THE FUTURE OF BUSINESS IS SUSTAINA BILITY

Islamic finance shapes responsible businesses

Innovating education systems

Renewable energy update





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About IN FOCUS

It is a complimentary bi-annual publication. Its inaugural issue was published in November 2017 and it is an extension of WIEF Foundation's online bank of articles that is constantly growing to cater to the reading pleasure of the global business community. Do drop us a line on economic and business-related matters you think we should report on.

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ON THE COVER, ISSUE 4 *The future of business is sustainability* Photo by Helena Yankovska on Unsplash



No Economy without an Environment

Connections between the economy and the environment are many. The environment provides countless resources to the economy and its resources are fundamental contributors to production as well as services in numerous industries. However, production and consumption emit pollution that impacts the environment, and this in turn, affects economic development.

Today, technology has made it possible for clean as well as efficient energy to be affordable. More and more households are using solar power, and businesses are already jumping onto this bandwagon, maximising opportunities stemming from the result. The irony of this is, while an economy may grow to more than 50 per cent in the past two decades, carbon emissions seem to remain the same as it was then.

What this means is, we have not cared enough about the environment and we are not acting quickly enough to restore it. In the first decade of the 21st century, we lost over five million hectares of forest per year due to deforestation. This fact affects businesses because many industries' resources depend heavily on nature, such as the multibillion-dollar pharmaceutical industry that relies on the genetic diversity of wild species found in forests.

To a large extent, well thought out policies for the benefit of the environment certainly help. However, these policies are a topic of much contention, in terms of their implementation and how effective they actually are in protecting the environment against negative economic reaction, and vice versa.

Still, it is worth recognising that policies are a sign of proactivity by governing bodies and awareness has made us better at implementing them – in March this year, the European Parliament voted by 560 to 35 in favour of banning 10 single-use plastic items in the EU by 2021. Also, to achieve circular economy, the EU will ensure the structure of proper waste and recycling management. This is a positive move towards policy implementation.

It is time to fully realise that nature is our greatest resource, ally and inspiration. Thus, a step towards building thriving ecosystems and a strong economy must be a collective effort. It begins with individuals, through well executed policies and responsible business practice. Change is ensuring that zero carbon footprint happens.

So, to keep the global economy from down turning and to sustain economic growth, the protection of environment is a prerequisite. Besides, for businesses, it has been proven that sustainability increases efficiency which in turn keeps the prices of products low for consumers. In other words, a healthy environment is good for business.

Whether we can enjoy the benefits of modern life without adverse effects on the environment depends on the day-to-day decisions we, and businesses, make. Thus, with this issue of *In Focus*, its articles hope to address that and highlight responsible business practice because there can be no economy without an environment.

Tun Musa Hitam Chairman of WIEF Foundation



Sustainability is key for not only a healthy environment but also longevity of businesses and stability of the economy. *Nisha K* and *Su Aziz* ask individuals from varied backgrounds just what drives sustainability.

WHAT DRIVES SUSTAINABILITY?

Sustainability brings about different meanings: from ensuring business resilience, building sustainably so we have healthier places to live and work, to living a sustainable life through recycling and eating locally grown vegetables. In other words, being sustainable basically brings about longevity and wellbeing.

The topic of sustainability is slowly changing the landscape of many industries. For instance, in the sports industry which is an industry with a global worth of more than USD500 billion, there's a growing need to change the collective perceptions by shifting the industry to become more sustainable. Hence, major sports venues of today are the pioneers of promoting sustainability. A classic example is the home of the football club Ajax Amsterdam, the Johan Cruyff Arena. The stadium has been in operation since 1996, but has undergone major renovation between 2010 and 2015 to accommodate several sustainable initiatives such as the 4,200 solar panels on the roof which uses Dutch wind energy to provide its remaining electricity needs.

QUICK FOCUS

So, what drives sustainability? Here, several individuals from various backgrounds and ages, share their thoughts on what drives sustainability:



Knowledge

JEYA KUMARAPPAN

62, Retiree

To me, knowledge drives sustainability. Once you are informed, you become more aware of what goes on. In my case, I now opt for organic, toxic-free products and recycle the bottles by giving them back to the recycling centre.



ISKANDAR ZAFFA 40, Executive Director Agrosky Sdn Bhd

In this era, sustainability in business is about ensuring long-term business towards success while contributing economic and social development, a healthy environment and a stable society. As part of the fundamental principles, companies that are committed to sustainable business adopt high standards in areas that can include environmental protection, gender equity, working conditions, employee benefits, capacity as well as community development, and transparent relationships between the company's management, board, shareholders and stakeholders, that fall under the term of corporate governance.



Learn, unlearn and relearn



DATO' HAFIZ IBRAHIM 38, CEO Peranmas Sdn Bhd

In order to achieve sustainability, we need to master the art of 'learn, unlearn and relearn'. We need to foster a mentality in both the government and public sectors, by adopting an impact measurement framework and identifying sustainable goals – it'll eventually reveal opportunities for replicating successful solutions across untapped areas. In the end, the mission of sustainable development is to equalise economic growth together with the protection of our natural ecosystems and conservation of our resources.

QUICK FOCUS



SUSAN THOMAS

35, Teacher Fukuoka International School Japan

In school, we try to eliminate paper wastage as much as possible. We communicate with the parents via e-mails and we try to use natural materials for arts and crafts. I like to use leaves, flowers and vegetables as stencils and through this, they learn how to be creative and also identify what's in their surroundings. When there's support from the school, parents and teachers, the drive for sustainability becomes integral to ensure our next generation has a holistic education.





REDZA SHAHID RIDZUAN

31, CEO Grub Cycle

For me, the main thing that drives sustainability is people. Anyone can set policies, rules and regulations but if the people don't change their behaviour in making a habit to create sustainability for themselves, their company or ecosystem, nothing will change. Hence, it's important to have the right people around you – they either inspire you or drain you – and this is key towards sustainability. It took me a while to get the right fit of people in the company but when I finally found it, the company just grows naturally.



MELATI WIJSEN 18, Co-founder Bye Bye Plastic Bags

Personally, I feel, people drive sustainability. Our everyday actions, the choices we make can lead to a more sustainable world. We often forget this though. Individual action can drive sustainability, governments should drive sustainability, companies, projects and the private sector should drive sustainability. Only when we collaborate among all of us, we'll achieve a higher goal of sustainability. We as consumers, producers, we have all the power to decide how we shape our lives. We get to choose how we embody sustainability.



VINASHAL PILLAI

38, Content Editor Asian Football Confederation

Sustainability habits start at home and to cultivate healthy conservation habits, parents must empower children with the idea from the very beginning. Switching off the faucet when brushing the teeth, turning the shower off in the bathroom and takeaway bags when we go to the supermarket. By watching us, they learn because a parent is a child's first teacher and the best teacher throughout their life.

SHAPINGA Responsible ECONOMY

Islamic finance plays a fundamental role in shaping a responsible economy. *Mobasher Zein Kazmi* looks at the how and why. he rediscovery and application of shariah compliant financial practices across member nations of the Organisation of Islamic Cooperation (OIC) has not only strategically reordered the global financial architecture but also fundamentally transformed the economic landscape of the Muslim world.

The introduction of modern Islamic Finance, or IF, through the Mit Ghamr Savings Bank experiment of Egypt in 1960 to the current global IF industry sized at more than USD2 trillion, is a resounding proof of concept to the efficacy and resiliency of IF industry as an alternative to the conventional financial order.

Consider at its core that IF is premised on the glorious Quranic principles endorsing riba-free, trade-focused, asset-based business transactions, while ensuring that obligations and rights of stakeholders are both documented and preserved. This has laid the foundation of economic interactions that encourages wealth-creation and growth but is also tempered with ethics and a sense of social responsibility, justice and fair play.

It's within this paradigm that the three core planks of IF namely Islamic banking, Islamic capital markets and takaful, have been operating so as to facilitate a more inclusive, participatory and equitable economic system.



Emerging Responsible Economy

The global economy entered a transformative period following the Global Financial Crisis (2007-09) as regulation, compliance and risk management dominated the conversation in the jurisdictions of key financial centres. Steps taken to prevent the next contagion included mitigating the concentration risk of toxic assets on bank balance sheets while regulating the use of derivatives.

Financial institutions underwent a serious process of deleveraging and de-risking as attempts to restore faith and confidence in the international financial system took its toll on the global economy.

Yet, with this crisis came an opportunity for renewal as well as growth. It was under these challenging conditions that IF established its credentials as a responsible and resilient model in the world of finance. In conjunction with this transition towards reimagining financial services through a shariah lens came the rise and development of alternative financing and investment initiatives centred on sustainable development and impact investing. The excesses of unfettered uber-financialisation capitalism, and was no longer considered prudent in managing global economic affairs.







Driving Ethical Businesses

In addition, climate change, depletion of natural resources and negative externalities resulting from economic activity all contributed towards a shift for a more carbonneutral and environmentally friendly socio-economic landscape.

Various stakeholders including governments, multilateral bodes, multinational corporates and a range of pressure groups recognised the imperative to introduce and adopt responsible and ethical business practices across the global supply chain. The underlying message had become increasingly clear that 'business as usual' was no longer tenable in the evolving global economic order. IF can play a decidedly critical role especially in key emerging markets of Asia and Africa.

IF is well placed to contribute towards this changing order given the use of valuebased transactions, which facilitate an equitable and ethical socio-economic exchange. Preventing wastage, excess and exploitation in economic undertakings conforms to the overarching objectives of shariah that apprise or shape IF. Furthermore, the underlying principles of IF mandate the efficient mobilisation and allocation of resources while keeping in mind the public good. In essence, IF becomes a vital cog in fuelling the 'halal' economy on an end to end basis by underscoring the use of responsible business practices.

