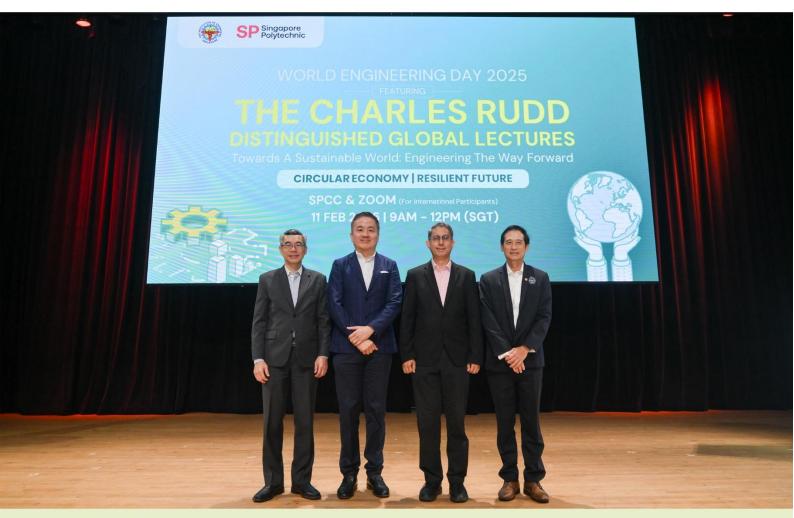
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WED 2025: Charles Rudd Distinguished Global Lectures Towards a Sustainable World: Engineering the Way



ENGINEERING DAY FOR SUSTAINABLE DEVELOPMENT

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INTRODUCTION



February 2025 saw us convening with other enterprises who were active in exposing their green initiatives to the Singapore population through the Go Green SG 2024 movement. Started in 2023 by the Ministry of Sustainability and the Environment, Go Green SG is an annual nation-wide movement aimed to raising awareness and fostering positive behavioural change for a more sustainable and climate-resilient Singapore.

Green in Future was proud to conduct green activities in support of Go Green SG in 2024 and we are looking forward to hosting a variety of activities this year to further Singapore's journey in becoming a green and climate-resilient nation. This year Go Green SG is also an official SG60 programme and hopes to create a bigger impact.

If you have an idea and would like to contribute to Go Green SG, reach out to us to collaborate for a greater reach and achieving shared goals. We are available at:

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Image credit - World Engineering Day

World Engineering Day 2025: Charles Rudd Distinguished Global Lectures

Towards a Sustainable World: Engineering the Way Forward

The Institution of Engineers, Singapore (IES), in collaboration with Singapore Polytechnic (SP), proudly presented the World Engineering Day 2025: Charles Rudd Distinguished Global Lectures (WED 2025: CRDGL) on 11th February 2025 at the SP Convention Centre. Held as a prelude to WED for Sustainable Development on 4 March 2025, this event convened leading experts, innovators and thought leaders from the global engineering community to share insights, explore emerging technologies and address engineering challenges shaping our future. Themed 'Towards a Sustainable World: Engineering the Way Forward', this year's lectures spotlighted two critical topics: Circular Economy and Resilient Future. With intensifying global challenges such as climate change, urbanisation and resource depletion, this event underscored the critical role of engineering in advancing the United Nations Sustainable Development Goals (SDGs).

The Minister of State for Home Affairs and National Development, Associate Professor Dr Muhammad Faishal Ibrahim, was the guest of honour at the event and spoke of the 2035 Nationally Determined Contributions (NDC) that was submitted by Singapore at the United Nation Framework Convention on Climate Change. He stated, "Achieving our targets will require expertise and innovation from our engineering community. Solutions such as carbon capture, utilisation and storage, new green building materials, centralised cooling systems are all testament to the power of engineering ingenuity. We must continue to drive innovation in these areas, so that Singapore can punch above our weight and contribute to thought leadership on the sustainability front."

The two distinguished keynote speakers were Ms Tita Yowana Alwis, Minister Counsellor, Head of Economy—Indonesia Embassy and Mr Kelvin Wong, Chief Executive Officer of Building and Construction Authority (BCA). Their addresses provided valuable insights into the intersection of engineering and sustainable development, inspiring participants to envision bold new pathways to a better future.

Ms Tita Yowana Alwis mentioned, "The principles of the Circular Economy (or sometimes called Regenerative Economy) offer a fascinating vision for the future — a vision where industries, communities, and nations work together to embrace practices that re-generate natural ecosystems, minimize waste, and keep products and resources in use for as long as possible. In this context,

engineering solutions become not only technical answers to environmental problems, but also tools for social resilience and economic growth."

And Mr. Kelvin Wong emphasised the important role talent plays by stating, "First and foremost, we need a pipeline of passionate engineers to continue making our world better! To inspire talents to join the built environment sector, we have embarked on a branding campaign. The theme "We are never done Building Singapore" reflects the endless contributions of built environment professionals, including engineers, to the development of Singapore. If you come across our campaign materials in public areas such as MRT stations and bus shelters, please help to spread the word around!"



(Left to Right) Mr Soh Wai Wah, SP PCEO, Mr. Kelvin Wong Chief Executive Officer Building and Construction Authority, Minister of State for Home Affairs and National Development, Associate Professor Dr Muhammad Faishal Ibrahim and Er. Chan Ewe Jin, President of IES. Image credit – The Institute of Engineers, Singapore (IES)

"WED 2025: CRDGL seeks to broaden public appreciation of the impact of engineering—showcasing its role in solving global challenges. By exploring the circular economy and resilient future, we aim to deepen appreciation for engineering as a driver of innovation—turning challenges into opportunities and forging solutions that balance progress with long-term sustainability," said Er. Chan Ewe Jin, President of IES. IES hosts the lectures annually in honour of the late Er. Charles Rudd, a distinguished IES member and engineer, who generously bequeathed over \$1 million to the institution.

Held as part of the WED 2025 celebrations, highlights of the lectures have been recorded and broadcast globally to celebrate engineering achievements in support of WED 2025's goal of 'Shaping Sustainable Future through Engineering'. Endorsed by seven sponsors and over 45 local and international organisations, the three-hour hybrid lecture attracted more than 1,000 local and overseas participants.

