chain relationships. In contrast, Agency Theory warns that directors serving on multiple boards may face conflicts of interest and limited capacity to effectively monitor all the companies they oversee.

Later in the year, I discovered that a similar study on social connections among Malaysian public listed firms had already been conducted by Simon Johnson, a Nobel laureate and former Chief Economist at the International Monetary Fund (IMF), in 2005. His work examined networks of firms in Malaysia, whereas my research focuses on networks of board directors. Interestingly, my study turned out to be an extension of his earlier work, though from a different perspective, since I was analysing board-level relationships rather than inter-firm connections.

Objective of the Study

The objective of my study is twofold: first, to investigate the existence of the Small World Phenomenon among board and director networks within Shariah and non-Shariah companies in Malaysia; and second, to examine the impact of social network properties on firm performance. I compiled data on approximately 6,400 board directors from Malaysian public listed companies, divided into networks of directors and networks of firms. Using Social Network Analysis, I applied the Watts–Strogatz model to test for the presence of a Small World Phenomenon and then conducted panel data regressions to assess how these network characteristics influence corporate performance.

Data and Methodology

In terms of data and methodology, the study covers 1,192 companies listed on the Kuala Lumpur Stock Exchange, comprising 902 Shariah-compliant and 200 non-Shariah companies, observed over the period 2014 to 2018. The analysis ends in 2018 to account for possible shifts in board composition following the change of government that year. In total, data were collected for 6,382 directors.

The Social Network Analysis focused on four key network indicators:

- Degree Centrality – measures how many firms are directly connected to one another.
- Betweenness Centrality – examines whether firms that act as intermediaries between others improve their performance.
- Closeness Centrality – assesses how quickly a firm can access information within the network.
- Eigenvector Centrality – evaluates whether a firm is connected to other influential or important firms.

These indicators were incorporated into the panel data regression model to determine which network characteristics most positively influence firm performance.

Results & Findings

This study involved a full panel data regression analysis on both Shariah and non-Shariah companies in Malaysia. The results showed clear evidence of the Small World Phenomenon across both types of firms, with an average connection path of six, meaning that any two individuals are linked through, on average, four intermediaries - consistent with the ‘six degrees of separation’ concept.

When the Panel Random Effects model was applied to Shariah companies, the findings revealed that Closeness Centrality - which measures how quickly a firm can access information - had a positive and statistically significant impact on Return on Equity (ROE). In contrast, Betweenness Centrality, which captures a firm’s role as an intermediary between other firms, showed a negative impact on performance. Degree Centrality, representing how many connections a firm has, was found to be insignificant for Shariah firms.

For non-Shariah companies, the results were slightly different. Degree Centrality, or the number of interlocking board memberships a company has, demonstrated a negative relationship with ROE, suggesting that excessive interlocking may harm firm performance.

The data set consisted of 6,383 directors across 1,200 firms, including around 5,000 Shariah-compliant and 1,005 non-Shariah companies. Using Social Network Analysis, network graphs were created to visualise the connections between directors and firms. Larger nodes represented key players with greater connectivity. The analysis also identified significant firms and influential directors that acted as brokers or were highly connected to other important individuals within the network.

The Watts–Strogatz statistics confirmed that the Small World Phenomenon exists among Malaysian public listed companies, both Shariah and non-Shariah. The results showed that for Shariah companies, Closeness Centrality (speed of information flow) positively influenced ROE and net income, indicating that faster access to information improves performance. However, Betweenness Centrality (intermediary role) negatively affected performance, implying that acting as a broker between firms does not necessarily create value.

In contrast, for non-Shariah companies, Degree Centrality (number of board memberships) had a negative effect on ROE. This supports Agency Theory, which suggests that directors sitting on multiple boards may face conflicts of interest and have limited time to effectively oversee all firms.

Conclusion

In conclusion, the study found that both Shariah and non-Shariah companies exhibit Small World characteristics, but their success drivers differ. For Shariah firms, the key factor is efficient information flow, while for non-Shariah firms, excessive interlocking weakens performance. Therefore, the study recommends that policy measures limit the number of interlocking directorships and promote closer monitoring to reduce information asymmetry and potential governance risks.

QUESTIONS & ANSWERS

QUESTION 1

Dato' Mohammad Faiz Azmi

When was the data cut off? Are you suggesting that I shouldn't let directors sit on five boards and I should only let them only sit on one so they don't interact or interlock with anyone?

You see the mere fact that I sit on two boards, you already presume that I'm somehow sharing information? But we're not supposed to pass the information. That's my point. Everything discussed on one board is confidential to another board.

There seemed to be a few presumptions within the study. One, of course, is the link between boards. The second is that we're all gossips who share information about what we do on other boards. Is that a fair hypothesis? Because some of the names there - I can't even get his birthday date, let alone anything out of him. So, I'm not so sure that they're that chatty. But anyway, I'm very impressed with the math.

ANSWER 1

Dr. Nur Ain Shahrier

The data used in this study was collected up to 2018, as that was the year of a change in the political administration, which could have influenced the composition of corporate boards. Interestingly, this research builds on the work of Nobel Laureate Simon Johnson, who, as the former Chief Economist of the IMF, studied social networks among Malaysian firms and published his findings in 2005.

In this study, the concept of the small world phenomenon remains relevant. Having directors sit on up to five boards is still considered acceptable, as it reflects the natural interconnectivity within corporate networks. However, beyond that, the connections may become excessive.

The findings also indicate that simply sitting on multiple boards does not automatically lead to positive outcomes. If directors do not share or pass information between boards, the interlocking relationship alone does not significantly influence firm performance.

QUESTION 2

Professor Dr. Mehmet Asutay

That was a very interesting presentation. I'm not sure if you're familiar with Murat Unal's work on Shariah scholars - he used network analysis to examine their relationships. In his first paper, he looked at how Shariah scholars are interconnected and how some of them monopolise board positions. In his second, he explored how such networks can create potential risks or threats.

Building on that, I wanted to draw your attention to an important point — the different dynamics between Shariah and non-Shariah companies. What drives this difference? Is it structural rather than behavioral? There's a compelling story there worth exploring.

From your network analysis, the graph clearly shows that Shariah-compliant companies are more concentrated and closely linked, even though there are around 900 of them.

Meanwhile, the non-Shariah companies appear more loosely connected. So, the key insight may not just be in the econometrics or the economic interpretation, but rather in understanding why these two networks behave differently. That behavioral distinction could be the most exciting part of your study.

A ANSWER 2

Dr. Nur Ain Shahrier

It could be due to the number and nature of the firms. Around three-quarters of the sample consists of Shariah-compliant companies, while the non-Shariah group is mostly dominated by large conglomerates such as Ranhill, which operates multiple subsidiaries like Ranhill Energy and Ranhill Construction.

Given that there are over 900 Shariah-compliant firms, their larger representation may explain the denser network connections.

In the draft paper, we included company profiles for the top 20 firms based on degree and betweenness centrality, which help illustrate these dynamics. The only question now is how much of these insights we can disclose or interpret in the final version.