According to figures sourced from the Global Sustainable Investment Alliance's (GSIA) 2018 investment review, an industry advocacy group tracking sustainable investments, total sustainable assets registered an impressive growth of 34 per cent in 2016-2018 period with USD30.682 trillion in assets under management (AUM). Perhaps, most commendable was the rapid jump in sustainability themed investing at 269 per cent during the corresponding period, as recorded by GSIA.



GLOBAL GROWTH OF SUSTAINABLE INVESTING STRATEGIES 2016 - 2018

USD BILLIONS



Source: 2018 Global Sustainable Investment Review, GSIA Note: Assets in USD Billions

As the above table indicates market participants have categorically responded in favour of choosing to invest in assets that maintain a net positive social impact by voting with their dollars. Institutional and retail investors alike are now recognising that their investment decisions are enabling greater capital flow mobilisation for responsible economic undertakings and such asset selection is not necessarily compromising investment return potential.

It's perhaps this convergence of sustainability investing and IF that can help unlock synergies in realising the broader SDGs that will cement the formation of a responsible economy.

Islamic Finance and Sustainability

IF can play a significant and decisive role in expanding impact investing for the betterment of humankind. Its principal foundation is based on social justice and provides the moral grounding to embrace ethical business and capital formation fully aligned with maqasid shariah, which are goals of Islamic law.

Ahead of the pack is Malaysia. It has led the issuance of the first ever 'green' sukuk in July 2017 and introduced incentives for issuers under its Securities Commission (SC). Malaysia's Sustainable and Responsible Investment (SRI) Sukuk framework intends to utilise funds sourced from investors for allocation towards environmentally sustainable and climate friendly infrastructure projects.

Reports by *Reuters* find that the SC has followed through by also unveiling a grant scheme to help offset the costs of external review of up to 90 per cent and encourage greater Malaysian Ringgit denominated green sukuk issuance in the country. SC Malaysia has also been very proactive in opening up the bond and sukuk market in the country to retail investors by relaxing existing regulations. Since the launch of the landmark green sukuk there have been additional developments that validate market interest in sustainable and responsible finance. A Malaysia's national newspaper, The Star, reports that BIMB Investment Management, a subsidiary of Bank Islam Malaysia, setup the first ever environmental, social and governance (ESG) sukuk fund, which should complement demand for green sukuk. Neighbouring Indonesia also demonstrated its commitment to low carbon and climate resilient infrastructure projects at a state level through its February 2018 USD1.25 billion sovereign green sukuk offering, as shown in table below.

The MENA region is also seeing value and opportunity in green sukuk via the Green Sukuk and Working Party (GSWP) established by the Clean Energy Business Council, the Climate Bonds Initiative as well as the Gulf Bond and Sukuk Association (GBSA). In particular, GCC countries would be well placed to capitalise on green sukuk given the range of renewable energy projects for sustainable development on offer in the region.

For example, Dubai is targeting a renewable energy mix of 75 per cent by 2050. While Saudi Arabia, as reported by S&P Rating Global, has committed to a USD200 billion solar project with an annual generation capacity of 200,000 MW. A core strategic objective of the UAE's Green Agenda 2015-2030 initiative is focused on ensuring economic competitiveness through sustainability clean energy and preservation of the environment for future generations.

There's now a clear and distinct link between sukuk and the financing of green projects given that the principles of responsible and ethical investing, which underpin Islamic finance is reinforced through shariah that categorically calls for the preservation of the environment. To ensure the highest level of integrity all green sukuk issued to date are in compliance with the ASEAN Green Bond Standards that are based on the International Capital Market Association's Green Bond Principles.

GREEN SUKUK ISSUANCES AS OF 11 MARCH 2019											
ISSUER	COUNTRY	ISSUE DATE	CURRENCY	FUNDS RAISED	USE OF FUNDS						
Tadau Energy	Malaysia	Jul - 17	MYR	58	Solar power project						
Quantum Solar Park Semanjung	Malaysia	Oct - 17	MYR	236	Solar power project						
PNB Merdeka Ventures	Malaysia	Dec - 17	MYR	461	Real estate development in KL complying with green accreditations						
Mudajaya Group	Malaysia	Jan - 18	MYR	63	Solar power project						
Indonesia	Indonesia	Feb - 18	USD	1,250	Various green project						
UiTM Solar Power	Malaysia	Apr - 18	MYR	57	Solar power project						
Pasukhas Green Assets	Malaysia	Feb - 19	MYR	49	Hydro power plant & other renewables						
Indonesia	Indonesia	Feb - 19	USD	750	Various green project						
Majid Al Futtaim	United Arab Emirates	May - 19	USD	600	Various green project						

Source: Bloomberg, S&P Global Ratings, ASEAN Capital Markets Forum Note: Assets in USD million

Long-term Outlook

The IF industry needs to considerably enhance its efforts in promoting green sukuk or green project finance, or both, as the investment vehicles of choice within green financial products and services as part of broader efforts to contribute to the formation of a responsible economy.

Other traditional asset classes such as Islamic equities can be considered as part of a balanced portfolio but green finance enables market participants to directly fund sustainable assets such as renewable energy projects and such, while also realising appropriate risk adjusted returns.

Providing an enabling environment for preserving natural resources, promoting renewable energy and reducing gashouse emissions should be the priority of regulators across all jurisdictions and not just Muslim-majority countries comprising the OIC. The win-win proposition for issuer and investors alike especially within an IF context is the interplay between values-based financing and impact investing.

The scope for constituting a responsible economy is there given the long-term infrastructure needs and energy demand of many emerging Muslim countries. It remains to be seen whether we fully realise its value through actual implementation.

About the Author

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The Business of Sustainability

76%

per cent of executives say sustainability contributes positively to shareholder value in the long term.

Just how does a business manage sustainability? For the answer, *Su Aziz* shines the spotlight on the world's most sustainable company this year.

efinition of sustainability in business generally involves two categories. One, effect of business on the environment and, two, effect of business on the society. Although the aim is to make a positive impact on either one, or both, of those categories, failure to do so result in negative impact including deterioration of environment and inequality.

However, McKinsey & Company, a global management consulting firm, reports that a potential reason many companies don't actively address sustainability despite its growing reputation among consumers and media, is that there's no clear definition of it. In fact, McKinsey's report states that 20 per cent of executives admit that their companies don't practice sustainability and for the companies that do, their definition of a sustainable company vary:

55%

define sustainability as the management of issues related to the environment such as greenhouse gas emissions, energy efficiency, waste management, greenproduct development, and water conservation.

48%

say it includes the management of governance issues such as complying with regulations, maintaining ethical practices, and meeting accepted industry standards.

41%

say it includes the management of social issues such as working conditions and labour standards.

56%

of all the respondents define sustainability in two or more ways.

50% see short term value creation.

Despite the varied responses, it's safe to conclude that the consensus is that, sustainability has a positive impact on work culture, business development and society.

World's most sustainable company in 2019

On the Global 100 list, the relatively unknown Chr. Hansen Holding is the most sustainable company in 2019. This Danish bioscience firm was founded in 1874. The company derives over 80 per cent of its revenue developing natural solutions for preserving food such as milk and yogurt, protecting crops using natural bacteria instead of pesticides and alternatives to antibiotics for animals, consumed by over a billion people daily.

The ranking of the Global 100 is awarded to large corporations globally according to their performance in reducing carbon and waste, their gender diversity among leadership, revenues derived from clean products, and overall sustainability. The list compiled by Corporate Knights, starts with around 7,500 companies that generate more than USD1 billion in revenue per year.

Although Chr. Hansen Holding won the first place on the list, beating France's Kering SA by slightly less than 1.5 per cent of the total score, it scored markedly lower in terms of women on board than the others in the list at 29 per cent. This is a reflection of how little women there are in the scientific field as compared to Kering, a luxury fashion brand conglomerate, that boasts 64 per cent women on board.



What is Chr. Hansen Holding Doing Right?

First of all, sustainability remains at the centre of Chr. Hansen and their strategy is to focus on developing natural solutions for the world's health, food and agricultural industries in a sustainable way. In fact, their first published sustainability commitment was in 1949. The UN Global Goals are used as their framework to link the impact of corporate strategy to sustainable development, and document their impact on sustainable development through a system they developed with accountancy firm Price Waterhouse Cooper.

Their tangible commitments to the SDGs include promoting sustainable agriculture, efficient food production, improving global health through probiotic solutions, help consumers reduce food waste and food loss.

In this case, it's absolutely apt to say, being ranked the most sustainable company in the world is a 'good culture shock' indeed for Chr. Hansen.

World's Top10 Sustainable Companies in 2019

RANK	NAME	COUNTRY CARBON PRODUCTIVITY SCORE	CARBON PRODUCTIVITY SCORE	CEO - AVERAGE WORKER PER RATIO	% WOMEN ON BOARD	% CLEAN REVENUES	OVERALL SCORE
1	Chr. Hansen Holding A/S	Denmark	81%	24:01:00	29%	81%	82.99%
2	Kering SA	France	73%	50:01:00	64%	43%	81.55%
3	Neste Corporation	Finland	85%	39:01:00	38%	25%	80.92%
4	Orsted	Denmark	56%	28:01:00	33%	58%	80.13%
5	Glaxo Smith Kline	UK	19%	60:01:00	42%	60%	79.41%
6	Prologis, Inc.	U.S.	92%	203:1**	20%	81%	79.12%
7	Umicore	Belgium	93%	33:01:00	30%	81%	79.05%
8	Banco do Brasil S.A.	Brazil	97%	NA	0%	29%	78.15%
9	Shinhan Financial Group Co.	South Korea	77%	11:01	0%	3%	77.75%
10	Taiwan Semiconductor	Taiwan	29%	99:01:00	20%	63%	77.71%

** CEO-Average Worker Pay Ratio not disclosed. Based on disclosed Median-to-CEO pay ratio; for indicative purposes only.

Source: Forbes

Why and How of a Sustainable Business

FIVE REASONS why you should be a sustainable company:

- 1 Efficiency, thus, lowering cost and increasing profit.
- 2 | Improvement on your product value and business reputation.
- 3 A way your business can innovate, thus, promoting growth.
- 4 Reduce waste and be in line with the SDG of responsible production and consumption.
- 5 A positive philosophy that attracts investors and employees.