"As engineers, we are called upon to address challenges that transcend borders, from subsistence farming practices to infrastructure challenges in urban areas and overcoming poverty through digital technologies. These require a united effort from the global engineering community, alongside

governments, businesses and civil society. As the incoming WFEO President, I am committed to advancing these collaborations to ensure engineering remains a catalyst for a sustainable world," said Er. Tan Seng Chuan, President-Elect of the World Federation of Engineering Organizations (WFEO), Chair of WED Committee and Emeritus President of IES.

This commitment to innovation and collaboration is reflected in Singapore's strong representation at the WED 2025 Hackathon, with two shortlisted entries out of the total of 15 finalists. A team from the National University of Singapore (NUS) has been recognised for their project, 'Empower: Digital Tools for Women's Social Change' which focuses on helping women in underprivileged areas access digital resources through education, mentorship and skills-building to break the cycle of poverty. Meanwhile, a team from PSB Academy also made it to the finals with their submission, 'Smart Irrigation Monitoring System (SIMS): Solar-Powered Irrigation & AI for Small Farmers', which provides farmers with affordable technology to enhance climate resilience and protect their crops. These innovative solutions highlight the ingenuity and problem-solving capabilities of Singapore's young engineers in addressing pressing global challenges.

Panel on 'Navigating the Future: Circular Economy and Building Resilience'

The panel discussion titled 'Navigating the Future: Circular Economy and Building Resilience' featured an influential lineup of experts, moderated by Professor Seeram Ramakrishna, Professor of Mechanical Engineering at the National University of Singapore and Chair of the Sustainability Cluster at IES. Questions regarding recycling, renewability, regeneration, resources, and the political climate surrounding these areas were addressed by the panellists who are professionals advocating sustainability through their work either in the industry or academia. There was acknowledgement that we are using the earth's resources at an unsustainable rate, and it is our responsibility as individuals or professionals belonging to a company to maintain our focus on embracing circular economy and rethinking how we incorporate the 10 Rs.



The panel on 'Navigating the Future: Circular Economy and Building Resilience' at the WED 2025 – Charles Rudd Distinguished Global Lectures organised by IES. Image credit – The Institute of Engineers, Singapore (IES).

Another focus needs to be on spreading awareness of circularity, to improve security and efficiency of products to be reused and promote that factor to consumers and change their mindsets on recycling and reusing. The start could be of companies advertising their sustainability journey and showcasing sustainability features on the wrapper, so consumers can make informed decisions. should be the expectation and not an exception.

The key is to find the passion in this sector as an engineer, find partners in like-minded professionals and then start taking action to make the sustainability journey better.

Launch of Built Environment Transformation Learning Journey

The event also saw the launch of the Built Environment (BE) Transformation Learning Journey, which was developed by SP and supported by BCA. Mr Soh Wai Wah, Principal & CEO, SP; Er. Chan Ewe Jin, President, IES and Mr Kelvin Wong, CEO, BCA, officiated the launch, with A/P Muhammad Faishal as the witness. Supported by BCA, the initiative offers Small and Medium Enterprises (SMEs) practical insights into this resilient and forward-looking industry.

Focusing on the Industry Transformation Map (ITM) and its three key pillars—Integrated Planning and Design, Advanced Manufacturing and Automation, and Sustainable Urban Systems—the journey showcases transformative examples of how BE sector companies leverage innovative technologies and sustainable practices. It also equips SMEs with the tools to strategically plan their business and workforce transformation. Participants can access follow-up support, including training programmes and funding opportunities, to facilitate their growth and position themselves for success in a rapidly evolving BE landscape.

Attendees had the opportunity to participate in breakout activities, including learning journeys, technical talks and seminars, designed to foster collaboration and innovation in engineering solutions for sustainable development. The breakout activities were curated by co-organisers SP and the National Committee of Engineering Organisations (NCEO) members, including the Engineers Australia Singapore Chapter and INCOSE Singapore Chapter.

Sangeeta Nair

Sangeeta Nair is a Sustainability Advocate and Educator. She has deep-interest in the field and believes in nurturing the love for nature and sustainable living from young. She founded The Eco-Statement (www.theecostatement.com) which allows her to walk the talk of her passion & interest areas - Sustainability & Education. She worked with NEA to create Singapore's Fist Eco Board Game and Card Game – The Karang Guni Trail® Board Game and RecycleRight™ Card Game.

She has completed an Advance Diploma in Sustainability & Sustainable Business Management from Singapore Management University (SMU) and teaches subjects on Sustainability at University and Polytechnic. She also plans and organises field trips for the students so that they experience and evaluate the actions for sustainability taken by the organisation(s).

Can you share a brief introduction on The Eco Statement, its goals and the values it personifies?

The Eco-Statement (TES) is dedicated to fostering sustainability education through game-based and project-based learning. We engage students of all ages in interactive programs that raise awareness, encourage responsible actions, and instil lifelong sustainability habits.

Our Goals:

- **Educate** Empower individuals with knowledge on sustainability.
- **Engage** Foster critical thinking through hands-on activities.
- **Empower** Equip students to drive realworld impact in their communities.

Our Values:

- Sustainability-Driven Integrating sustainability into daily life.
- Innovative Learning Using creative methods to make sustainability engaging.
- Collaboration & Impact Partnering with students, educators, and businesses to create solutions.
- **Community-Centric** Focusing on local actions for global change.



We envision a world where sustainability becomes second nature — where learning leads to action, and action drives meaningful change.

You have the credibility of creating the first board game in sustainability in Singapore, what do the games aim to achieve?

The Eco-Statement is proud to have created Singapore's first sustainability board game, turning environmental learning into a fun, interactive, and action-driven experience.

What Our Games Do:

- Simplify Sustainability Breaking down recycling and composting into engaging gameplay.
- Build Critical Thinking Players face real-world challenges & make impactful decisions.
- Inspire Action Connecting game scenarios to real-life solutions, so learning turns into action.

Our games don't just teach sustainability — they make it real, fun, and part of everyday life.

What are the are the benefits you have personally experienced with hands-on-activities in promoting sustainability?