Q QUESTION 3

Dato Dr. Nik Ramlah Mahmood

I share the same concerns of Professor Dr. Mehmet because your classification between Shariah and non-Shariah companies, unless you're talking about takaful or Islamic banks, the choice of being Shariah compliant company is not the companies. It's based on skin screening by the SC, you know. So as far as the company is concerned, this is how they conduct their business, because of ratios and all that, some are compliant, some are not. So, I do not know to what extent that distinction can be used.

A ANSWER 3

Dr. Nur Ain Shahrier

I don't mean the distinction is just that we run the similar regressions variables on both. It's just to show that in this set of regressions - close the centrality - how fast the information passed to you is the most significant one.

Q QUESTION 4

Tan Sri Azman Mokhtar

Can I share a few perspectives? First, your dataset ends in 2018 - I remember that period as I was still working then. I noticed that among the companies cited, only Malaysia Airlines appeared as a government-linked company. You may recall we had the Green Book on governance, which limited board memberships to about five, including unlisted firms - relatively low compared to some private sector players who hold multiple seats.

I'm also curious - if you were to run this study in other countries, would you find similar results? The concepts of centrality and networks are not unique to Malaysia; they exist everywhere. But more importantly, I wonder - is your research suggesting that these networks are good or bad? Is it about 'know-who' versus 'know-how'?

If I may refer to Ibn Khaldun's concept of *asabiyyah* - social solidarity or social capital - there's both good and bad *asabiyyah*. Conflicts of interest aren't necessarily wrong; they just need to be managed through disclosure and governance. When harnessed properly, social capital and networks can drive positive collaboration and even social movements. But, of course, if misused, they can lead to issues like insider trading.

So, I think it's important we don't interpret your findings as purely negative. Those with expertise and strong networks are often in demand because they bring value — it's about what they know and how they contribute. Having connections or lineage is not inherently wrong; the key is balance. We shouldn't let excessive compliance overshadow performance.

A ANSWER 4

Dr. Nur Ain Shahrier

So key point is that it's not like so much whom you know. It's more about what you know that has the positive impact on the ROE and the net income.

My final say is that if SC can share the data - because when I checked - they said I have to dig out the archive if I wanted to see whether this finding here is still valid - if I look under the new governments from 2018 to 2025. I have to look at the archive - and I have to manually dig out the data. So, taking this opportunity, I would appreciate if you can kindly share available information.

Closing Note

Sharifatul Hanizah Said Ali

Taking this opportunity, I'd like to address the data and data architecture issue — it's something we plan to tackle very soon. On that note, I'll need to close this session and move on to the next session.

Thank you, Dr. Ain, for the insightful presentation. I also acknowledge that many of the questions raised, especially those from Tan Sri, show that this topic deserves a deeper, more critical discussion. Typically, SIR Scholar sessions are meant to be challenge sessions rather than interactive panels.

So perhaps next time, we should label this as a Challenge Session instead of just a scholar presentation. That would better reflect its nature as applied research — where diverse perspectives and constructive debate are part of the process. Thank you again, Dr. Ain. Going forward, we'll structure it as a Challenge Session.

SESSION 3: CONCLUSION & RECOMMENDATIONS

CHAIR

Dr. Basil Mustafa
Board of Trustees,
Former Nelson Mandela Fellow, Oxford Centre for Islamic Studies

RAPPORTEUR 1

Azreen Idayu Zainal
General Manager,
Office of Chief Sustainability Officer,
Securities Commission Malaysia

RAPPORTEUR 2

Siti Rosina Attaullah
Deputy Director,
Islamic Finance Department,
Bank Negara Malaysia

Extra Observations

CHAIR

DR. BASIL MUSTAFA
Board of Trustees,
Former Nelson Mandela Fellow,
Oxford Centre for Islamic Studies

Thank you very much. It's a pleasure to be back at this esteemed forum.

We will now move to the rapporteur session. I would like to invite our two rapporteurs - Azreen Zainal and Siti Rosina Attaullah to present their reports, keeping them within ten minutes.

After that, I'll invite the presenters to share any final thoughts or additions they may wish to make. Once that's done, we'll open the floor for comments and suggestions as part of our conclusion and recommendation session.

With that, I'll set aside my prepared remarks and invite our first rapporteur to begin. Thank you.

RAPPORTEUR 1

AZREEN IDAYU ZAINAL

General Manager,
Office of Chief Sustainability Officer,
Securities Commission Malaysia

The first session, 'Ethical and Effective: Redefining Climate Policy for the Financial Sector,' opened with Chairperson Datin Seri Sunita, sharing her perspectives on the crucial role of climate policy in shaping the financial landscape. She emphasised that boards, management, and businesses must look beyond profit-making to integrate sustainability into decision-making. Datin Seri stressed the importance of future-proofing the capital market, ensuring that financial institutions are resilient in the face of climate-related risks and are equipped to support sustainable growth.

The session presenter, Dr. Renard, provided a strong framing for the discussion on redefining climate policy for the financial sector. He highlighted the importance of climate policy by identifying its key drivers and explaining how it has continued to evolve amid rapid global developments. Dr. Renard traced the evolution of investor behavior over the decades - from reactive responses to environmental issues to a more proactive stance that helps establish standards and 'guardrails' for sustainable and responsible investment. His presentation positioned climate policy as both an ethical and strategic imperative for the financial sector.

Renard then outlined the building blocks necessary to advance climate policies and initiatives in Malaysia at both the federal and state levels. He noted that carbon pricing could serve as a crucial enabler for Malaysia's transition toward a low-carbon economy. In addition, he discussed several policy tensions that shape the climate framework, including the balance between voluntary and mandatory measures, flexibility versus enforceability, and short-term versus long-term policy goals. He also touched on the readiness of entities to comply with these evolving requirements and the need to design policies that are both ambitious and practical.

Renard emphasised the need for ethical guardrails to guide effective climate policy. Among these were intergenerational fairness - ensuring that today's policies do not become tomorrow's burden - and equitable distributional impacts, where policies should safeguard the interests of SMEs and local communities. He also underscored the importance of integrity and trust, warning against the risk of greenwashing and calling for greater transparency in environmental claims and financing.

He further elaborated on the development of carbon markets, both globally and regionally, positioning them as a critical financial mechanism for facilitating the transition to a net-zero economy. Renard noted that while carbon markets alone cannot close the global financing gap, they serve as an essential tool to effectively price carbon emissions and drive accountability. He concluded that without a functioning carbon market, achieving net-zero emissions would be nearly impossible.

The first respondent, Professor Dato' Dr. Ashraf, provided a Shariah perspective, aligning the discussion with *Maqasid al-Shariah* (the objectives of Islamic law). He affirmed that the presentation was broadly consistent with Shariah principles, provided that it fulfilled five key objectives - namely, the protection of life, wealth, and posterity, as well as recognition of humanity's role as *Khalifah* (steward) of the Earth. Professor Dato' Dr. Ashraf explained that carbon markets could be deemed Shariah-compliant if they avoid harm (*darar*) and uncertainty (*gharar*). He also emphasised the importance of distributive justice, ensuring fair treatment and protection for vulnerable communities affected by climate policies.