FIVE INITIAL STEPS on *how* to be a sustainable company:

- 1 | Have a set of specific goals that efficiently directs your business towards sustainability.
- 2 A designated person or team who will advocate sustainability to everyone at all level.
- 3 Allocate necessary resources such as people, funds, time and tools.
- 4 Encourage sustainable processes such as supply chain, production methods and product packaging.
- 5 Implement sustainable practices one step at a time by starting in one area of your business and making it make it work before moving onto the next one.

Business Resilience

This is a fact: 2019 statistics show that most small businesses stay alive until their fourth year and an increasing percentage of more than 50 per cent last five years. Whereas, just a year or two ago statistics show that small businesses fold within three years and more than 70 per cent won't last five years. The top reason for their lack of longevity is failure to fill market needs or gaps while the second reason is that these businesses run out of money.

While there are many factors that contribute to businesses' longevity – and this includes consistency in product quality or service, a strong mentor from which to gain advice and a strong business model – there are four things you can narrow down to for staying power and it includes sustainability.

No 1: Sustainable Employees

The very core of business is its people. A sustainable set of employees is fundamental. A *Forbes* article states that, 'Company sustainability typically looks at its impact on the community locally and globally, but sustainability starts with the people behind the scenes. It unites them to create a better work culture, work-life balance and contributions to customers and the world.'

Keeping an employee's productivity and enthusiasm toward work may be a challenge but through sharing of information, it helps them to see, and hold onto, the big picture. Recognition and equal pay as well as benefits, of course, help too. Next up, as in the *Forbes* article, 'Sustainable performance includes a human element, and its cornerstones are passion and learning. When you unite the two, you have the drive and know-how to make great progress and innovation. Leaders should strive to cultivate both within their work culture.'

Business sustainability ensures resilience, longevity and steady growth. There are a few ways to build business sustainability but **Su Aziz** narrows it down to four.

No 2: Adaptability

Especially today, the age of disruptions, a business survival depends a lot on how flexible it is. The Edward Lowe Foundation, known to champion entrepreneurship, lists adaptable business strategies as an important way to ensure a business's longevity. It's not enough to only formulate an annual budget and compile yearly projections, you must know the market and be willing to adapt for your business strategy to succeed.

Adaptability is driven by business strategies that are shaped by how you price your product, employment of staff, attract investors and, of course, the state of the economy. More importantly, stay ahead of the game, be ahead of your competition. Be able to foretell what are the gaps that need filling in your industry or the market.



Two More Factors to Consider

No 3: Intimately Know Your Finances

It's not enough to just monitor your finances. Projections done a year ago may not necessarily apply during this time of economic uncertainty where consumers' spending patterns are fickle. When it comes to monitoring your finances, the Edward Lowe Foundation advices to do it monthly, to monitor payroll, keep tract of inventory, go through monthly reports with a fine-tooth comb and know exactly where every dime is going.

These are facts to avoid nasty surprises such as realising at the eleventh hour that there are no more funds and be able to forecast troubles half a year ahead so you can adapt your business strategy or seek financing before it's needed.

No 4: Purpose

Even more than profit, the future of business today, in the twenty-first century, is purpose. Developing sustainability standards and applying it to your product, services and company culture gives a business not only purpose but also a competitive edge. Furthermore, today, many businesses believe that a business strategy applying sustainability creates long-term value and encourages longevity.

A PricewaterhouseCoopers (PwC) 2016 study *Putting Purpose to Work,* shows that 79 per cent of business leaders surveyed by PwC believe that an organisation's purpose is key to business success. Perhaps, one of the reasons for this is the increasing importance put upon businesses to acknowledge non-monetary assets such knowledge harnessed as well as groundbreaking ideas.

However, blind purpose yields little to no result. Experts advice purpose for businesses should be globally integrated.

Lastly, even though it isn't counted as fundamental by most studies and reports for the longevity of a business, a succession plan certainly helps with its long-term view. Deloitte's publication *Business Succession Planning*, states that, 'For a business, working without a succession plan can invite disruption, uncertainty, and conflict, and endangers future competitiveness. For companies that are family-owned or controlled, the issue of succession also introduces deeply emotional personal issues and may widen the circle of stakeholders to include non-employee family members.' What's more, the publication states that for private, owner-managed, or family-owned businesses, a solid succession plan can drive the growth of the business, reduce taxes, and set the stage for retirement.

Diversify to remain competitive. Diversifying is not only thinking up new products or services with which you can explore different markets, but it's also a way to widening your existing market reach by adapting your existing product to a different market. For instance, if you produce car tires, snow car tires widen your reach to countries with extreme cold weather. Some of the oldest companies in the world have lasted hundreds of years due to diversification.

BUSINESS





S ocial enterprise has been looked upon as an entrepreneur's way of trying to change the world and promote inclusivity. Being more than just a business trend, social entrepreneurship has caught momentum as a way to simultaneously manage a business and elevate the lives of others as well as the environment. Furthermore, technology has made it possible for social enterprise to take off in a grand manner. This is because the internet makes it easier and inexpensive to promote social enterprise, crowdfunding as well as microlending.

Everything begins with education. So, with the intention to spur social enterprise development and plant social entrepreneurship roots in universities, a two-day forum was organised by WIEF Foundation, the Ministry of Education Malaysia and Higher Education Leadership Academy (AKEPT) in collaboration with International Islamic University Malaysia, last October in Kuala Lumpur. More and more, universities play a prominent role in supporting and developing social enterprises. These academic institutions could develop, for example, bespoke academic social enterprise modules, internships in a social enterprise and guidance for students establishing their own social enterprise.

The AKEPT-WIEF Social Enterprise Forum had around 300 participants who were mainly higher education students. Over 30 experts from various countries including India, New Zealand and the Philippines, shared their insights, experiences as well as opinions on how to move forward in terms of social entrepreneurship. During its five plenary sessions and six masterclasses, topics covered included the potential of social enterprise development in universities, how governments can play a role, some lessons from success stories, how to commercialise the businesses and a few experiences from abroad.

One of the main takeaways from the experts was that social entrepreneurship requires perseverance and careful management of finances as well as passion. It's a fine balance where too much of one thing can topple the balance as well as minimise the chances of one's success as a social entrepreneur. Keeping an eye on the bottom line of the business while being socially responsible is no mean feat. In fact, it has been admitted by many just how difficult it can be and echoed by session speaker Sasibai Kimis, founder of Earth Heir, who said, 'Social entrepreneurship is a scary journey. We are not only answering to our clients but also to our beneficiaries. The first few years, I didn't pay myself and lived on my savings. There were many times I wanted to give up but what kept me going is knowing that we are building something for the nation. All businesses in Malaysia should have a do-good component. Social entrepreneurship is a new model for businesses.'

Naturally, nothing good comes easy. The speakers agreed that although passion is good but it alone cannot fuel a business. 'You must be so flexible, nimble on your feet and you must have that blueprint of what you want to achieve. It is not just about passion. You must also have logic,' said Masterclass speaker Joycelyn Lee, long-time social entrepreneur and cofounder of Pit Stop Café in Kuala Lumpur.

Unleashing its Potential

It starts with education and universities have an important role to play by instilling the benefits of social enterprises among students through their teaching. During a plenary session, Syed Mahmudul Huq, chairman of Bangladesh Shrimp and Fish Foundation, observed a mismatch between universities and life of students, and that this was common in many developing countries. 'The solution to this was to assist students in identifying their problems in their communities and help them come up with practical solutions to improve their situation and help in economic contribution,' said Syed.

During the same plenary session, Professor Dr Hafid Abbas from the State University of Jakarta, noted that to develop university excellence there needed to be a training centre to provide technological training among other required skills to assist towards this development. The speakers concurred that universities should first set the example of being a social enterprise itself and help to bridge this mismatch. Gomer Padong from the Philippines Social Enterprise Network (PhilSEN), emphasised the need for governments to play a role in the sub sectors and help to mainstream social entrepreneurship in the education system.

AKEPT-WIEF SOCIAL ENTERPRISE FORUM 2018



Examples of Commercialising Social Enterprises

In Indonesia, Jamil Abbas of the Rahmania Foundation explained, the Foundation provided commercial financing and Islamic financial assistance such as zakat as well as waqf for the neediest children in the country. 'Unfortunately, society needs more,' he said. Jamil established other social enterprises to help people make money and stay with their families. He's currently working on a solution to help solve the garbage problem in Indonesian towns and at the same time help the differently-abled people make a living.

Nurfarini Daing, co-founder of the Youth Trust Foundation in Malaysia, dedicates her time towards supporting youth projects that contributes to nation building. During a plenary session, she pointed out that many social enterprise companies faced a social mission drift along the way because they weren't ready. 'It's important that we're aware of the balance between our social impact and the business return of investment,' she said and admitted that there was no real formula to finding this balance.