Hands-on activities have been the most

powerful way I've seen sustainability come to life. Whether it's composting, playing board games, or engaging in eco-challenges, doing creates a lasting impact.

One of my favourite moments was after a sustainability workshop with kindergarten kids. After playing our recycling game, they started looking for Blue Bins everywhere and even convinced their parents to bring recyclables to the right bins! Seeing kids take immediate action reminded me why interactive learning matters — when people experience sustainability firsthand, it sticks.

It's not just about teaching concepts; it's about making sustainability real, fun, and actionable so that small moments turn into lifelong habits.

You already have many years of experience in sustainable education. With the deadline for SG Green Plan 2030 fast approaching, what is your advice to those companies looking to reduce their carbon footprint?

Companies must take **practical and intentional** steps to reduce their carbon footprint.

Start Small, But with Purpose:

You don't need a massive overhaul overnight. Begin with meaningful actions—switch to energy-efficient lighting, reduce waste, or optimize logistics. What matters is embedding sustainability into your core operations with intentionality.

• Track Progress Year-on-Year:

Sustainability is a journey, not a one-time effort. Measure and track key metrics—carbon emissions, energy use, waste reduction—so you can see tangible progress and adjust strategies

accordingly. What gets measured gets managed.

 Celebrate Wins & Acknowledge Challenges:

Showcase successes to inspire employees, stakeholders, and customers—but also be transparent about challenges. Reporting both achievements and roadblocks builds credibility and drives continuous improvement.

Sustainability isn't just a goal; it's a commitment to consistent, measurable, and honest action. The key is to start now and keep going.

According to you, what are some daily activities that everyone can easily do to make their living more sustainable and energy efficient?

Living sustainably is easier than you think! Here are three simple ways to make a difference every day:

• Say No to Single-Use Items:

Bring your own water bottle, shopping bag, and utensils to reduce plastic waste. No need to buy fancy zero-waste kits — just use the reusable containers and cutlery you already have!

• Use Fans Instead of Air-Conditioners:

Fans use way less energy than air-conditioners. If you need air-con, set it to 25°C or higher to save electricity.

• Buy Less, Waste Less:

Think before you buy—do you really need it? Choose quality over quantity, repair instead of replace, and avoid food waste by planning meals.

Sustainability is about making small, smart choices every day.

Sustainability Reporting Study Reveals Gaps in Nature-Related Disclosures among Asia-Pacific Companies

The inaugural study on nature-related reporting and climate transition plans by the Centre for Governance and Sustainability (CGS) at the National University of Singapore (NUS) Business School and Kering revealed significant gaps in nature-related reporting and low adoption rate of the Taskforce on Nature-related Financial Disclosures (TNFD) framework among companies in Asia Pacific.

Nature-related disclosure remains nascent

The study, which analysed 700 listed companies across 11 industries and 14 Asia Pacific jurisdictions, focused on four key pillars: governance, strategy, risk and impact management, and metrics and targets. It found that while 72% identified topics such as water, biodiversity and ecosystem protection in their sustainability or annual reports, only 25% considered nature-related issues material to their businesses.

Among the companies that made nature-related disclosures, Australia took the lead with 68% considered nature as material. This is followed by New Zealand (48%) and Singapore and Malaysia (both at 42%). South Korea ranked the lowest at 18%.

In the governance pillar, approximately 50% disclosed the role of their board and management in overseeing nature-related issues, signalling growing attention at the board and management level.

Across the strategy pillar, 75% acknowledged the impact of nature-related issues on their business strategies and 49% identified their effects on financial planning. However, only 25% of companies planned their strategy resilience in adapting different nature-related scenarios and even fewer companies, only 9% mentioned capital flows and financing opportunities, highlighting the need for greater capital allocation to address nature-related concerns.

Under the risk and impact management pillar, only 39% of the companies have integrated nature-related concerns into their overall risk management frameworks. But this trend is expected to grow as companies increasingly recognise the value of addressing such challenges to enhance their risk management practices. Notably, Singapore has the largest share (66%) of companies incorporating nature-related issues into their risk management practices, setting a benchmark in the region.

Less than 40% disclosed metrics for managing nature-related issues, and only 30% set specific targets in the metrics and targets pillar, reflecting gaps in accountability and oversight. These findings underscore the need for more comprehensive and actionable nature-related reporting to align with global standards and drive meaningful progress.

Early stages of TNFD framework adoption

The study found that only 13% of the 700 listed companies have disclosed their alignment with the TNFD framework, a comprehensive standard for nature-related reporting. This highlights that adoption remains in its early stages since the framework was introduced in 2023. As companies continue to evaluate nature-related issues, develop strategies, and gather necessary data, progress toward broader adoption is expected over time.

Marie-Claire Daveu, Chief Sustainability and Institutional Affairs Officer, Kering, said, "Voluntary actions won't be enough to halt and reverse nature loss by 2030: like the work initiated for climate change, it is now imperative that nature-related issues are embedded into companies' strategies for the long run; it is imperative for nature policies to be ambitious and progressive enough. Through this partnership we are conducting with Centre for Governance and Sustainability, NUS Business School,

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Kering contributes to delivering tangible facts and figures to help Asia-Pacific businesses build robust nature policies. With climate, biodiversity and fashion interlinked, companies need to move towards a nature-positive economy - and fast."

Professor Lawrence Loh, Director, Centre for Governance and Sustainability, NUS Business School, said, "While there is growing recognition of nature-related issues in corporate sustainability strategies across Asia-Pacific, nature remains a nascent issue compared to climate. However, as climate reporting matures, integrating nature-related considerations into these frameworks is crucial for a comprehensive understanding of environmental risks. By aligning with global nature-reporting frameworks, companies can enhance their risk management, drive meaningful change, and contribute to a more sustainable future in an increasingly interconnected environmental landscape."

About Kering

A global Luxury group, Kering manages the development of a series of renowned Houses in Fashion, Leather Goods and Jewelry: Gucci, Saint Laurent, Bottega Veneta, Balenciaga, Alexander McQueen, Brioni, Boucheron, Pomellato, DoDo, Qeelin and Ginori 1735, as well as Kering Eyewear and Kering Beauté. By placing creativity at the heart of its strategy, Kering enables its Houses to set new limits in terms of their creative expression while crafting tomorrow's Luxury in a sustainable and responsible way. We capture these beliefs in our signature: "Empowering Imagination".