Professor Dato' Dr. Ashraf further highlighted the need to uphold trust, truthfulness, and intergenerational justice, urging policymakers to avoid financing assets that may harm future generations. He closed with a reminder that while collective efforts are essential, meaningful change also requires individual responsibility, encouraging everyone to reflect on what more they can contribute to sustainability.

The second respondent, Nik Shahrizal, focused on the implementation of the National Sustainability Reporting Framework (NSRF). He stressed the need to build specialised expertise in sustainability, address economic inequality, and ensure that vulnerable communities are not disproportionately impacted by climate transitions. He also argued for mandatory sustainability requirements, expressing the view that regulation, rather than voluntary commitments, is necessary to drive behavioural change and meaningful progress.

During the Q&A session, several key takeaways and recommendations emerged. Regulators shared plans to classify carbon as a regulated asset, which would accelerate the creation and development of a robust carbon market ecosystem — including the establishment of standards, verifiers, and other necessary enablers. Participants also discussed the need to increase green and sustainability sukuk issuances to finance environmental projects. A debate emerged around whether to rely on incentives (carrots) or introduce mandatory measures (sticks) to shift corporate behaviour and promote more green issuances.

Further discussions focused on the smooth implementation of the NSRF, the role of artificial intelligence (AI) in managing environmental risks, and the broader need for bold leadership to take decisive action, as highlighted by Tan Sri. The session concluded with a strong call to unlock philanthropic capital and foster innovation to accelerate sustainable finance and climate action in Malaysia. With that, I conclude my summary.

RAPPORTEUR 2

SITI ROSINA ATTAULLAH

Deputy Director,
Islamic Finance Department,
Bank Negara Malaysia

I believed that our moderator Tan Sri Azman would normally have a handwritten mind map to prepare for his speaking session. Therefore, I prepared this digitally drawn mind map to help capture our key takeaways for the session, Tan Sri.

So for Session Two, the problem statement focused on how to unlock the mobilisation of private finance and crowd in private capital for climate adaptation. Tan Sri Azman opened the session with an analogy of building a house for actions, which framed the discussion around investing in resilience. He outlined the key questions that the session aims to answer: what finance can do, perspective of justice as Guardians of Earth, how do we navigate the geopolitical and investment challenges that we face today, and stewardship - how do we invest and act on this purpose.

The speaker, Paul introduced the Climate Adaptation Investment Framework, which was designed to enhance investment in climate adaptation and in strengthening the ecosystem. Continuing with the house-building analogy from our moderator, Tan Sri highlighted the key instruments that needed to be factored in, namely regulatory alignment, insurance and risk transfer mechanisms, sustainability finance tools such as taxonomy and providing the right incentive to spur and grow private investments. As we operate in a dynamic investment landscape and market realities, Paul also outlined key actions that could support deployment of blended finance, including the integration of adaptation goals, undertaking regular assessments for the need of concessional finance, and exploring the use of guarantees and the de-risking components.

In improving this investment process, Paul suggested a step-by-step approach to deploying effective blended finance for adaptation. More importantly, he shared insights on how best to implement adaptation checks to ensure blended finance is deployed effectively. He drew from his experience in Kenya, where bond issuance was structured to incorporate social and climate considerations while also taking investors' consideration into account.

Professor Dr. Mehmet then raised the importance of finance responding to climate needs. He emphasised that responsibility and accountability must be reflected in actions that align with our worldviews on societal values and justice, requiring shareholders to play an extended role. This will be part of the equation in our value theory - and hence Islamic finance guided by *Maqasid al-Shariah* must consider climate element in our decision making.

Professor Dr. Mehmet also shared his work comparing OIC and non-OIC countries, highlighting how OIC countries called for more action-oriented approaches to managing vulnerability and readiness factors related to climate and adaptation implementation. He noted that elements such as agenda alignment, capacity building, awareness, incentive mechanism, market infrastructure, and impact monitoring must be addressed to refine our action equation.

Bilal then brought in the practitioner's perspective. He shared the growing numbers of sustainable finance initiatives, which were on a positive trajectory, including promising trends in Asia. He noted that demand, particularly to support the emerging market needs, was a key driver. He also confirmed earlier discussions that ecosystem enablers – such as sustainability frameworks, regulatory clarity and impact reporting are important part of this journey.

The session then evolved into an important dimension on governance, where the SC Chairman emphasised the 'G' (governance) in ESG - as a critical code to unlock capital mobilisation. Professor Dr. Mehmet reaffirmed the importance of governance in project implementation as based on various experience in PPPs. He noted that inadequate management of impact measurement and governance would have consequence for scaling up and sustaining momentum in PPPs. Tan Sri Azman also emphasised this point, highlighting that governance plays an important role in this process based on his past and recent experiences in the investment world.

Another area of action identified was the exploration of the feasibility of establishing a takaful fund to support the climate investment needs. The nature of mutuality of takaful aligns well with the collective goal of being Guardians of the Earth among key stakeholders. Another action raised by many practitioners was the need to anchor and expand the asset classes required for the climate resilience. Practitioners in the room provided examples such as social funds as possible asset class for climate project based on pay-for-success models, the role of family offices, convertible grants, equity structures, *waqf* structure and mobilisation of investment accounts in this journey.

In conclusion, the session reinforced that to elevate the role of finance in climate resilience, we must turn the tide in time, as emphasised by His Royal Highness earlier in the day. Inshallah, realising these actions outlined in this session would reflect our responsibility as Guardians of the Earth. Thank You.

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EXTRA OBSERVATIONS

Dr. Basil Mustafa

Thank you for your reports - capturing and summarising these points in a meaningful way is a skillful talent, and we do appreciate that. Thank you. Now, I would like to open the floor for further comments or clarifications from the speakers or the respondents as well in both sessions.

We still have a bit of time, so let me share a brief update. I'm pleased to announce that the SC–OCIS Fellowship for the next academic year (2025–2026) has been finalised. The selection process has been completed, and the scholar chosen for the fellowship will be continuing research on the theme of climate action.

If I may provide a little more detail — the fellowship was awarded to Dr. Nazrul Hazizi Noordin, who will be working on the topic 'Bridging the Climate Finance Gap for MSMEs in Malaysia: A Framework for Unlocking the Potential of the Islamic Capital Market.'

This research continues directly from the theme of this conference, reinforcing our collective commitment to advancing knowledge and action in this area. I'm very pleased that this decision was reached about three or four months ago, as it reflects the continued strength, relevance, and potential of this fellowship scheme.

Paul Horrocks

Thank you, and I just want to say - that was an excellent summary. You did a stellar job, far better than I could have done, so congratulations.

Just to add one point, echoing what the Chairman mentioned earlier - we should try to capture the importance of data and transparency in this discussion. He gave an example about the sea wall project, but it could apply to any similar initiative, such as a drainage or flood mitigation project.

The key idea is to capture and quantify the value that such an asset creates - not only for the state and private sector, but also in understanding how the asset, once developed by the sovereign or federal government, generates wider economic benefits.