Jerryson Abraham Doss, co-founder of Viva Starfish Sdn Bhd in Malaysia, had helped millions of people in need of education. He believed that in order for social work to have an impact it must be continuous. He used to sell bottles of water to earn money to help children in their education. He also mentioned that success comes with knowing how to manage your finances and the passion you have about your business. 'Choose something that's very close to your heart,' he advised.

Barely 21 years old during the time of the forum, Anand Chowdhary was one of the youngest entrepreneurs. He founded Oswald Labs in 2016 and built a web tool to help people with dyslexia to read. 'Someone told me how powerful the tool is, and that she used it for her kids and students,' he said. So, he decided to drop out of school and worked on it, full time. Today, he offers it for free to the public but charges big corporations that can afford to pay.





Last Words

Masterclass speaker Vishnu Swaminathan from Ashoka USA, defined social enterprise as a way for enterprises to 'make money, re-deploy, open source and help others copy'. In starting a business, a main challenge is funding. During the Masterclass that discussed how and where to look for funds had Vishnu advising fresh entrepreneurs to avoid complex and small money when looking for funds. He insisted that focussing on individuals for funding could be a better strategy. Even though getting flexible money might be a challenge, he encouraged this and reminded how industries such as medical as well as education got the most funding. Also, when it came to social entrepreneurship, size didn't matter, 'What matters is how you transform your own industry, it's no longer about how big your organisation is,' he insisted.

Final takeaway from the AKEPT-WIEF Social Enterprise Forum came from Royston Braganza, CEO of Grameen Capital India Limited, who listed pillars that young entrepreneurs should have. They included: education, innovation, a social ecosystem, policy, institutional framework and technology. Royston told participants that they should integrate work with their courses and to look at Sustainable Development Goals or SDGs. 'There has to be a positive contribution to the economy and it should benefit all stakeholders,' he concluded.

Social entrepreneurship, though a tough road to travel on, brings deep satisfaction. This was obvious from the various speakers during the sessions.

It wasn't only the positive social impact which they created but also the recognition for wanting to make a change while contributing to the economy. Furthermore, in today's economic climate, the speakers unanimously agreed that social entrepreneurship is the future of business. Therefore, the future of business is *purpose*.

Ingredients for social entrepreneurship from speakers of AKEPT-WIEF Social Enterprise Forum:

- 1 Keep a different perspective to doing good
- 2 A strong support system
- 3 Build and maintain a
- 0| network
- 4 | For students, integrate work and studies
- Keep an eye on the balance 5 | of social impact and return on investment (ROI)

About WET

WIEF Education Trust is the education pillar of WIEF Foundation and it believes that education is key to progress. Through its various programmes, it aims to garner support as well as resources globally to provide educational opportunities for young people, contribute to the intellectual property of the Foundation and provide platforms for entrepreneurs from various backgrounds to network, acquire knowledge and form collaborations.

> More details on WET:



OPINION: MACHINE vs SUSTAINABILITY

Technical innovation makes a lot of things in life convenient but encourages globalisation that exhausts our natural resources. *Su Aziz* muses.

all glass apartment an fitted with ultra-modern contraptions softened by dove grey walls and the tinge of warm hue from a burgeoning sunrise spilling in from the floor to ceiling windows, sits a little girl engrossed in conversation with what seems to be a pup. Well, what it is or labelled as, is arbitrary. Its sleek, angular silver body sits, squats, lays down and stands as any four-legged family pet would. The little girl giggles in delight as the plastic and steel pup does so according to her command. It seems to give her as much joy as a living pet would.

At the end of the day, isn't receiving joy the whole point, at least, for the little girl? As for the parents, well, a robotic pet pup spells low maintenance. This model they own even knows how to skip to its charging station when it hits 'low bat'. It's truly convenient and one of the main things that sold them on it – that and virtually no vet bills. Yes, we hear it: but what about the giving and reciprocating of affection, expressing emotions such as anger, hurt and joy, and being responsible of another's well-being? Well, what about it? In this digital age we interact with and through machines about 80 per cent more than actual face to face communication. We're comfortable and brave through the anonymity machines offer indiscriminately. We care less about being responsible of another's reaction or feelings to our actions when cloaked by this anonymity.

Ironically, some believe that machines will be able to mimic emotions, soon. To date, through algorithm, machines such as robots are now able to tell what a person is feeling. How they do it is, their algorithm counts the words a person uses and links them to the appropriate emotion. By the same token, in time to come, machines will be able to cultivate creativity and, perhaps, feelings. Let's not discount Hollywood prophesying this fact through films such as *AI*, *Wall.E* and *I*, *Robot*. On a global scale, conveniently, machines have made globalisation unstoppable. Through which, migration, consumerism and the sharing of knowledge burgeoned, making the world seems much smaller and inclusive. But every good has its bad. Globalisation has helped worsen the environment in which we live today and deplete our natural resource at an alarming speed. Machines, fittingly, don't care. Why should it if industrialists, businesses, policymakers and most of us, don't?

Although machines are absent of creativity to innovate out of their own free will – at least for now, their creators are not. Shouldn't now be the time to muse over how machines can further help design a sustainable future? There's food for thought.

TECH

Renewable Energy, To Date

There are many forms of renewable energy. Most of these renewable energies depend on, one way or another, sunlight. Alternative Energy, website that concerns itself with everything on renewable energy, explains that solar energy is the direct conversion of sunlight using panels or collectors while biomass energy is stored sunlight contained in plants.

Other renewable energies that don't depend on sunlight are geothermal energy, which is a result of radioactive decay in the crust combined with the original heat of accreting the Earth, and tidal energy which is a conversion of gravitational energy. Wind and hydroelectric power are the direct result of different heating of the Earth's surface which leads to air moving about, which is wind, and precipitation forming as the air is lifted.

If you think 100 per cent renewable energy will never happen, think again. Several countries have adopted an ambitious plan to obtain their power from renewable energy. These countries are not only accelerating installations but they are also integrating them into their existing infrastructure. A recent study by Stanford University researchers predicted that the world could be powered entirely by renewable energy in just 20 to 40 years from now. Given that we already have the technology, it's not that hard to imagine.

To date, almost 50 countries including United Kingdom, Germany and Denmark, that would be adversely affected by climate change, have agreed to make their energy production 100 per cent renewable by the year 2050. Furthermore, countries all over the world are actively embracing solar, wind, and geothermal energy.

Renewable energy ensures sustainability and economic longevity. *Nisha K* and *Su Aziz* look at which countries are leading the way, in terms of producing as well as consuming renewable energy, and how they are doing it..



High Use of Renewable Electricity in Sweden

Iceland Leads the Way

Renew Economy, an Australian website focusing on clean energy news and analysis, reports that, besides being famous for its breathtaking scenery, its geysers and Blue Lagoon, Iceland is also well known for using its abundant renewable energy. Also, it's especially known for tapping the volcanic roots of the island in developing its geothermal resources. Iceland today generates 100 per cent of its electricity with renewables: 75 per cent of that from large hydro, and 25 per cent from geothermal.

Media such as *The Guardian* have reported how Iceland provides 87 per cent of its demand for hot water and heat with geothermal energy, primarily through an extensive district heating system. Icelanders waited until the 1940's before they started tapping their geothermal resources to provide space and water heating for the capital city Reykjavik. It's estimated that exploiting geothermal energy for space heating alone saves Iceland USD100 million in imported fossil fuels.

In fact, all except 30 of Iceland's 160 swimming pools use geothermal water and because of the heat of the water, the pools are open-air and open during their biting cold winter. Geothermal water is now often used to keep pavements heated in Iceland and in Reykjavik, it's used to keep around 40,000 metres of roads snow free.

Within the next two to three decades, Iceland will be powered by renewable energy 100 per cent. This is because it plans to use geothermal electricity to split hydrogen from water, and then to use hydrogen fuel cells to power its vehicles and fishing trawlers.

The share of renewable energy used in Sweden keeps growing and this is in line with its goal to be the first country to be totally free of fossil fuel. Its official source for facts website, *Sweden Sverige*, reports that in 2012, the country had already reached the government's 2020 target of 50 per cent in terms of renewable energy production. For the power sector, the target is 100 per cent renewable electricity production by 2040. Sweden has a rich supply of moving water and biomass, which contribute to the country's high share of renewable energy.

Hydropower and bio energy are the top renewable sources in Sweden – hydropower is mostly for electricity production and bio energy is for heating. Few countries consume more energy per capita than Sweden, but Swedish carbon emissions are low compared with other countries. According to statistics from the International Energy Agency (IEA), the average American releases almost four times as much carbon dioxide (CO_2) per year into the atmosphere compared to the average Swede.

The reason for Sweden's low emission rate is that about 80 per cent of electricity production in Sweden comes from nuclear and hydroelectric power. Sweden currently has three nuclear plants with eight nuclear reactors in commercial operation, but nuclear power also remains a topic that divides political parties in Sweden. What to take note is, about 11 per cent of their electricity comes from wind power. Also, combined heat and power plants account for nine per cent of the electricity output in Sweden, and these are mainly powered by bio fuels. TECH

Costa Rica Turns the Ship Around

Costa Rica's growing demand for oil, due to its rapidly growing transportation sector which depends on gasoline, increased its gasoline purchase by 11 per cent in 2016. According to Costa Rica's State of the Region report, the country has approximately 287 cars per 1,000 people, surpassing the world average of around 150 cars per 1,000 people. However, it's only two per cent of the number of cars are electric. In fact, navigation app Waze, ranked its capital city, San José, as one of the most congested cities in Latin America.