About NUS Business School

The National University of Singapore (NUS) Business School is known for providing management thought leadership from an Asian perspective, enabling its students and corporate partners to leverage global knowledge and Asian insights.

The school has consistently ranked first in Asia by independent publications and agencies, such as The Financial Times, and Quacquarelli Symonds, in recognition of the quality of its programmes, faculty research and graduates.

The school is accredited by AACSB International (Association to Advance Collegiate Schools of Business) and EQUIS (European Quality Improvement System), endorsements that the school has met the highest standards for business education.

Established in 2010, the Centre for Governance and Sustainability (CGS) is part of the NUS Business School. Its mission is to spearhead high-impact research on corporate governance and sustainability in Singapore and the Asia-Pacific and serves as the national assessor for the corporate sustainability and governance performance of listed companies in Singapore.

In tandem with growing demands from consumers and investors that financial returns are achieved with integrity, backed with environmental and social considerations, CGS has a slew of research focusing on sustainability reporting in Asia Pacific, sustainable banking, nature reporting, and climate reporting in ASEAN.

More information about CGS can be accessed at https://bschool.nus.edu.sg/cgs/.

Building a Brighter Future: LG Electronics Leading Change for People and the Planet

From Homes To Habitats, The Life's Good Deeds Initiative Partners with Local Non-Profit
Organisations to Empower Communities and Protect The Environment

LG Electronics Singapore has solidified its commitment to creating meaningful change in 2024, focusing on uplifting communities and championing environmental sustainability. Through its **Life's Good Deeds** initiative, the company has worked hand-in-hand with local non-profit organisations to bring its vision of a "Better Life for All" to life, building stronger, more inclusive, and environmentally-conscious communities.

Empowering Independent Living



This year, LG expanded its social impact with initiatives to foster autonomy and independence for individuals with disabilities. One of its standout programmes was a partnership with Bizlink Centre Singapore, where LG provided 30L NeoChef® Microwave Ovens to 10 beneficiaries aged 21 to 68, including individuals with autism and cerebral palsy.

With user-friendly features like large, easy-to-press buttons, the microwaves empower beneficiaries to manage their meal preparation, fostering a sense of independence in their daily routines. The donation was accompanied by festive mini-Christmas hampers from Bizlink, spreading joy to the beneficiaries during the holiday season.

LG's efforts were celebrated during Bizlink Centre's 'Live-To-Give 2024' charity concert, honouring the company with a handmade copper tooling plaque crafted by Bizlink beneficiaries.

"LG's collaboration with Bizlink Centre to support persons with disabilities has been invaluable in building an inclusive community," said Ms Ang Li May, Chief Executive Officer of Bizlink Centre

Singapore. "We deeply appreciate LG's partnership in strengthening the support ecosystem for persons with disabilities".

Supporting Families, One Appliance At A Time

Beyond its work with Bizlink Centre, LG launched multiple initiatives to improve the lives of needy families. Early in 2024, LG partnered with New Hope Community Services to deploy units of the LG PuriCare™ Air Purifier HIT and LG PuriCare™ Air Purifier (HEPA) units across transitional shelters, ensuring clean, healthy air for residents - especially crucial during the haze season.

In October, LG also collaborated with TOUCH Community Services to donate 70 essential appliances, including refrigerators, washing machines, and TVs, to 45 needy families. These donations replaced faulty or outdated appliances, providing families better living conditions and a stronger foundation for future success. The initiative was further supported by Myco3 Logistics, which offered complimentary delivery, installation, and disposal services.

Leading the Charge for Sustainability



LG complemented its community initiatives with a steadfast commitment to sustainability. In June, LG joined the OneMillionTrees movement to celebrate World Environment Day, mobilizing over 100 employees to plant 50 trees - including species like the Dwarf Powder Puff Tree and River Tarenna Tree - at Camp Road. These efforts contributed to biodiversity and greener urban spaces.

In September, LG organised its first beach cleanup at East Coast Park, marking World Cleanup Day and International Coastal Cleanup Day. More than 100 employees participated, collecting 293kg of litter and raising awareness about marine plastic pollution. The activity reinforced LG's dedication to the 3Rs - Reduce, Reuse, Recycle, inspiring sustainable habits to protect natural resources.

Creating Lasting Impact

As 2024 comes to a close, LG Electronics Singapore remains steadfast in its mission to drive positive change for communities and the environment, underscoring its commitment to the company's vision of creating a "Better Life for All." Throughout the year, LG has actively engaged with local communities, forging meaningful partnerships and implementing impactful initiatives that address both immediate needs and long-term challenges.

"Through our initiatives in 2024, we have focused on enhancing lives, fostering independence, and creating lasting opportunities for those in need," said Mr Gerald Chun, Managing Director of LG Electronics Singapore. "These efforts embody our commitment to ensuring that Life's Good for everyone - today, tomorrow, and beyond".

Looking ahead to 2025, the company is committed to building on this momentum. With aims to deepen its partnerships, scale up its community impact, and explore new ways to integrate sustainability into its operations and outreach efforts, LG reinforces its role as a socially responsible corporate leader dedicated to making a meaningful difference for communities and the environment.

About LG Electronics Inc.

LG Electronics is a global innovator in technology and consumer electronics with a presence in almost every country and an international workforce of more than 74,000. LG's four companies – Home Appliance & Air Solution, Home Entertainment, Vehicle component Solutions and Business Solutions – combined for global revenue of over KRW 80 trillion in 2022. LG is a leading manufacturer of consumer and commercial products ranging from TVs, home appliances, air solutions, monitors, service robots, automotive components and its premium LG SIGNATURE and intelligent LG ThinQTM brands are familiar names world over. Visit www.LGnewsroom.com for the latest news.