Doing so helps to build a better understanding of asset classes and their associated benefits, while also providing benchmarks for future projects. More importantly, it gives valuable insight into pricing structures and helps improve how we design and benchmark blended finance models going forward.

Tan Sri Azman Mokhtar

I thought Tan Sri Wahid's framing, which was echoed by the Chairman, of distinguishing between commercially viable and non-commercially viable projects, is a very useful one, especially in the context of financing climate-related solutions. Clearly, the commercially viable projects can attract financing more easily and don't require as much support. The real challenge lies in the grey area, where projects are not fully commercially viable but have significant social or environmental value.

This is where the power of finance truly comes in - the ability to slice, dice, and blend different forms of capital through good financial innovation. In theory, Islamic finance is well positioned to play a leading role here, as its principles naturally encourage risk-sharing and ethical investment structures.

Earlier in the morning, I also wanted to re-emphasise the Chairman's observation on the potential of equity-based financing as a purer form of risk-sharing, compared to the more common use of credit instruments, which primarily facilitate risk transfer. This connects well to Professor Dr. Mehmet's point about rethinking our reliance on debt-like instruments.

Ultimately, the key is to make full use of the entire capital spectrum - from equity to philanthropic capital - and to integrate them creatively within Islamic finance frameworks. That, I believe, sits at the very heart of what we've discussed today. Thank you.

Dato' Mohammad Faiz Azmi
I would like to thank everyone for coming and sharing their ideas. As I said - we're at this interesting inflection point where we do need to kind of think of new ideas, but in a different context and for a different purpose. To me, I'm very focused on transition, adaptation and resilience - and I do see that there is a role for Islamic finance, because what can be a better purpose than saving the planet. So, thank you all for participating.

CLOSING REMARKS

SHARIFATUL HANIZAH SAID ALI

Executive Director,
Securities Commission Malaysia

Thank you, everyone. I think we can all agree that today has been an incredibly rich and thought-provoking day. There were many good insights and meaningful discussions throughout the sessions. A very special thanks to all our presenters and speakers for keeping the conversations engaging, insightful, and deeply relevant.

Now, I promise I'm not trying to push a Marvel theme too far - but as Chairman, and as HRH also noted earlier, this year's theme does sound a bit like a Marvel movie. Whether that was intentional or not, it does remind us that guardianship is collective. That's precisely why we felt the title was so fitting. In finance, we often say we hold power - the power to influence where capital flows, what gets built, and how societies thrive. But as the famous Spider-Man quote goes, "With great power comes great responsibility."

So, allow me to pepper in two Marvel references - one of them, as I mentioned, is from Spider-Man, reminding us that power must always come with accountability. The other is from Thanos — the super-villain who, in his twisted way, believed that by accelerating destruction, he was helping the universe. His thinking is a stark reminder of what happens when power is exercised without moral grounding.

Last year, our Roundtable explored finance through the lens of humanity. This year, we shifted to finance through the lens of Maqasid and climate action. I knew from the start it would be a challenging topic -

especially when presenting it to my Chairman, who knows this area far better than I do. Climate change, as we all know, is vast, complex, and technical. In contrast, *Maqasid al-Shariah* is driven by morals, principles, and values. The question then becomes - how do we bring these two worlds together? How do we merge ethics with market practice?

That's why today's diversity of perspectives was so valuable. We wanted to move beyond a theoretical discourse and instead listen to the voices of regulators, market participants, scholars, and advisors. And through this, I think a shared vision emerged - one that reflects why this year's theme truly matters.

If I may recap a few takeaways:

We need to take *Maqasid al-Shariah* beyond being a moral compass and make it a market practice - embedded into our DNA. Stewardship is not just a principle; it's a design challenge. That's why we brought in architects — to help us think about how we can translate aspirations into concrete actions: protecting communities, preserving ecosystems, and humanising finance. If we are truly guided by Maqasid, we don't need incentives to do what's right. It becomes the natural first choice. Still, to achieve adoption at scale, it must also make business sense and that balance between ethics and economics is the real challenge.

Developing policies that are both ethical and effective is not easy. As my Chairman often reminds me, climate policy sits at the intersection of competing tensions: flexibility versus enforceability, voluntary versus mandatory, short-term versus long-term, and of course, intergenerational fairness. In Islamic finance, some argue that pricing pressures limit innovation, while regulators must come up with targeted interventions. But as we heard today - nothing is more Islamic than investing in productive enterprises. With two-thirds of our market already Islamic, we are making progress.

We've also just launched the Social Exchange Guidelines, and as announced by our Chairman, we'll be launching the Social Exchange Platform soon. This will open up immense potential to mobilise philanthropic and institutional capital. As Dato' Izlan mentioned, institutions will have a crucial role to play in driving leadership and shaping market patterns. We know we need capital for adaptation, not just mitigation. The challenge is making adaptation projects bankable and investable. As Professor Dr. Mehmet and Tan Sri Azman noted, it's a catch-22 - even though finance has contributed to the problem, it is also part of the solution.

We've heard fascinating ideas today - from leveraging takaful and family offices, to exploring new asset classes and innovative structures to crowd in capital. Much has been achieved, but much more remains to be done. There are still gaps and opportunities, but none of us can do this alone. Boards, managers, investors, regulators, and Shariah advisors - everyone has a role to play. Each of us must answer the call to action and take the next step forward.

So, what's next? Some of the most meaningful outcomes of past Roundtables have led to regulatory interventions, but these take time - often years. Unfortunately, time is not on our side. That's why our conversations must continue - this cannot be where it ends.

You've heard our Chairman talk about the upcoming Capital Market Master Plan 4 (CMP4), where sustainability and Islamic capital are key strategic pillars. The challenge now isn't a lack of ideas - it's translating those ideas into practical steps that build confidence and demonstrate credibility.

So, the call to all of us is this: within our own mandates, let's take the next step - whether it's refining disclosures, structuring pilot transactions, or reassessing investment mandates. Each of us, in our own spheres, must commit to moving forward together.

Before I end, let me leave you with two parting thoughts - one from Iron Man and one from a Hadith. Iron Man once said, "It's not about how much we have lost; it's about how much we have left." And the Prophet (peace be upon him) reminded us: "The wealth of the son of Adam is only what he has eaten and consumed, what he has worn and used, or what he has given in charity and sent forward. Whatever is beyond that is left for others."

These remind us that our true needs are limited, our resources are sufficient, and excess belongs to the next generation. Everything we take must consider its impact on those who come after us. Planning wisely is, in itself, a sacred trust — one that safeguards both our welfare and that of future generations.

So, before I close, I want to once again thank all our speakers, respondents, and participants for their candour, intellect, and sharing. The conversations we've had today will shape tomorrow's work — moving us from aspiration to implementation, and from principle to practice.

We began the day with many icons, and we end with another - Dato' Dr. Ken Yeang, an icon of eco-architecture whose lifetime work and contributions are truly inspirational. We'll be sharing his slides and details later for everyone's reference - because no summary can do justice to what he's achieved.

Thank you all once again. To those travelling, I wish you safe journeys, and I hope to see everyone again at our next gathering, Insha'Allah.