Then In 2017, Costa Rica turned the environmental ship around with their 271 days of fossil-fuel free electricity which made global headlines. Impressively, Costa Rica was able to produce 98 per cent of its electricity without oil. This is no mean feat and one that even countries with stronger economy find tough to accomplish. Costa Rica blends hydro, wind and geothermal to power the homes of its 4.9 million inhabitants and renewable energy is less than a quarter of the country's total energy use.

What this means for Costa Rica is, recognition as one of the countries considered as leaders leading the path towards renewable energy that includes the Scandinavian countries, Iceland, Kenya, China and Germany.

Conclusion

As long as the sun rises and the wind blows, renewable energy is possible and any country can tap into this reservoir of energy. Unlike fossil fuel, renewable energy stations won't run dry because they aren't only constant source of fuel but also enduring. The initial high price of constructing renewable energy stations is high but it will soon pay for itself, not unlike fossil fuel production when it was first started. The step ahead of today as compared to fossil fuel days, technology is so developed that it certainly helps ease the burden.

Other than the three countries featured, these are the other countries leading in terms of renewable energy production:



United Kingdom: generates more electricity from wind farms than coal plants.



Germany: solar panels work optimally in its cooler temperatures and has fulfilled about 85 per cent of its electricity needs with solar.



China: it owns five of the world's largest solar manufacturing plants and the largest manufacturer of wind turbine.



America: it comes in second to China in terms of installed solar PV capacities and installed wind energy capacity.



India: it has 17 gigawatts of solar and almost 33 gigawatts of wind. It'll most likely surpass its 175-gigawatt goal by 2022.



Brazil: 76 per cent of its electricity comes from renewable resources.



Uruguay: 95 per cent of their energy supply is strictly renewables.



Denmark: it's investing primarily in wind power with short term goal to harness 50 per cent of their electricity from renewables by 2020.



Nicaragua: it has a goal of being 90 per cent powered by renewables by 2020 and has invested in wind, solar and geothermal power.



Morocco: it invests in solar and wind, and it aimed to power over one million homes with renewables in 2018.



Kenya: it invested in geothermal energy which fulfilled more than half of their energy capacity in 2015. It has installed the continent's largest wind farm that contributes 20 per cent to their energy production.

Where the School has No Walls

a most unexpected setting, nestled in the heart of a lush Balinese jungle, sit several bamboo structures that form Green School. It's a private, non-profit school for preschool to grade 12 (age 3 – 18) and its curriculum focuses on powerful, sustainable as well as impactful learning experiences that can help develop 21st century skills. The beauty of it is, the school has no walls, uses natural light and is built on approximately eight hectares of land.

Founders, John and Cynthia Hardy conceived the idea of the school in 2006, and opened its doors in 2008 to 90 students. The award-winning jewellers and sustainable business pioneers were 30-year residents of Bali then, and wanted their daughters to attend a school they believe in, one that went beyond the physical limitations of most traditional schools.

John was affected by Al Gore's film, An Inconvenient Truth, that during his TED Talk in 2010 which garnered over a million views on YouTube, he said, 'I've four kids. And even if part of what he [Al Gore] says is true, they're not going to have the life that I had. And I decided at that moment that I would spend the rest of my life doing whatever I could to improve their possibilities.' What if there's a school with no walls, where the students are smiling and they don't want to leave? **Su Aziz** finds one such school.

EDUCATION



John introduced his school during his 2010 TED Talk by saying how his school doesn't look like a school, but, he adds, 'At Green School, the children are smiling. An unusual thing for schools! The people who built my school also built the prison and insane asylums, out of the same material.' Which is bamboo, a sustainable building material.

The school's mission of 'a community of learners making our world sustainable' sets the core philosophy of why and how the school educates. Basically, it sets out to develop global green leaders. Teachers here are as diverse as the student body. It prepares the students for the real world by being involved in it now, to have impact now, to take responsibility now, to model as well as practice the skills and mindsets that we'll need later on, now.

Back to School

In many ways what happens at Green School can, and does, at times look very similar to what happens in other schools. The difference lies in the culture that's created around the experience: the collegiality between students and teachers, the 'everyone is a learner' belief system, the dedication to celebrating people's differences not similarities, and highlighting how differences actually build a stronger community than similarities.

Currently, there are 508 students at the school from 35 countries including 43 full scholarship Balinese students. A school day runs from 8.15am to 3.15pm but students often stay on till 5pm for the daily after school activities.

The 'Green School way' or the Green School curriculum has age and developmentally appropriate ways of teaching as well as embedding learning. Their curriculum follows the three frames of learning:

1 | THEMATIC: geography and maths may be integrated into a thematic.

2 | PROFICIENCY:

focuses on core, discrete intellectual competencies that require repetition to reach proficiency.

3 | EXPERIENTIAL:

'At most schools,' its principal Leslie Medema said in an interview, 'you learn about making a bridge in a book. At progressive schools, you maybe make it out of matchsticks or carve it out of soap. At Green School, you actually just go and make it.'

In wall-less classrooms, primary school students may start with circle time and a moment for the whole class to get together before breaking out into other subjects for the day. Proficiency classes are usually in the morning, followed by thematic or the experiential lesson frame.

Students may have a green studies class in the garden, their physical wellbeing class in the gym, their science class in the bamboo science lab or head to see the music teacher in the music room. The students may be at Green School Innovation Hub, which is their makers space, where they create items using woodworking equipment or 3D printers. At Project Hub, they pitch a student-led project idea which will then be used in the classroom or engage in their Waste Management centre called Kembali. Snack time and lunch are in the main building of the school which is known as the Heart of School and older students tend to eat lunch in the main community space. Then, afternoon lessons may involve an assembly or middle school and high school students may be meeting up with their mentors for their projects (Quest and Green Stone). Otherwise, they may present their projects in the Adult Co-working space known as The Bridge – by the way, Green School is also for grownups.



Balancing Green and Tech

Green School aims to empower in their students a healthy and vibrant growth mindset, entrepreneurial and innovative mindset, and a sustainability mindset. In the decade since it's been operating, there are two success stories that the school's proud of:

1 | BIO-BUS:

their sustainable transportation system that runs on used cooking oil.

2 | BYE BYE PLASTIC BAGS:

youth movements to ban plastic bags use in Bali and beyond.

Despite being a school in the jungle, the school embraces both high-tech and lowtech solutions. They believe that in order to build a sustainable future, being skilled in technology is part of that change and allows their students to make a bigger impact now. Green School Innovation Hub was created to fulfill the need to create a space where students could learn by creating, iterating and learning through mistakes. The hub's equipped with 3D printers, woodworking equipment, laser engravers and precious plastic machines that help them convert plastic recycling waste into ink for their 3D printers.

The school's curriculum teaches digital citizenship in an age, and developmentally, appropriate way. Their primary school students have a computer lab and learn to use technology. Middle school and high school students are required to use laptops as part of their lessons. Furthermore, it has been accredited by WASC (Western Association of Schools and Colleges).

Staying Relevant

The school's curriculum is ever evolving. Established course design processes ensure regular review of program offerings that are always open to student-led directions that can be explored and evidence-based approaches, for curriculum development.

Their teachers come from all corners of the globe, bringing with them their own educational networks and resources. Faculty and individual professional development are supported with a focus on peer-lead development and training, along with external expertise.

With a focus on global issues and real learning, their teachers are expected to be well-read and plugged into world issues. Teachers and students are also able to tap into the expertise and knowledge that reside within their parent community. For example, on highly technical projects such as renewable energy, a team of students, along with their teacher, can invite a parent to join the project team to provide expert input and contribute to the learning and achievement of the end goal.

EDUCATION



What's Next

The next step is heading towards New Zealand. This is because of the country's 'can do' culture and pristine natural environment provide the school with a wonderful opportunity for a second Green School.

With its own unique elements, Green School New Zealand will stay true to their philosophies of structural design and learning principles while embracing the culture as well as traditional wisdom of the people, and work in harmony with the natural landscape.

The physical design of the school will be in keeping with the belief that the structures should work in harmony with the land, that children will be immersed in nature and that buildings should be works of art that spark creativity, as well as make a tangible statement about the school's commitment to sustainability.

The school will open in February 2020 with an initial enrolment of around 85 students. Since the announcement of Green School New Zealand, enrolment interest has been very high, signalling the need for new educational models globally.

What's more, it's promising to be the kind of school where students don't want to leave.



A typical day at school depends on the age of a student – from early years, primary school, middle school and high school:

Starts with a commute to Green School on the Bio Bus fuelled by used cooking oil.

Coming through the bamboo school gates and meeting friends at the community space which has a local restaurant, juice bar and a hangout place. Parents and students usually meet and greet here.

Classes start at 8.10 am so the gong rings at this time (there's no school bell).

School ends at 3.15pm but there are numerous after school activities to choose from, including Balinese Dance, engineering club, capoeira and soccer.



Three tips Green School have for conventional schools to realistically adopt or incorporate sustainability into their curriculum by Leslie Medema, principal of Green School:

1 | Learning real life experiences or projects: the students feel their learning come to life. That's when they really know and can answer why they go to school and understand the impact they can have in their world which is a highly empowering and motivating experience.

2 | Focus on the mindsets you're creating in children. It isn't what they do or what they learn as much as it's how they think that will change their lives and the world. These mindsets should be growth oriented, entrepreneurial, problem solving and sustainability focused. Mindsets can be changed and developed in many ways but really it's through the experiences that one has in life.

3 | Develop 21st century skills and make this your foundation.

GREEN

Greening Cities

ADDRESS AND THE OWNER.