TRIREC Announces Breakthrough Decarbonisation Achievements in Inaugural 2024 Climate Progress Report

Leading Venture Capital Firm Marks Its 10th Anniversary by Showcasing Transformative Innovations, Sets Course for Expansive New Initiatives

TRIREC, the pioneering venture capital firm committed to accelerating climate solutions, today announced the release of its highly anticipated inaugural **2024 Climate Progress Report**. The comprehensive document spotlights TRIREC's substantial strides in reducing greenhouse gas (GHG) emissions, mobilizing innovative climate technologies, and strengthening partnerships across five critical verticals: **Food & Agriculture, Industrial, Transportation & Mobility, Energy, and Buildings.**

In celebration of its 10th anniversary this year, TRIREC presents this milestone report as a testament to its decade-long commitment to championing sustainable innovation and as a launching point for new frontiers in climate-focused ventures. It invites stakeholders to reflect on TRIREC's remarkable decade-long journey, which began in 2015 with a bold vision: to build a climate-conscious world where the planet and business thrive in harmony.

Over the past decade, TRIREC has laid a strong foundation in the venture capital landscape by championing sustainable innovation, investing in climate-focused startups, and nurturing a tight-knit community of colleagues, investee companies, and investors. This newly launched report showcases how TRIREC's steadfast commitment to decarbonization and entrepreneurial excellence has empowered exceptional minds to develop groundbreaking advancements in climate technology.

"This Climate Progress Report is not just a testament to what we've achieved over the past decade but also a roadmap for the future—one where we continue to champion solutions that accelerate the transition to a low-carbon economy while delivering value to our stakeholders." says Melvyn Yeo, Founder and Managing Partner of TRIREC.

A Multi-Pronged Approach: Theory of Change & Sustainability Risk Management

Central to TRIREC's success is its Theory of Change, which addresses the Problem, Input, Output, Outcomes, and Impact of each climate investment:

- **Problem**: High-emission sectors—including agriculture, industry, transportation, energy, and buildings—drive global warming.
- **Input**: Early-stage funding and strategic partnerships empower startups developing innovative decarbonization technologies.
- **Output**: Tangible, scalable solutions that reduce GHG emissions while fostering sustainable resource use.
- **Outcomes**: Lowered emissions, decreased cost of energy (LCOE), and supportive regulatory environments.
- **Impact**: Pivotal contributions to combating climate change and creating long-term economic value.

In tandem, TRIREC takes a holistic approach to sustainability risk management, integrating climate considerations at every stage—from deal sourcing to due diligence, post-investment engagement, and fund-level oversight. In 2024, the firm launched its first Article 8 Fund, TVII, with 100% of its investments aligned to environmental characteristics promoted by the SFDR Regulation. Adhering to exclusion criteria—such as prohibiting investments in illegal economic activities, tobacco, weapons, and gambling—underscores TRIREC's commitment to rigorous environmental, social, and governance (ESG) standards.

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Driving Meaningful Market Shifts & Community Impact

By carefully selecting and supporting companies that combine high-impact solutions with robust business fundamentals, TRIREC's portfolio has achieved impressive progress in cutting GHG emissions worldwide—demonstrated by advancements in direct-air-capture technology, battery recycling, and carbon-negative innovations. Moving forward, TRIREC intends to deepen its ecosystem-wide efforts by aligning capital, technology, and policy, ensuring that both established and emerging markets recognize the value of sustainable, climate-conscious innovation.

Empowering the Next Decade of Climate Solutions

As TRIREC marks its 10th anniversary, the 2024 Climate Progress Report not only celebrates past accomplishments but also sets an ambitious trajectory for the decade ahead. By leveraging its proven Theory of Change, robust risk management practices, and deep industry expertise, TRIREC remains poised to scale climate-impact investments and transform global sectors. This enduring commitment—rooted in innovation, community, and measurable impact—stands as an invitation to partners, governments, and forward-thinking businesses to join TRIREC in forging a cleaner, more resilient future.

About TRIREC

TRIREC is a Singapore-headquartered global venture capital investor focused on decarbonisation investments. Aspiring for a climate-conscious world where the planet and businesses flourish in harmony, TRIREC focuses its efforts on five decarbonisation verticals: Food and Agriculture, Mobility, Buildings, Industries and Energy. Through its expertise in analysing decarbonisation technologies, TRIREC maximises climate impact and business gains by focusing on investing in exceptional entrepreneurs whose innovations accelerate the reduction, prevention or sequestration of greenhouse gas emissions. TRIREC boasts 20 exciting portfolio companies across two pools of capital and has celebrated 3 of them becoming unicorns. Investing globally, TRIREC capitalises on its deep and wide roots in Asia. Find out more about TRIREC's portfolio and purpose: https://www.trirec.co/



Terviva Secures Investment from Idemitsu to Scale Sustainable Pongamia Production for Sustainable Aviation Fuel

Together, the two companies are poised to accelerate the transition to a low-carbon economy through greener fuel production

Terviva, Inc., an agricultural innovation company working with farmers to grow and harvest pongamia for food, feed and fuel, today announced a strategic investment from integrated energy company Idemitsu Kosan Co., Ltd (Idemitsu). Idemitsu, in partnership with Terviva and Stanmore, an Australia-based coal resource company, is beginning a trial plantation of Terviva's pongamia in Queensland, Australia. This collaboration leverages Terviva's scalable tree production and Idemitsu's expertise in fuels to accelerate the global production of sustainable aviation fuels (SAF) with oil from Terviva's proprietary pongamia technology. Terviva has developed a model that ensures high yields for farmers and a robust end market for the entire pongamia bean, while Idemitsu's industry knowledge streamlines the path to market for the oil as SAF.

Pongamia is recognized for its ability to serve as a feedstock for Sustainable Aviation Fuel (SAF) using HEFA1 technology. Through this trial planting, Idemitsu Kosan will gain an understanding of growing pongamia in a non-typical cropping area, and work on development and optimization of the supply chain for SAF production. Additionally, the company will explore the creation of carbon credits through afforestation, the production of black pellets from shells for biomass power plants, the use of pressed seed pomace as livestock feed, and other uses beyond feedstock for SAF.