SPEAKER PROFILES

HRH SULTAN NAZRIN MUIZZUDDIN SHAH

Sultan of Perak, Malaysia
Royal Patron for Malaysia's Islamic Finance Initiative

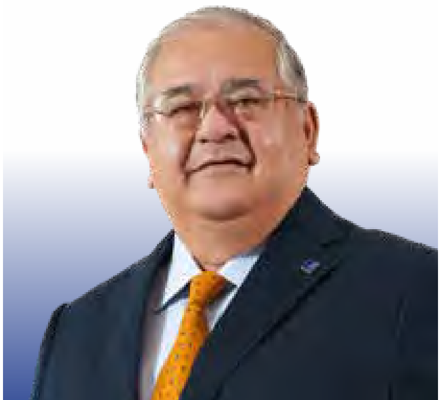
His Royal Highness Sultan Nazrin Shah is the Ruler of Perak and the Deputy King of Malaysia.

He has served as the Financial Ambassador for the Malaysian International Financial Centre (MIFC) and is the Royal Patron for Malaysia's Islamic Finance Initiative.

He is Chancellor of the University of Malaya; Honorary Fellow of Worcester College, Oxford, and of Magdalene College and St Edmund's College, Cambridge; Vice-Chair of the Board of Trustees, Oxford Centre for Islamic Studies; Royal Fellow of the Institute of Strategic and International Studies, Malaysia; and Royal Fellow of the Malaysian Institute of Defense and Security. He has served as Malaysia's Special Envoy for Interfaith and Inter-Civilisational Dialogue at the United Nations Alliance of Civilisations.

In recognition of his contribution to humanitarian issues, in 2015 the Secretary-General of the United Nations invited Sultan Nazrin Shah to serve as Co-Chair of the High-Level Panel on Humanitarian Financing. The Panel's recommendations for closing the funding gap for meeting the needs of complex humanitarian needs helped frame discussions at the World Humanitarian Summit held in Istanbul in May 2016.

Sultan Nazrin Shah holds degrees from Oxford and Harvard universities. His publications include *Charting the Economy: Early 20th Century Malaya and Contemporary Malaysian Contrasts (2017)*, *Striving for Inclusive Development: From Pangkor to a Modern Malaysian State (2019)* and *Globalization: Perak's Rise*, *Relative Decline, and Regeneration (2024)*.



DATO' MOHAMMAD FAIZ AZMI

Executive Chairman,
Securities Commission Malaysia

Dato' Faiz was appointed the Executive Chairman of the Securities Commission Malaysia (SC), the capital market regulator of Malaysia, in June 2024 by the Malaysian Minister of Finance. He was previously a Board member on the SC since August 2023.

He was the Chairman of PwC Malaysia for 11 out of his 30 years with the firm. He has over 38 years of experience in the audit and business advisory services in Malaysia and the UK. He was the leader of PwC's Global Islamic Finance Team practice from 2007 to September 2012. He was also PwC Malaysia's Financial Services Leader and joint Head of Audit and lead the ESG and Shariah Investing part of PwC's Sustainability and Climate Change practice in Malaysia. He retired as a partner and the Executive Chairman of PwC Malaysia in June 2023.

Much of his recent work has been with the Federal and State Governments involving work related to Accrual Accounting, acting as an Administrator for an airline and certain government entities and being part of the Federal Government National Covid vaccine rollout. He has also been involved in the financial restructuring of government agencies as well as investigations.

Dato' Faiz is a member of the Malaysian Institute of Accountants and a Fellow of ICAEW. He has held the post of President of the Malaysian Institute of Accountants, Chairman of the Malaysia Accounting Standards Board, President of the Kuala Lumpur Business Club and ICAEW City Group Chairman.

He was educated in Malaysia and UK and read law at the University of Durham before being called to the English Bar. He is an alumni of Lincoln's Inn and a member of the Inns of Court of Malaysia. He is a member of the Worshipful Company of Chartered Accountants England and Wales. He was conferred the Darjah Kebesaran Sultan Sharafuddin Idris Shah (DSIS), which carries the title Dato' in 2013 by the Sultan of Selangor. He was conferred an Honorary Degree of Doctorate of Laws by the University of Nottingham in July 2016.

DR. FARHAN NIZAMI

Director,
Oxford Centre for
Islamic Studies, UK

Farhan Nizami CBE (D.Phil.Oxon) is the Prince of Wales Fellow in the study of the Islamic World, Magdalen College, Oxford University and the Founder Director of the Oxford Centre for Islamic Studies. He read Modern History at Wadham College.

From 1983, he was a Fellow of St Cross College, Oxford: Rothman's Fellow in Muslim History and subsequently Fellow in Islamic Studies.

He is an Emeritus Fellow of St Cross College and a member of the Faculty of History and of Oriental Studies at the University of Oxford. He is Founder Editor of the Journal of Islamic Studies (OUP, 1990-To Date); Series Editor, Makers of Islamic Civilization (OUP, 2004-To Date). He specialises in Muslim social and intellectual history.

SHARIFATUL HANIZAH SAID ALI

Executive Director,
Islamic Capital Market
Securities Commission Malaysia

Sharifatul Hanizah is the Executive Director of Islamic Capital Market (ICM) of the Securities Commission Malaysia (SC).

She leads a team that facilitates the developmental and operational initiatives for Malaysia's ICM. This encompasses initiatives through the deepening and broadening of ICM products and services to further strengthen Malaysia's position as a global hub for ICM as well as reviews of industry proposals and Shariah status for listed/pre-initial public offering securities.

Sharifatul Hanizah has an extensive and diverse experience of over 30 years in the fields of investment analysis, portfolio management, equity trading and unit trust while serving in various organisations such as Permodalan Nasional Berhad (PNB), RHB Investment Management Sdn Bhd and Muamalat Invest. During her tenure in PNB and RHB, Sharifatul Hanizah's board experience was vast, spanning consumer goods, technology and manufacturing companies. She served on the boards of exchange-listed and private companies as a Nominee Director for PNB and RHB.

Prior to joining the SC in August 2019, Sharifatul Hanizah was the Chief Executive Officer of Securities Industry Development Corporation (SIDC), the learning and development arm of the SC. She is a Fellow of the Financial Services Institute of Australasia (F Fin), a Certified Financial Planner (CFP), an Islamic Financial Planner (IFP) and a Fellow of the Institute of Corporate Directors Malaysia (ICDM).

DATIN SERI SUNITA RAJAKUMAR

Council Member,
Climate Governance Malaysia

Datin Seri Sunita Rajakumar is a strong advocate for corporate governance in boardrooms and climate governance in particular.

She is Ambassador for the World Economic Forum's Climate Governance Initiative, and Founder of Climate Governance Malaysia, which was the second country chapter of this Initiative and first in Asia-Pacific to be launched. In six years, under her leadership, it has grown to be a significant advocate for increased climate ambition, as arguably the largest private sector mobilisation, for climate action.