Climate change affects everyone. *Nisha K* examines the effects of climate change to the environment and people. A thousand-year-old monastery in remote Nepal battles Mother Nature as melting ice caps surrounding the Himalayan valley threatens its very existence. That's the scenario playing out in the Humla District where the ancient building lies at the focal point of the trans-Himalayan village of Halji.

Halji's one of the three main villages that make up the Limi Valley, the other two being Til and Jang. Halji's extremely remote and where it snows at least half the year. What's more, with absolutely zero network capabilities, there's no connection with the outside world. This means no Twitter or Instagram can capture the breathtaking scenery. At the heart of the village is the highly revered Rinchenling monastery, possibly one of the oldest in Nepal, but the building's rich history is under threat by the unpredictable glaciers which sometimes melts and floods the valley.

It has been reported that the monastery sits merely 30 metres away from the previous flood path, adjoining broken walls of the collapsed houses. As glacial retreat hastens with rising temperatures, the possibility of another outburst looms large. There have been several casualties over the years and the local government agencies as well as NGOs have been working towards a viable solution to counter the effects of Mother Nature.

STATE OF TAXABLE

The changing climate adds the danger of development of supraglacial lakes which are prone to sudden drainage,' says Jan Kropacek, a researcher at the Faculty of Environmental Sciences at Czech University of Life Sciences in Prague, who studied the Limi Valley.

The village of Halji in the Limi Valley is just a classic example of how the forces of nature can have a detrimental effect on the livelihood of the surrounding inhabitants. The residents in Halji, who constantly live in fear in case of the worst possible scenario – the melting of the ice – aren't alone, as many city dwellers also suffer the same fate though by the effects of climate change.

In fact, big cities are very much vulnerable to the long-term changes in the Earth's climate and because there's a high concentration of population in the area, it becomes a huge liability for the population. Here, we take a look at some of the major cities in the world that are affected by the significant changes in global temperature.

Effects of Climate Change





Bangkok, Thailand

Being a metropolitan hub in Asia, Bangkok have been plagued by countless floods, which is caused by the rising level of its rivers. At the heart of Bangkok is its river network that runs through the city – the Chao Phraya River which is the lifeblood of the sprawling city.

When water levels of the Chao Phraya River rise due to continuous rainfall, the swelling causes spillage onto the roads of Bangkok and its surrounding areas. This causes massive panic and inconvenience to the locals. Despite it being a common occurrence and the locals are somewhat accustomed to it; the situation does make it rather uncomfortable.

To prevent further flooding, the city's local councils have taken positive steps in mapping out flood prone areas in early 2018. The most notable project is the Chulalongkorn University Centenary Park, which is a 44,415 square meters of green space that can hold up to a million gallons of rainwater. According to TED, the project is headed by local firm Landprocess, with its architect Kotchakorn Voraakhom designing the park to address the flooding in its surrounding neighbourhood. Kotchakorn's latest completed project is a dazzling park in the centre of Bangkok, set on the campus of Chulalongkorn University. She has transformed 44,415 square meters — land worth an estimated USD700 million — into Chulalongkorn University Centennial Park, a lush, green oasis featuring ample space for outdoor meetings, an amphitheatre, a massive lawn for recreation, playgrounds and even a small museum.

Since it opened in March 2017, the park has been a huge draw for students and residents (one local podcast called it a hidden gem). And while 44,415 square meters may not sound like much, any new park in green space-starved Bangkok is a big deal. According to Siemens Green City Index, Bangkok has just 3.3 square meters of green space per person, by contrast, Manila has 5; Paris, 11; Shanghai, 13.5; New York City, 23.1; London, 27; Singapore, 66.



Florida Keys Photo by Lance Asper on Unsplash

GREEN

Singapore Changi Photo by Pang Yuhao on Unsplash



Florida Keys, United States

Best known for its key lime pies, pastelcoloured buildings, beautiful tropical islands which are perfect for snorkelling and scuba diving, Florida Keys is a beachgoer's paradise. But in 2015, the coral cay archipelago, which is situated along the Florida Straits, succumbed to tidal flooding and Hurricane Irma in 2017 gave a painful taste of the future.

'In a small Key Largo neighbourhood, the tide came in — and didn't go out for almost a month. Residents sloshed through more than a foot of saltwater that lapped at their front yards, knocked over their trash cans, created a mosquito breeding ground and made their roads nearly impassible. Some residents rented SUVs to protect their own cars. Others were homebound,' observed Alex Harris in the *Miami Herald*.

Small stretches of roads are a test case for Florida and the country. A lesson learned here is that climate change will swamp in the years to come and hundreds of kilometres of roads are susceptible to sea level rise in the next two decades. Developing countries have taken on the issue of sustainability and have introduced lush green landscapes into the enclosure of their concrete jungles. Singapore is a prime example of a city which has a mix of skyscrapers and greenery.

Its most recent example is their Jewel at Changi Airport, connected to its Terminal 1, opened in April 2019. The multi-level dome structure houses an integration of 'nature with engineering marvels' through a canopy park, hedge maze, rain vortex, forest valley and topiary walk, along with retail stores, a hotel and eateries. The dome's top floor alone is 14,000 square metres and contains a variety of natureprone recreational spaces.

Going back a little, Singapore's efforts kickstarted with the Garden City vision, introduced by its first Prime Minister, Lee Kuan Yew, in 1967. It was to transform Singapore into a city with abundant lush greenery and a clean environment in order to make life more pleasant for the people. Singapore has come a long way since then and has remodelled itself into a world-class city in a garden that it is today.

The combination of high demands of fresh produce and dearth of suitable urban farming land in urban areas, roofs are increasingly being seen as a plausible space for growing food and a proactive measure in building a sustainable future for cities. In the heart of Kuala Lumpur, Malaysia, the rooftop of 22-storey Kenanga International building enables vertical farming by local company VFarm.

Kenanga's rooftop space of around 1,300 square metres allows for a production capacity of around 20,000 kg of crops per month. The end product will be used for food, cosmetics and pharmaceutical. The project kicked off in May 2019 and expected to produce results by end June of the same year. Besides an economic effect, converting rooftops into green roofs is a rising trend in cities globally and transforms lifeless roofs into vibrant green cityscapes.

Examples of Green Lungs

Slowing Down Deterioration



Cities are also becoming more sprawling: the amount of land being used for urban purposes is expected to triple between 2000 and 2050. This is leading to the loss of natural ecosystems and productive agricultural land. 'Sprawling cities are also less energy efficient, as residents have to spend more time travelling to reach jobs, services and amenities,' says Aniruddha Dasgupta, Global Director of WRI Ross Center for Sustainable Cities.

'The Sustainable Development Goals commit to ending poverty in all its forms by 2030. To realise this aspiration, governments need to provide underserved urban residents with decent housing, safe drinking water, reliable sanitation and clean energy. Ultimately, the number of slum dwellers should be declining by 50 to 60 million people a year even as urban populations rise,' says Aniruddha.

Emissions are highly concentrated in a small number of crowded, high income cities and affluent suburbs according to the Norwegian University of Science and Technology, who compiled a list of carbon footprints of 13,000 cities worldwide. 'The study, released in 2018, identifies where actions to combat climate change are more desperately needed,' says Dan Moran, lead author and principal investigator on the *Global Gridded Model* of Carbon Footprints.

'People can take actions such as improving bikeability, investing in solar panels for city buildings and schools, using clean vehicle fleets or even consider actions we might consider more radical, like moving the whole city to green electricity or establishing a walking-only downtown,' says Dan.



Intensive urban growth in cities have detrimental effects – exhaust from automobiles increases lead levels in the air, uncollected waste become hazards and animals are affected by the loss of their homes and food sources. By 2050, 75 per cent of the population of the world is expected to be living in urban areas. One way to make a city greener is to create parks – these can be considered as green lungs where families and children can play in a safe environment. It also balances the hardscapes like skyscrapers and contributes to cooler temperatures.

Also, providing public transportation that allows commuters to move around quickly and within cities would reduce carbon footprint. Governments should also create policies and regulations to cut water consumption and waste and encourage recycling and composting to ensure a greener environment for the next generation.

The Paris Agreement commits to eliminate net global emissions by 2050. To decarbonise cities, governments will need to mobilise large-scale investments in renewable energy, public transport, energy-efficient buildings and solid waste management. Much of this investment will be needed in urban areas that need to reduce emissions by four to five per cent every year.

RENEWABLE BUILDING MATERIAL



Sustainable and a good building material, bamboo's the material of choice for IBUKU, a Bali-based architectural design company. Here, its founder tells *Nisha K* how she uses them to create stunning architectural structures. he thought of a bamboo house is certainly fascinating and it lasts a lifetime. What's more, bamboo is environmentally-friendly, sustainable, renewable, strong in tension as well as compression, and noted for its rapid growth. Bamboo houses are common in many parts of Southeast Asia where the plant grows in abundance.

At IBUKU, an architectural design company that handcrafts bespoke bamboo designs for boutique hotels, high-end resorts and hotels, restaurants, yoga centres and spas, the bamboo they use is carefully selected from the river valleys and mountains on Indonesian islands of Bali and Java. They are harvested from clumps that, once established, grow a new generation of shoots each year. It takes just a few months for a new bamboo shoot to reach its full height, and in three years it becomes timber ready for harvest.

IBUKU takes great care to ensure that only the mature poles are harvested, creating an incentive for the bamboo farmers to allow the younger shoots to grow to maturity for subsequent years' harvests.