"We are excited to partner with a leading company like Idemitsu that shares our vision for a sustainable future," said Naveen Sikka, founder and CEO of Terviva. "Our pongamia genetics have been proven through extensive field trials on over a thousand acres, using proprietary data analytics and farming techniques to drive maximal yield, minimize cost and promote sustainable cultivation. The end result is a complete pongamia farming package that creates a low cost, low carbon and high-quality form of oil and protein - revolutionary for a global agriculture industry that is confronting climate change. We are eager to support Idemitsu's goals to advance sustainable fuel solutions."

Terviva's elite pongamia cultivars have been developed over 15 years of research trials spanning nearly 2,000 acres in the US and Australia. Terviva's pongamia trees produce three or more metric tons of beans per acre, which feature a high oil content. The harvested beans are processed to produce oil, which can then be used as a feedstock, or raw material, for the biofuels industry. The combination of high oil yielding cultivars with low agricultural input best-practices creates a unique opportunity for reduced greenhouse gas emissions compared to traditional fossil fuels. Due to the strong genetic variability of pongamia, the know-how for selecting and reproducing superior varieties is key to achieving high yield.

Idemitsu Kosan aims to establish a supply system for 500,000 kL of SAF annually. To meet this goal, the company plans to produce 250,000 kL of SAF annually using HEFA technology at its Tokuyama Complex in FY2028. Considering the potential future supply and demand tightness and price fluctuations of various raw materials, Idemitsu Kosan is working to secure raw materials that can be supplied sustainably over the long term. Pongamia's ability as a high yielding oilseed crop is considered promising as a measure to secure raw materials for the long-term stable and economical production of SAF using HEFA technology. This initial trial will inform Idemitsu Kosan's future expansion of commercial pongamia.

About Idemitsu Kosan

The Idemitsu Group is engaged in the development, manufacture, and sales of a wide variety of energy sources and materials in the areas of Petroleum, Basic Chemicals, High-Performance Materials, Power/Renewable Energy, and Resources based on relationships of trust with partners and customers in a variety of fields. To achieve carbon neutrality and a circular society by 2050, we aim to develop the three business areas of "Energy One-Step Ahead," "Diverse Resource Conservation/Circulation Solutions," and "Smart Yorozuya" and continue to take on new challenges using our domestic and international networks.

About Stanmore Resources Limited (Asx: Smr)

Stanmore Resources Limited controls and operates the South Walker Creek, Poitrel and Isaac Plains Complex metallurgical coal mines as well as the undeveloped Eagle Downs, Lancewood, Isaac Plains underground and Isaac Plains South projects, in Queensland's prime Bowen Basin region. Stanmore Resources holds several additional high-quality prospective coal tenements located in Queensland's Bowen and Surat basins. The Company is focused on the creation of shareholder value via the efficient operation of its mining assets and the identification of further development opportunities within the region. For more information, visit https://www.stanmore.au/.

About Terviva

Terviva is an agricultural innovation company partnering with farmers to grow and harvest pongamia, a regenerative, permanent tree crop that stores carbon, revitalizes soil health, and has a history of reforestation. Through an equitable and transparent supply chain, Terviva transforms pongamia beans into sustainable food ingredients and bioenergy, which help to revitalize land and communities around the world. Learn more at terviva.com.

Bettr Coffee opens its First Sit-Down Cafe at The Foundry, Marking Next Step in Brewing a Bettr Future

Bettr Coffee, the specialty coffee brand known for its impact-driven mission and dedication to sustainability, has proudly announced the opening of **Bettr Coffee @ The Foundry**, its first sit-down cafe location since being founded in 2011. Located in the heart of Singapore's Prinsep District, Bettr Coffee @ The Foundry marks a significant milestone for the Bettr Group, which became Southeast Asia's first certified B Corporation in 2015, as it expands its commitment to conscious consumption, community building, and social impact.



The new cafe, situated within The Foundry, Singapore's social impact hub recently launched on 28 November 2024, extends Bettr's mission of making ethically sourced coffee more accessible to the local community, offering craft cocktails, natural wines, and small plates, all anchored in a deep respect for provenance and environmental stewardship. Bettr Coffee @ The Foundry invites guests to discover how every sip and bite can contribute to positive change through small yet incremental lifestyle adoptions, showcasing innovative approaches such as upcycled ingredients and direct-trade partnerships with global farmers.

Building a Conscious Community Space

More than being a new cafe, Bettr Coffee @ The Foundry has been designed as a gathering space for those who appreciate not only good coffee but also the story behind every sip. Building on 14 years of experience as a provider of specialty grade coffees, equipment, full-service mobile coffee bars and in-house solutions for corporate offices, Bettr has crafted its first sit-down location to foster community building, with a work-friendly setup, a lush backyard garden, and pet-friendly spaces.

"In setting up our first location, we wanted Bettr Coffee @ The Foundry to surpass what most people expect of a cafe so as to contribute something truly new and meaningful," said Pamela Chng, Founder and CEO of Bettr Group. "We wanted to invite the local community and visitors to be part of a bigger movement, one that respects the provenance of the food and coffee we consume on a daily basis."

"From our relationships with farmers in Asia and Latin America to the spent coffee grounds we repurpose into cocktails, we hope that this new cafe will be a germinator of thought and conversations around how every single decision in the coffee value chain, and by extension our everyday lives, can create ripples of positive impact," added Pamela.

Since its founding in 2011, Bettr has built a reputation as a business that uses coffee as a catalyst for change. Having been minted as Southeast Asia's first B Corporation in 2015, Bettr operates through two core arms: Bettr Coffee and Bettr Academy. Bettr Academy, the largest Specialty Coffee Association Premier Training Campus in the region, has trained more than 15,000 individuals in professional barista skills, including at-risk youth, prison inmates, and individuals from marginalised backgrounds. The academy offers Workforce Skills Qualification (WSQ) certified courses and participates in the SkillsFuture Career Transition Programme, enabling learners to upskill or pursue new careers in the F&B industry using SkillsFuture credits.

Alongside its training and social impact initiatives, Bettr Coffee continues to champion responsible sourcing practices through long-standing partnerships with coffee farmers across Asia and Latin America. By working with producers who share its commitment to ethical labor practices, environmental stewardship, and direct-trade relationships, Bettr Coffee ensures that every cup served supports not only the end consumer's enjoyment but also the livelihoods of those who grow and harvest the beans.