She is an independent non-executive director on the board of three multinationals (HSBC Malaysia, Zurich General Insurance, public-listed Dutch Lady Milk Industries), a member of the World Economic Forum's Global Future Council 2025-2026 (Climate and Nature Governance), an Adjunct Professor for Climate Change and a trustee of four charities.

TAN SRI AZMAN MOKHTAR

Chairman,
Malaysia International Islamic
Finance Centre (MIFC)
Leadership Council

Tan Sri Azman Mokhtar is currently the Chairman of the Malaysia International Islamic Finance Centre (MIFC) Leadership Council, the Chairman of the Board of Directors of Universiti Teknologi Malaysia (UTM) and the Chairman of INCEIF University (The International Centre for Education in Islamic Finance). Between June 2004 and July 2018, he was the Managing Director of Khazanah Nasional Berhad, Malaysia's strategic investment fund with AUM then of ~ USD40bn. Between December 2021 and December 2023, he was the Chairman of Lembaga Tabung Haji Malaysia (Hajj Pilgrims Fund Board with AUM of ~ USD20bn).

Other current affiliations include as a member of the Global Future Council on Investing of the World Economic Forum, the Steering Committee of the Global Ethical Finance Initiative (GEFI), a Development Leadership Dialogue Fellow at the School of Oriental and African Studies (SOAS) of the University of London, the Investment Advisory Council of the Kingdom of Saudi Arabia, the Advisory Board of the University of Oxford's Technology & Management Centre for Development, the Advisory Board of the College of Islamic Studies, Hamad Bin Khalifa University, Qatar and the board of the international humanitarian relief organization, MERCY Malaysia.

Tan Sri Azman obtained an M.Phil in Development Studies from Darwin College, Cambridge University, as a Chevening scholar, and a Diploma in Islamic Studies from International Islamic University Malaysia. He is also a CFA Charter Holder and a Fellow of the Association of Chartered and Certified Accountants (ACCA). Between 2019 and 2022, Azman was a Bye-Fellow of Darwin College, Cambridge and the Distinguished Visiting Fellow at the Centre of Development Studies, University of Cambridge.

DR. RENARD SIEW

Group Head,
Corporate Sustainability,
Yinson Holdings Berhad

President,
Malaysia Carbon Market
Association (MCMA)

Climate Advisor,
CENT-GPS

Dr. Renard Siew is the Head of Corporate Sustainability for Yinson, where he is responsible for advancing the organisation's work in the field of climate change and sustainability. He is also currently the President of the Malaysia Carbon Market Association (MCMA) looking into spurring the growth of the carbon markets nationally.

Prior to this, he was involved in the implementation of the sustainability agenda for a number of public-listed corporations (Sime Darby, CIMB, MRCB) and was a researcher at the Centre for Energy and Environmental Markets (CEEM) contributing thought leadership in: sustainability/ integrated reporting, GHG reporting and verification, ESG integration, socially responsible investment (across different asset classes: equities, infrastructure and property/real estate), climate change and sustainable construction for the building/infrastructure sector. Renard is a graduate of Cambridge University, UNSW and the Harvard Kennedy School. In 2013, he was selected as one of 15 scholars to attend the PhD Academy at the Swiss Federal Institute of Technology (ETH). He has published in many international refereed journals. In 2014, he won a Highly Commended Paper award by the Emerald Literati Network and was inducted into the prestigious Global Young Academy as recognition of his research impact.

He was the Co-Chair of the Climate Change & Disaster Risk Management Working Committee and UNEP-FI's Collective Commitment on Climate Action. In 2020, he was appointed an SDG Champion-Climate Action by the World Economic Forum (WEF). He is a member of the WEF Expert Network Group, serves on the WEF Global Future Council on SDG Investment. He was accepted into the Forbes Fellowship Programme and attended the inaugural UN Climate Action Summit in New York in 2019.

NIK SHAHRIZAL SULAIMAN

Partner, Risk Services,
PwC Malaysia

Nik Shahrizal has over 18 years of experience in the assurance and advisory profession. He was trained in the United Kingdom as a chartered accountant prior to joining PwC Malaysia in 2007. Nik has been involved in a wide range of work in the industry from strategy, governance, internal audit and risk management.

Nik graduated from the University of Cambridge with a Master in Business Administration, and is professionally qualified in the area of accounting (ICAEW), investments (CFA), financial risk management (FRM) and treasury (PKMC).

PROFESSOR DATO' DR. ASHRAF MD HASHIM

Shariah Advisory Council Member, Securities Commission Malaysia

Professor Dato' Dr. Ashraf Md Hashim is a globally recognised Shariah advisor and a Professor at INCEIF University, Malaysia. With extensive expertise in Islamic finance, Shariah governance, and regulatory frameworks, he holds leadership positions on multiple Shariah councils and boards across Malaysia and internationally. His academic, advisory, and consultancy roles have made him a pivotal figure in advancing Islamic finance globally.

Dr. Ashraf currently serves as the Chairman of Bank Negara Malaysia's Shariah Advisory Council and the Shariah Committee of Bursa Malaysia. He is a member of the Shariah Advisory Council of Securities Commission Malaysia, and a member of the Shariah Committee for International Islamic Liquidity Management Cooperation. In addition, he serves as a member of National Fatwa Council of Malaysia (Muzakarah Kebangsaan Hal Ehwal Agama Islam), a Shariah committee member of Yayasan Waqf Malaysia (Malaysia Waqf Foundation), State Development Cooperation of Kelantan, a member for the Waqf Committee for Kelantan Religious Council and a Finance and Investment Committee member for the Selangor Religious Council.

He is a member of the Board of Directors for Tabung Haji and the Chairman of its Shariah Board. He is also a board member of Halal Development Cooperation Malaysia, Express Rail Link and Tabung Haji Travel and Services.

Dr. Ashraf is actively involved in a number of consultancy works related to Islamic finance abroad, among others, as a member of the Shariah Board for Abu Dhabi Islamic Bank and Standard Chartered Bank in the United Arab Emirates; the Islamic Bank of Australia (Project); Noor Takaful Nigeria (Chairman of Advisory Council of Experts), IMON International, Tajikistan; Amanat Advisory, Kygryz Republic; and a few REIT companies, particularly in Saudi Arabia and Singapore.

PAUL HORROCKS

Head of Private Finance
for Sustainable Development Unit,
OECD

Paul Horrocks is Head of the Private Finance for Sustainable Development Unit at the OECD Development Co-operation Directorate. Paul is leading work on policies aiming at encouraging greater private sector investment into developing countries, in particular mobilisation approaches, such as blended finance, that governments can adopt in order to reach scale and development impact.

Paul has extensive senior experience in leadership positions having been a Senior Executive at the Australian Federal Treasury, working on the domestic infrastructure market as well as providing policy advice during Australia's G20 presidency on international policy challenges. Senior experience in the European Institutions in Brussels, having worked on such key initiatives such as the deepening of European capital markets in response to the 2008 financial crisis.

Paul has degrees from the University of Swansea and of Liverpool as well as an Executive MBA from Vlerick Business School in Belgium. He also provides executive teaching at the Oxford University and the Maastricht School of Management.