In the past, bamboo buildings were susceptible to termites and powder post beetle infestations that would eat the bamboo to dust. However, at IBUKU bamboo is treated with a boron solution, a naturally occurring salt solution that renders the bamboo indigestible to insects. It has a toxicity level just 1.5 times greater than that of regular table salt. The solution is re-used in a closed-loop system ensuring minimal impact on the immediate ecosystem.

Like any natural fibre, bamboo must be protected from the sun and rain. The dramatic overhanging roof and tilting structural columns are designed to protect the villas for the long-term. To prevent moisture, the structural beams are secured by steel and concrete to large river rock stones. These are, in turn, secured within the earth's foundation by steel rods reaching down several meters, as determined by IBUKU's team of structural engineers.



<image>

Raised in Bali, Elora Hardy was inspired by the highly skilled local craftsmen as well as her parents' talented jewellery designs. She spent 14 years of her young adult life in the United States, where she received a degree in fine arts and went on to New York City to design prints for Donna Karan that would walk the world's runways. In 2010, Elora left her successful career in the fashion world to carry on the incredible work of the design-build team that created the world-renowned Green School in Bali, founded by her father John Hardy.

The first structure at Green School was a bridge, connecting the two sides of the river valley campus. It stands as an outstanding example of what is possible when architects, engineers, designers, and craftsmen come together to build in a new way. The construction of Green School led to many innovations in bamboo architecture and engineering.

Elora and her team of designers and architects have until today built 60 new bamboo structures in Bali. 18 of these buildings now make up Green Village, a community of luxurious private homes neighboring the Green School. 'What we are doing is reinventing the rules and standards of what a building can look like. These buildings are a testament to the power of bamboo and the possibilities of sustainable architecture. IBUKU continues to expand the potential of building exceptional bamboo structures', adds Elora.



Joerg Stamm, a German builder who specialises in bamboo, was a key contributor in this process along with artist Aldo Landwher. Together they were responsible for developing many of the design aesthetics and engineering concepts used by IBUKU today. Joerg developed the concept of creating central basket-like towers to hold up larger buildings, as well as the lidi concept, giving us access to our signature curvilinear vocabulary.



IBUKU uses bamboo because of its strength, beauty as well as flexibility, and also because with its four-year growth cycle and carbon sequestration capacity it's the most environmentally conscientious building material conceivable. 'In a world of retrofitting or re-designing traditional items and materials to be slightly less "bad", we decided to wipe the slate clean and start fresh. Though bamboo has traditionally been used throughout Asia in short-term structures, new treatment methods have given it a capacity for a longer life,' says Elora.

With very little attention, a bamboo shoot can become a structural column within three years, compared to 10-20 years for softwoods. Some species have been measured shooting skyward at two inches an hour or up to one and a half meters a day. Besides being sustainable. bamboo is also known for its unlimited possibilities and beauty.

to be continuing and evolving this age-old tradition so it can live on in Bali. Onsite, these craftsmen measure and replicate the bamboo model, building these structures almost entirely by hand', Elora adds.

Bamboo entrepreneurship is also one of the key reasons to uplift the socioeconomic status of the underprivileged and poor. 'We work with many bamboo farming communities across Indonesia and are supporters of the work done by Arief Rabik,' says Elora. Arief is the founder of Indobamboo and the Bamboo Environmental Foundation.

Bamboo has great potential for both economic empowerment and restoring degraded land. The bamboo used by IBUKU is carefully selected from the river valleys and mountains of the islands of Bali and Java in Indonesia. They are harvested from clumps that, once established, grow a new generation of shoots each year.



It takes just a few months for a new bamboo shoot to reach its full height, and in three years it becomes timber ready for harvest. IBUKU takes great care to ensure that only the mature poles are harvested, creating an incentive for the bamboo farmers to allow the younger shoots to grow to maturity for subsequent years' harvests.

There are many challenges of using bamboo, but so are the opportunities. According to Elora, the main structure of the house is made of bamboo, however strong foundations are constructed from stone, concrete and steel. To ensure long-term weather resistance, roofs are made using bamboo shingles with an aluminium lining. Interior accents meanwhile are created using natural materials found in the local environment, including giant stone slabs, beaten copper in bathrooms, paper walls, and hammered brass details, all handmade by local artisans using traditional techniques.



Governments in Asian countries are encouraging farmers to grow bamboo trees instead of timber because of its advantages. With its three-year growth cycle and carbon sequestration capacity, it's a uniquely efficient and responsible resource. Even sustainable timber can't begin to compare with bamboo as a building material. Bamboo is also very affordable compared to timber and the duration where it can take 15 to 20 years for timber to be transformed into flooring. Bamboo functions essentially the same as wood but its lightness makes it - easy to handle, transport and store. Advantages of Using Bamboo to Build Structures

10 advantages of bamboo

that makes it a good building material:

1|Bamboo's strong natural fibre makes it superior to hardwood.

2 | Bamboo's versatility makes it a good material for flooring, roofing, concrete reinforcement, scaffolding, piping and walls.

3 | Bamboo's very flexible. When it grows it can be defined to grow into specific shapes.

4 | Its shock absorption capacity makes it a great building material for earthquake resistant houses.

5 | Bamboo houses can also stand hurricane of wind speed of up to 270 km/ph.

6 | It's light in weight, making it easy to transport.

7 | When bamboo is properly maintained it can last as long as wood.

8 | Bamboo is cheap and readily available in areas where it's cultivated.

9 | Transportation of bamboo is cheaper than other materials.

10 | Bamboo's naturally waxy surface doesn't require painting.

Source: www.altenergy.org





ively, that's the word that would describe Melati and Isabel Wijsen, well. Although, Melati describes herself as, 'determined, ambitious and visionary young changemaker! A leader with initiative and who empowers those around me.' While Isabel sees herself as, 'a focused and passionate student who has a great sense of humour, loves to dance and expresses herself creatively. A genuine listener and always a good friend.'

Without a doubt, youthful optimism and enthusiasm exude generously out of these two. Exactly the ingredients to drive a cause. Now, 18 and 16 years of age respectively, these two sisters who grew up in Bali have been advocating for the island to be plastic-free through their initiative, Bye Bye Plastic Bags.



The Wijsen sisters in Bali focused on eradicating the use of plastic bags on the island at barely 10 and 12 years old. They proved that, when it comes to making a difference, age really doesn't matter. These changemakers chat with **Su Aziz**.

What got them started six years ago was a lesson in class – both are students of Green School in Bali – about impactful world leaders and changemakers, such as Nelson Mandela and Martin Luther King that got them thinking about making a difference in Bali. Brainstorming led to a decision to focus on Bali's garbage issue because it impacted their daily life the most. Bali has a population of nearly 670, 000 and it's a well-known tropical island destination. Its beautiful beaches, colourful as well as exotic culture attract over five million tourists annually, and the number is growing. Tourism is its biggest revenue that contributes around 48 per cent to the island's GDP.

It's not hard to imagine how Bali's lucrative tourism industry may contribute to its garbage problem. 'We'd play in the rice fields or walk on the beach and we saw plastic bags clogging the gutters and piling up in the rivers, by the side of the road as well as in the rivers,' says Isabel. 'Plastic bags were something we saw given away every day and they aren't necessary. We saw this as a realistic problem we could tackle,' adds Melati. In fact, Bali aims to reduce its plastic usage by 70 per cent by 2025. In 2013, when Melati was 12 years old and Isabel was 10 years old, they launched the idea of Bye Bye Plastic Bags (BBPB) at the Global Initiative Network Youth Conference in Bali. To date, there are 35 global BBPB teams in 29 countries led by young people. Both Melati and Isabel have spoken to tens of thousands of students globally with the hope that each time they do so, they leave behind a huge motivation for youth to take action.

Here, they tell us more.

Q:

Why is Bye Bye Plastic Bags an important effort?

A:

Bye Bye Plastic Bags is a group of young people – just like you and your friends – to help save the environment. We don't like using plastic bags because it ends up in nature, forever. Animals can't tell the difference between plastic and food, so they eat it. Can you imagine? You wouldn't want to eat plastic. So, let's work together and say no to plastic.

Q:

What's been the most effective way of getting your message across?

A:

What we're still enjoying the most when it comes to campaigning is speaking to the youth. Whenever we travel for conferences or speaking assignments, we try to talk to at least one local school as we recently did in Berlin and Bandung. Their age groups vary from 5-year-olds to university students. We've spoken to around 45,000 students over the past years which is probably one of the things that make us the proudest. For us, speaking to them and sharing our story is the most effective way to get the message across. It's relatable because we're students too. Also, using the tool of social media to spread the message far and wide. We feel that this is an incredible way to reach thousands of people on and off our island home.



Q:

You had aimed for Bali to be free of plastic bags by 2018. It's now 2019, what is the update?

A:

Finally, after many years of hard work and with the effort of many, the ban of plastic bags in modern stores is in place since 1 January 2019 in Bali's capital city, Denpasar. We're doing regular checkups with our local team and are proud to say that it's been taken very seriously. You won't find a plastic bag at the stores and people are slowly changing their habits to bringing their own bags when shopping. We're so proud. The rest of Bali will follow in June 2019, and under the new governor's regulation #97 of 2018, the ban will be extended to straws as well as styrofoam.

Q:

Your thoughts on youth empowerment?

A:

Youth empowerment has become one of our key messages. Over the years we've embodied the proof that kids can do things. We're living examples of that. Everything's happening in our lifetime, our generation is experiencing things to an extreme level never felt before. But unlike previous generations we don't have the luxury to wait before taking action. We believe the current traditional education system needs to change because at the rate we're going now, we're not empowering young people to act. We're studying for standardised testing, focusing on grades, finishing school in such a linear way and yet we're forgetting the biggest test of our time - climate change. So, the question becomes, how can we empower youth through education? Our next project dives straight into that.