With approximately 50 seats spread across its cozy indoor area and breezy outdoor patio, Bettr Coffee @ The Foundry invites guests to slow down, connect, and savour each cup with intention, in an environment where sustainability meets comfort. Designed with the modern, socially conscious consumer in mind, power outlets have been thoughtfully integrated into the space to make it a convenient spot for remote workers and creative professionals in search of a productive yet relaxed atmosphere. The backyard features an herb garden which showcases Bettr Coffee's commitment to fresh, traceable ingredients, while offering a playful touch for pet owners and their furry companions.

"We've tried to find ways of reducing waste and prioritising sustainability in every element of the cafe, without compromising the guest experience," said Pamela. "Our herb garden, for instance, helps us cut down on transport emissions while giving our team and guests a tangible connection to the ingredients we use. When it comes to garnishes, we always ensure that it heightens the drink instead of just serving an ornamental purpose."

A Menu Rooted in Provenance and Impact

Bettr Coffee's ethos of conscious consumption comes to life most vividly in its coffee programme. Traditional espresso blends can be found alongside innovative creations like Prefer, a bean-free decaf alternative made from upcycled bread, soy, and barley. Developed in response to the impact of climate change on coffee-growing regions, this malty, caffeine-free option offers a glimpse into the future of sustainable coffee consumption.

The cafe's beverage programme brings these principles to life using innovative techniques, such as upcycling coffee grounds into creative drinks. One standout is the Black & Cola, a refreshing combination of organic Madagascan cola and Bettr's Eureka blend, which won the Best in Class and Gold Medal in the Best Alternative Milk Coffee category at the Royal Melbourne Australian International Coffee Awards (AICA) 2022. Another highlight is the Coconut Russian, consisting of a light, full-bodied iced white with brown sugar syrup, coconut milk, and cream top, which has quickly become a crowd favourite.

The cafe's cocktail programme provides further testament to how craft and conscience can complement each other to create exceptional drinks while minimising waste and championing sustainable practices. The cocktail list features inventive combinations that challenge traditional ideas of what a drink can be. The **Bettr Old Fashioned** takes a beloved spirit-forward classic and gives it a sustainable twist by using fat-washed, spent coffee grounds. Instead of discarding leftovers from the espresso bar, the spent coffee grounds are steeped overnight with blended malt whisky, sourced from ecoSPIRITS, a low-waste, closed-loop packaging system that significantly reduces carbon emissions.



The White Negroni offers a lighter take on the traditional aperitif, with delicate notes of chrysanthemum, dry vermouth, and wildflower honey. The Gin & Teanic presents a house-made twist on the gin and tonic, using dried lemongrass and rooibos tea, slowly infused through a sous vide process to intensify the flavours. Those seeking a tropical touch will enjoy the Junglebird, which balances the brightness of pineapple and lime with aromatic betel leaf sourced directly from the cafe's herb garden.

The same ethos applies to the cafe's wine list, showcasing a carefully curated selection of natural wines from innovative winemakers around the world. Crafted with minimal intervention, these wines use wild yeast for fermentation with little to no added sulfites, resulting in a collection of bottles that are often unfiltered, vibrant, and alive. Guests can expect to encounter bright, fruit-forward wines like the 2022 Loveblock Sauvignon Blanc Tee from New Zealand, with tropical notes of mandarin, sweet basil, and ripe yellow star fruit, as well as the richer, creamier profile of the 2019 Bledsoe Family Wines 'JOI' White Chardonnay from the United States, which balances pineapple and guava with a cool, smooth finish.

The culinary offerings at Bettr Coffee @ The Foundry follow the same guiding principles of provenance, sustainability, community, and connection, designed with an emphasis on small plates that complement the beverage programme while showcasing high-quality ingredients. Herbs like basil and mint, often used in garnishes and sauces, are sourced from the cafe's backyard garden, while fruits are supplied by Ponthier, a certified B Corporation company, known for its pesticide-free, 100% traceable purees.

"We've placed a huge emphasis on sustainability, but we are not here to lecture anyone about it," said Pamela. "Rather, we want to show through our cafe that small shifts can contribute to a larger, positive impact, down to the way we source, serve, and even savour the things we consume."

With its laid-back atmosphere and inventive drinks, Bettr Coffee @ The Foundry invites guests to slow down, stay curious, and discover how a good cup of coffee can be the first step towards a better world. Bettr Coffee @ The Foundry is open from 9am to 5pm on Mondays and Saturdays, 9am to 9pm from Tuesday to Friday, and is closed on Sundays.

About Bettr Coffee

Bettr Coffee @ The Foundry is Bettr Group's first sit-down cafe — beverage-focused with a mission to uphold transparent sustainability practices and create communities of change. Beginning with a small plates shared dining concept and ethically-sourced, traceable ingredients for its beverage menu, it serves a plethora of options from coffee and tea to various alcoholic and non-alcoholic drinks with a story. As a hub for changemakers, the cafe is centred on building communities that make a difference. Bettr Coffee @ The Foundry is a space where provenance comes to light, people come to connect and passion comes to thrive. The Bettr Group, a homegrown specialty coffee company founded in 2011, is also Southeast Asia's first certified B Corporation. Visit https://bettr.coffee/pages/who-we-are for more information

Comment on climate action, energy, and sustainability

- by <u>Michael Ding, Global Executive Director, Univers</u>

Singapore's Budget 2025 underscores the nation's commitment to achieving net zero by 2050. The S\$5 billion Future Energy Fund is a clear acknowledgment that decarbonization is not just about reducing emissions but about rethinking how energy is produced, distributed, and consumed.

With a target for one-third of Singapore's electricity demand to be met through imported low-carbon energy by 2035, the shift toward renewables and alternative sources will likely accelerate. Digitalisation and AI for Energy will also play a critical role in optimizing energy distribution, minimizing losses, and ensuring grid stability.

As Singapore integrates more renewable and alternative energy sources, it must ensure that the grid is intelligent, flexible, and resilient enough to accommodate fluctuating supply and demand. A prime example is the Punggol Digital District - the recent lighthouse project that is expected to increase energy efficiency of significant savings of over 50%.