PROFESSOR DR. MEHMET ASUTAY

Director, Durham Centre for Islamic Economics and Finance, Durham University

Professor Dr. Mehmet Asutay is a Professor of Middle Eastern and Islamic Political Economy & Finance at the Durham University Business School, and the Director of the Durham Centre for Islamic Economics and Finance as well as Programme Director of Islamic finance master programmes.

Professor Mehmet's teaching, research, publication, and supervision of research is all in Islamic moral economy/Islamic economics, Islamic finance and banking, Islamic political economy, Islamic governance and management and the Middle Eastern political economies. His articles on his research interest have appeared in various international academic journals and professional magazines. He has also published manuscripts and edited books on aspects of Islamic moral economy and Islamic finance, the latest of which are: A Model for Islamic Development: An Approach in Islamic Moral Economy (with S. Jan, 2019), Mapping the Risks and Risk Management Practices in Islamic Banking (with W. Eid, 2019).

Professor Mehmet's recent research includes the construction of Islamic moral economy and Islamic political economy; and their articulation in economic and sustainable development. In addition, his research focused on locating Islamic banking and finance within the expressed ideals of Islamic moral economy by essentialising sharing and collaborative economy nature of Islamic finance. Professor Mehmet is also involved in empirical research in various aspects and dynamics of Islamic banking and finance as well as examining the political economy determinants and consequences of various Islamic finance industry development models.

Professor Mehmet is the Editor-in-Chief of the American Journal of Islamic and Society, the International Journal of Islamic Economics and Finance Studies, and the Review of Islamic Economics. Professor Mehmet is also a Board Member of the International Association for Islamic Economics.

BILAL PARVAIZ

Chief Executive Officer
Standard Chartered Saadiq
Malaysia

Bilal Parvaiz started his career with Standard Chartered in 2010 as part of the Group Islamic Banking team based in United Arab Emirates, where he was responsible for the Bank's Structured Trade and Transaction Banking business across the Gulf Cooperation Council (GCC) and South Asian markets.

He joined Standard Chartered Saadiq Malaysia in 2014 and led the Islamic Corporate and Investment Banking (CIB) team, driving regional coverage across the ASEAN markets including Malaysia, Brunei, Singapore, and Indonesia. Bilal was appointed as Chief Executive Officer of Standard Chartered Saadiq Malaysia on 15 March 2024.

Bilal has played an instrumental role in originating landmark transactions across the GCC, South Asia and ASEAN, including market firsts such as the world's first ESG Islamic Collateralised Commodity Murabahah transaction and Sustainable Islamic Supplier Finance. Bilal most notably spearheaded the Halal360 initiative, a key proposition that aims to expand the Halal eco-system globally.

Bilal was also the Country Champion for Sustainable Finance and represented the Bank in multiple sustainability initiatives including Value Based Intermediation (VBI) and Joint Committee on Climate Change (JC3). He also jointly led the Value Based Impact Assessment Framework (VBIAF) for the Renewable Energy sector. Owing to his expertise in Islamic Finance – the Halal economy and Sustainable Finance, he is often invited to share his views at various industry forums.

Bilal holds a Master of Business Administration (MBA) degree, and professional qualifications in Sustainable Finance from Frankfurt School of Finance & Management, Sustainability Leadership Programme at the University of Cambridge, and Global Banking Leadership program at Bayes Business School London. He is also an Associate Member of Chartered Institute of Islamic Finance Professionals (CIIF).

DR. BASIL MUSTAFA

Board of Trustees,
Former Nelson Mandela Fellow,
Oxford Centre for Islamic Studies

Dr. Basil Mustafa was the Nelson Mandela Fellow in Educational Studies at the Oxford Centre for Islamic Studies. Dr. Mustafa held an Associate Fellowship at the Saïd Business School, University of Oxford (2010-2012) and was an Associate Tutor at the Department for Continuing Education, University of Oxford (1998-2008).

He was awarded a Visiting Professorship at the International Business School, Universiti Teknologi Malaysia (2014-2017). Dr. Mustafa has special interest in e-learning and distance learning programmes. His taught courses at the Oxford University Department for Continuing Education include 'Islam in the Modern World' and 'Islam and the West'. He has contributed to the Leadership Development Programme of the Executive Education Centre, Saïd Business School. At Saïd Business School, Dr Mustafa participated as lecturer at the Oxford Leadership Advantage Programme for State Farm Insurance, US, and coached leadership competency workshops for the Abu Dhabi Civil Service Department (2009-2011).

Dr. Mustafa has been a speaker and coach on the Program for Advanced Leadership and Management, Madinah, Saudi Arabia.

AZREEN IDAYU ZAINAL

General Manager,
Office of Chief Sustainability Officer,
Securities Commission Malaysia

Azreen Idayu Zainal is a General Manager in the Office of Chief Sustainability Officer of the Securities Commission Malaysia (SC). She leads the development of sustainable investment strategies and policies for the Malaysian capital market, and their implementation since 2014. Azreen is instrumental in the development of the Sustainable and Responsible Investment (SRI) Roadmap for the Malaysian Capital Market, and many other SRI initiatives. Azreen is the Chair of Sub-committee 3 (Product and Innovation) of the Joint Committee on Climate Change (JC3), an initiative established to pursue collaborative actions for building climate resilience within the Malaysia financial sector.

At the regional level, Azreen is involved in developing sustainable finance initiatives for the ASEAN capital markets, through SC's co-chairmanship of the Sustainable Finance Working Group of the ASEAN Capital Markets Forum and SC's membership in the ASEAN Taxonomy Board.

Azreen regularly represents the SC at various speaking engagements on sustainability regionally and internationally.

Azreen joined the SC in 2010 where she was involved in the formulation and implementation of the Capital Market Masterplan 2, the 10-year strategy blueprint for the Malaysian capital market. Azreen started her career in PricewaterhouseCoopers in 2002 until 2010 prior to joining the SC. Azreen is a Fellow Chartered Accountant of the Association of Chartered Certified Accountants, a member of the Malaysian Institute of Certified Public Accountants and a Chartered Accountant of the Malaysian Institute of Accountants.

SITI ROSINA ATTAULLAH

Deputy Director,
Islamic Finance Department,
Bank Negara Malaysia

Siti Rosina binti Attaullah is a Deputy Director at the Islamic Finance Department, Bank Negara Malaysia (BNM), where her work focuses on innovation, market development, and international strategy for the Islamic finance sector. She has 20 years of experience in the Islamic finance industry.

Siti Rosina began her career at BNM in 2005, contributing to various strategic and developmental projects aimed at strengthening the Islamic finance ecosystem. In 2013, she joined KFH Research Limited—the former investment, advisory, and research arm of Kuwait Finance House—as Head of the Islamic Capital Markets Research Unit. In this role, she oversaw research and advisory services across key areas including Islamic banking, takaful, sukuk, Islamic fund management, financial inclusion, and regulatory and financial stability analysis. Her portfolio also included collaborative projects with multilateral institutions, pension funds, corporate clients, and KFH subsidiaries in Türkiye, Saudi Arabia, and Bahrain.