Q:

How can we tackle issues concerning the environment?

A:

Sometimes, when you look at issues that we're facing, like climate change or plastic pollution, it can feel huge and you start to doubt your own action. But it does matter. For an individual to start and to make it easier, break things down. Do research to best understand local practices being done in your area that contribute to saving the environment. Just start today, start leading by example. Make that difference one bag at a time, one plastic bottle and straw.



Q:

What are the three things you'd change about the environment?

A:

1 | We'd see more serious climate action being done to ensure that we stay below 1.5 degrees.

2 | We'd stop plastic consumption and replace it with more circular, sustainable products for the environment.

3 | Stop the mass deforestation that's happening throughout the world and especially Indonesia.

Q:

What's an unforgettable lesson for you?

A:

You can't do it alone. You need a team behind you. It's what keeps us going on challenging days and they make it fun. Whether it's been our friend, family or other local changemakers. It took a team of volunteers of all ages from all over the world to make BBPB a reality.

Q:

What question would you that can change the world, and who do you think should answer it?

A:

The question would be, 'What if we could start from the beginning, how would we as young changemakers create the world that we want to be a part of?' and the youth collectively should answer it.

Q:

Lastly, where can we expect to hear you speak next?

A:

What we're definitely excited about our first Changemaker Weekend hosted by Melati here in Bali. We can't wait to share our ideas, beliefs and vision with young, likeminded youth, hoping to help empower them to follow their passion. Other upcoming speaking assignments for 2019 include Australia, Colorado, Germany and Canada. Alas, Isabel's very much focussing on school this year and can't miss out on her classes so much. So, she isn't traveling abroad that much for speaking assignments.

*Follow them on their social media accounts @byebyeplasticbags for updates.



Melati and Isabel Wijsen's formula for great teamwork and results:

Make it fun! Creating a movement doesn't have to be boring. Keeping it fun and alive will attract lots of team members. If you speak from the heart, people will see your passion for the work that you do, the fun that you're having and they will want to join in. Letting team members take leadership on certain projects they feel passionate about will also give great results.

> More details on Bye Bye Plastic Bags



WBN:

WIEF Social Media Workshop for Women Entrepreneurs

25 – 26 April 2018, Universiti of Brunei Darussalam, Brunei

Taking into account the importance of social media in business, WIEF Businesswomen Network (WBN) and the Universiti Brunei Darussalam (UBD) jointly organised the WIEF Social Media Workshop for Women Entrepreneurs at the Universiti Brunei Darussalam in April 2018. The Workshop's programme was designed to equip women entrepreneurs with the skills needed to exploit this new phenomenal marketing platform.



36 women such as entrepreneurs, lecturers and students from Malaysia, Philippines, Sri Lanka and Brunei, attended the Workshop that was held at the Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah Institute of Health Sciences (PAPRSB IHS), UBD. The participants were from various backgrounds and businesses ranging from beauty care, food, education, clothing and other sectors.

The Workshop covered social media strategy, graphics, video, digital marketing, search engine optimisation, web development, animation and AI. Among the guests who attended the closing ceremony were Dato' Dr Norraesah Mohamad, Chairman of WBN and Associate Professor Dr Mohammad Ayub Sadiq @ Lin Naing, Acting Vice Chancellor of UBD.

Taking the initiotive

WBN:

WIEF Women Entrepreneurs Strategic Workshop

Growing Your Business – Mobility Opportunities

28-30 August 2018, Tamu Hotel and Suites, Kuala Lumpur

The purpose of the 3-day workshop was to provide opportunity for women entrepreneurs to find out how to overcome the challenges of today's highly competitive business environment. In order to achieve this, the programme module was specifically designed to help women entrepreneurs learn and apply sustainable business models and business creativity into their enterprises. There were four interactive sessions led by a trainer, a half day industrial visit and five special sessions with guest speakers who are experts in their fields. 30 women entrepreneurs aged between 27 and 69 years old, from nine countries – Sri Lanka, Bangladesh, Philippines, Yemen, Indonesia, United Kingdom, Sudan, Brunei and Malaysia – from a variety of industries that included food and beverage, education, clothing and other sectors, attended the workshop.

Serba Dinamik Holdings Berhad had volunteered a sponsorship in support of women empowerment in entrepreneurship. Overall, the participants' diversity and varied businesses offered an excellent platform for them to exchange knowledge, experience and networking opportunity. 2018 was a year of initiatives for the WIEF Foundation. The initiatives had actively engaged with smaller audiences focusing on their specific entrepreneurial needs and gauge the direction toward which the business world is heading.

WET:

Global Discourse on Quantum Computing

Quantum Computing: Fuelling Future Innovations

20 September 2018, Inter Continental Hotel, Kuala Lumpur

In order to address the potential strategic advantages and impact of quantum computing, particularly on businesses, the WIEF Foundation organised the WIEF Global Discourse on Quantum Computing at the InterContinental Hotel, Kuala Lumpur on 20 September 2018 which was attended by 43 participants from six countries. The event was also live streamed online

Four international experts - Assistant Professor Dr Joseph Fitzsimons from the Singapore University of Technology and Design (SUTD), Vice President and Chief Technology Offer Christian Raetzsch from IBM Asia Pacific, Professor Rajiah Simon, a Science and Engineering Research Board Distinguished Fellow from the Institute of Mathematical Sciences in India and Moderator Professor Lai Choy Heng, Professor, National University of Singapore, Singapore, explained the fundamentals and current research of quantum computer and where it is headed. They also simplified the foundations and fundamentals of quantum computing and explained how it evolved over the years.



WYN:

WIEF IdeaLab 2018

Building Ecosystems

16 – 17 October 2018, Goa Institute of Management, India

WIEF IdeaLab marked its first regional edition in Goa, India, after three successful editions in Kuala Lumpur since 2015. It was held in Goa Institute of Management (GIM). The initiative was a collaborative effort between WIEF Foundation and GIM, as part of the institute's series of high-level events in conjunction with its Silver Jubilee celebration.



In Goa, IdeaLab remained a platform that spurred key players in the startup ecosystem to network, share experiences, find ways to sustainably scale up and explore business collaborations. Over 400 participants from eight countries, including Belgium, India, Malaysia, Uganda, the United Kingdom and Denmark, attended the 2-day programme. They were guided by 31 ecosystem experts from six countries who were speakers and trainers.

The presence of WIEF Foundation's Chairman Tun Musa Hitam, WYN Chairperson Ebrahim Patel, WIEF Foundation's IAP member Nasser Munjee, Chairman of Goa State Innovation Council Jose Manuel Noronha, Director of GIM Dr Ajit Parulekar and Secretary of Goa Public Service Commission Ameya Abhyankar, added notable significance to the event.

" over 500 participants from 32 industries and seven countries

WET:

AKEPT-WIEF Social Entrepreneurship Forum

Social Enterprise: Empowering the Future

22 – 23 October 2018, ISTAC, Kuala Lumpur

With the intention to spur social enterprise development in universities, a 2-day forum was organised by WIEF, the Ministry of Education Malaysia (MOE) and Higher Education Leadership Academy (AKEPT) in collaboration with International Islamic University Malaysia (IIUM), on 22 – 23 October 2018 at ISTAC in Kuala Lumpur.

The AKEPT-WIEF Social Enterprise Forum had around 300 participants and they were mainly higher education students. Over 30 experts from various countries including India, New Zealand and the Philippines, shared their insights, experiences and their opinions on how to move forward in terms of social entrepreneurship. The forum revolved around five plenary sessions and six masterclasses that shed light on the potential of social enterprise development in universities, how governments can play a role, some lessons from success stories. how to commercialise the businesses and a few experiences from abroad.



The AKEPT-WIEF Social Enterprise Forum succeeded in encouraging active dialogues between participants and speakers. It had highlighted on-going or past social enterprise projects in universities, looked at areas where the relationship between universities and social enterprises could be strengthened, as well as explored ways to further develop social enterprise in universities.



WRT: WIEF-UEF CHENNAI ROUNDTABLE 2018

Innovative and Alternative Finance for Business and Infrastructure Development in India

10 November 2018, Hotel ITC Grand Chola in Chennai, India

The opulent building of Hotel ITC Grand Chola in Chennai buzzed with activity on the morning of 10 November. While WRTs have always kept to an audience of around 100, this one in Chennai is the largest Roundtable WIEF Foundation has ever organised and it was held in collaboration with the United Economic Forum (UEF) Chamber of Commerce. Over 500 participants, from 32 industries and seven countries – including the United States, Singapore and the UAE – were registered for the WIEF-UEF Chennai Roundtable. It was officiated by the Deputy Chief Minister of Tamil Nadu, the Hon. O. Panneerselvam. Its full day programme consisted of four sessions and a closed-door meeting. There were 14 speakers, experts in their fields, from at least six countries including Malaysia, Australia, France and Bahrain. They helmed the sessions that discussed alternative finance, its components and investment opportunities in Tamil Nadu.

Tamil Nadu, being India's second largest economy, and forecasted a robust growth of USD600 billion, was a logical choice for the WRT. In his recorded welcoming speech, Ahmed A. R. Buhari, President of UEF, noted that Tamil Nadu's growth opportunities are ripe to be capitalised on. Tamil Nadu has established itself as investor-friendly, by providing the necessary incentives and infrastructure, as well as fast-track mode of approvals, making it convenient for those wanting to do business in the state.

WIEF Foundation 2018 Initiatives

More details on these initiatives in the WIEF Foundation Report 2018: infocus.wief.org/digital-version/



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