Her industry contributions extend to talent development and capacity building. She served as National Consultant to the Asian Development Bank (ADB) for a regional study on talent migration in ASEAN, and was a Panel Committee Member for the development of professional learning frameworks under the Finance Accreditation Agency, including the Islamic Finance Professional Qualifications Structure and the Finance Professional Qualifications Structure.

Siti Rosina holds a Bachelor of Economics (Honours) from Universiti Utara Malaysia, a Master's Degree in Finance from the University of Warwick, and is a Chartered Banker.

DR. NUR AIN SHAHRIER

SC-OCIS Scholar in Residence 2023/2024

Dr. Nur Ain Shahrier is a Senior Economist at The SEACEN Centre (The Southeast Asian Central Banks Research and Training Centre), where she designs macro-financial policy frameworks and advises central banks across the Asia–Pacific. She also serves as an economic adviser to Malaysian ministries and government agencies. Previously, she was a senior lecturer at Sunway University and an economist at both the Central Bank of Malaysia and the Asian Development Bank (Philippines). Her research and advisory work span macroeconomic policy, financial-sector development, and applied economic analysis across Southeast Asia.

Dr. Nur Ain has held fellowships at the Harvard Asia Center (2019) and the Oxford Centre for Islamic Studies (2024), focusing on income inequality and the intersection of Islamic finance and sustainability. She holds a PhD and MSc in Regional Science (Economics) and an MEng in Financial Engineering from Cornell University, and a BSc (Hons) in Actuarial Science, Economics, and Mathematics from the University of Iowa.

She is a Certified Technologist (Malaysian Board of Technologists) and an associate member of FPAM and IFPAM. Her publications include peer-reviewed journal articles and policy-oriented working papers for Bank Negara Malaysia.

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GLOSSARY, ACRONYMS & ABBREVIATIONS

Regulatory Bodies, Institutions & Organisations	
Term	Definition
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations; a political and economic union of 11 Southeast Asian countries.
AXA Insurance	A global insurance group providing risk management and insurance solutions.
BNM	Bank Negara Malaysia, the central bank of Malaysia.
CIMB	CIMB Group Holdings Berhad, a regional banking group active in Islamic and sustainable finance.
COMCEC	Standing Committee for Economic and Commercial Cooperation of the Organisation of Islamic Cooperation.
EU	European Union.
GLC	Government-Linked Company.
GLIC	Government-Linked Investment Company.
HRH	His/Her Royal Highness.
IFC	International Finance Corporation, a member of the World Bank Group.
IMF	International Monetary Fund.
IPCC	Intergovernmental Panel on Climate Change.
ISSB	International Sustainability Standards Board.
JC3	Joint Committee on Climate Change established by BNM and the SC.
MIA	Malaysian Institute of Accountants
MIFC	Malaysia International Islamic Financial Centre.
MIGA	Multilateral Investment Guarantee Agency, a member of the World Bank Group.
NGO	Non-Governmental Organisation; a non-profit, voluntary group independent from government control, focused on social, environmental, or humanitarian causes, operating locally, nationally, or internationally to advocate for change and provide services.
OECD	Organisation for Economic Co-operation and Development.
OIC	Organisation of Islamic Cooperation.

PIF	Public Investment Fund of Saudi Arabia.
PwC	PricewaterhouseCoopers.
SC	Securities Commission Malaysia.
UN	United Nations.

Policies, Standards and Reporting Frameworks

Term	Definition
CMP4	Capital Market Masterplan 2026-2030 issued by the Securities Commission Malaysia.
ESG	Environmental, Social and Governance.
IFRS	International Financial Reporting Standards.
IFRS S1	General sustainability-related financial disclosures.
IFRS S2	Climate-related financial disclosures.
NCCP 2.0	National Climate Change Policy 2.0 of Malaysia.
NCQG	New Collective Quantified Goal on climate finance under the UN framework.
NDC	Nationally Determined Contribution under the Paris Agreement.
NETR	National Energy Transition Roadmap of Malaysia.
NSRF	National Sustainability Reporting Framework of Malaysia.
PRI	Principles for Responsible Investment supported by the United Nations.
TCFD	Task Force on Climate-related Financial Disclosures.

Islamic Finance Principles and Instruments

Term	Definition
Adl	Justice; a foundational principle in Islamic ethics and finance.
Amanah	Trust and fiduciary responsibility in Islamic governance and finance.
Asabiyyah	Social solidarity and collective responsibility.
Gharar	Excessive uncertainty prohibited in Islamic financial contracts.
Khalifah / Khilafah	Concept of stewardship, recognising human responsibility for the Earth.
Maqasid al-Shariah	Objectives of Shariah, including the protection of faith, life, intellect, lineage, wealth and the environment; or in the context of Islamic Capital Market Malaysia – Maqasid al-Shariah Guidance by the Securities Commission Malaysia.

Shariah	Islamic legal and ethical framework governing financial and commercial activities.
Shura	Consultation as a principle of Islamic governance.
Sukuk	Shariah-compliant capital market instrument structured on asset-backed or asset-based principles.
SRI Sukuk	Sukuk issued to finance sustainable and responsible investment projects.
Takaful	Shariah-compliant insurance based on mutual risk-sharing.
Tawarruq	Shariah-compliant financing structure using commodity transactions.
Wakaf / *Wakaf* pavilion	Square pavilion an open structure with four to twelve timber columns, a pyramidal roofed and a hipped gable design, usually made with a low platform for sitting or lying down and is meant for travellers, local or otherwise, as temporary shelter for resting, napping and as a prayer space.
Waqf	Islamic charitable endowment for religious, social or development purposes.
Zakat	Obligatory almsgiving under Islamic law for wealth redistribution.

Climate Finance, Markets and Instruments

Term	Definition
BCX	Bursa Carbon Exchange.
CAIF	Climate Adaptation Investment Framework.
Carbon Market	Market mechanism for the trading of carbon credits or offsets.
CCS	Carbon Capture and Storage.
CCUS	Carbon Capture, Utilisation and Storage.
CO_2	Carbon dioxide.
GSSS	Green, Social, Sustainability and Sustainability-linked instruments.
IRR	Internal Rate of Return.
KPI	Key Performance Indicator.
PPP	Public-Private Partnership.

Corporates, Markets and General Terms	
Term	Definition
ACWA Power	Energy and water company active in renewable and transition investments.
AI	Artificial Intelligence.
APG	ASEAN Power Grid.
ASEAN–GCC Summit	High-level engagement between ASEAN and Gulf Cooperation Council member states.
CFC	Climate Finance Corporation or Facility.
CHC	Climate Hazard Classification.
EV	Electric Vehicle.
GCC	Gulf Cooperation Council, a regional political and economic union of six Arab states bordering the Persian Gulf: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
KTM	Keretapi Tanah Melayu.
KLIA	Kuala Lumpur International Airport.
MOU	Memorandum of Understanding.
MSME / SME	Micro, Small and Medium Enterprises / Small and Medium Enterprises.
PETRONAS	Petroliam Nasional Bhd.
PPM	Parts per million.
Q&A	Questions and Answers.
ROE	Return on Equity.

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