At Univers, we have seen firsthand how the shift to renewables, smart grid technologies and advanced energy storage solutions can improve energy resilience and enhance competitive advantage, all while enabling a more sustainable future.

Companies that take proactive steps – be it managing multi-site buildings, integrating real-time carbon tracking, or rethinking supply chain and storage through the use of AI – will gain a competitive edge in a world increasingly shaped by environmental responsibility.

UN GCNS celebrated the 20th Anniversary of being Impactful in Driving Sustainability

The event saw the launch of the book, 'The Business of Better', a collection of SDG-driven member success stories

United Nations Global Compact Network, Singapore (UN GCNS), celebrated a remarkable milestone – their 20th Anniversary on January 15th, 2025, at The Terrace, Design Orchard. The event was a platform for GCNS to bring forth their activities in driving sustainable business practices and fostering partnerships that positively impact our society and the environment. The celebration also facilitated the organisation to look forward to shared vision for a sustainable future to advance the UN Sustainable Development Goals (SDGs).



When UN GCNS started in 2004, terms like sustainability were at their infancy with many patrons not fully comprehending its necessity and significance. At the time, this organisation aimed to encourage businesses to operate responsibly and to nurture them to build stronger, more cohesive and more resilient cities. In that regard, they have built fruitful and constructive partnerships with businesses, unions and academic institutions.

Deputy Prime Minister, Mr. Heng Swee Keat presided as the chief guest and delivered a speech at the event. He acknowledged the efforts of UN GCNS in the past 20 years and remarked, "Against this backdrop, the urgency and importance of making a global green transition is clear. Notwithstanding climate scepticism from some quarters, we can expect to see even more emphasis placed on sustainability and the SDGs in the years ahead. Governments alone cannot successfully implement the green transition. Involving the private sector and the people sector is critical."

He also emphasised the importance of the imminent Singapore Green Plan 2030 and the need for innovative solutions and technologies by stating, "One of the key pillars under our Singapore Green Plan 2030 is to build a Green Economy – creating new jobs, transforming existing industries and harnessing sustainability as a competitive advantage. This includes developing new growth sectors such as green-carbon technologies, and carbon services and trading."



The event also witnessed the launch of the book – 'The Business of Better', a set of businesses that are members of UN GCNS who have shared their inspiring experiences and journey in sustainable interventions in Singapore. It also illustrates collaborative efforts to upscale their sustainability endeavours that has become a testament to the power of taking the first step toward impactful change. Link to Download the Member Company Book

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Rapid WAPS uptake driven by stricter emission regulations and industry innovation

A surge in industry interest combined with systems builders and yards scaling up production and installation capacity, is set to accelerate growth in orders for wind-assisted propulsion systems (WAPS) in the coming years. In response to this trend, DNV's new whitepaper provides a detailed look at WAPS technologies, their onboard implementation, and potential fuel savings to help shipowners determine whether they are a viable business option for their vessels and operations.

DNV's whitepaper explores the design and operational factors influencing WAPS fuel savings and provides steps for evaluating the technical feasibility of new systems, from concept to implementation. The paper includes two case studies in EU waters modeling how different WAPS installations can effectively reduce fuel costs and emissions in compliance with EU ETS and FuelEU Maritime.



Knut Ørbeck-Nilssen, CEO Maritime at DNV, said: "As we navigate the maritime energy transition, it's crucial to consider all options for decarbonization. And as more verified data comes in, the business case for WAPS technologies is building. They are already delivering significant fuel savings when matched to the right vessel type and operational profile. And as part of the suite of new energy efficiency technologies, WAPS are stepping up to deliver immediate emissions reductions and play a growing role in the maritime decarbonization journey."

Retrofitting WAPS is possible for almost any ship with sufficient deck space and unobstructed airflow, even if not originally designed for sails. However, vessels with WAPS integrated into the design offer even greater opportunities for optimization. Currently, 75% of the WAPS fleet are retrofits, primarily tankers and general cargo vessels. Rotor sails have been the preferred technology for the bulk and tanker sectors (54% share of systems installed), while suction sails are the main choice for general cargo ships (67%).

Hasso Hoffmeister, Senior Principal Engineer at DNV, stated: "Current WAPS technologies use advanced control and automation systems, combining aerodynamics, automation, computer modelling, and modern materials. Today, these technologies are not widely adopted but show significant promise as a component in hybrid propulsion systems. Looking ahead, we might see the first pure wind powered modern large cargo vessel, Orcelle, contracted in the next few years."

Drivers behind the rapid WAPS uptake are also tied to economic benefits of complying with current and future regulations like the Energy Efficiency Design Index (EEDI), Efficiency Existing Ship Index

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(EEXI) and upcoming IMO regulations that set CO2 emission requirements for new and existing ships. WAPS can help meet these requirements through a correction factor as well as improve Carbon Intensity Indicator (CII) ratings by reducing fuel consumption.

DNV has been at the forefront of developing rules and standards for verifying and certifying WAPS and their integration onboard, publishing the first class notation for ships using WAPS in 2019. This notation is supported by the ST-0511 "Wind Assisted Propulsion Systems" certification standard. DNV's "WAPS Ready" notation, which uses a modular approach to verify compliance for future WAPS installations and DNV's new recommended practice (RP), which proposes an on/off methodology to measure performance, will be updated in 2025.

Do you really Need to Wash that Shirt after Sweating?

This Bacteria-Killing Technology Helps Businesses Save up to 986 Litres of Water Per Person a Year

Picture this: It's a hot, humid day in Singapore, and your team is wrapping up their work after a long day of wearing their uniforms. The first thought? "Aiyaaa, I wear my uniform already, now I need to wash liao!." But is that really the case? Ultifresh says, "Not so fast."

Sweat itself isn't what makes clothes dirty; it's actually sterile, odourless and harmless until it meets bacteria. The problem is... that's everywhere in our environment. That's why a typical Singaporean household does about three full loads of laundry each week — and each one uses anywhere between 50 to 150 litres of water.

And that's just in a house. Imagine how much worse it is for businesses in industries like hospitality, healthcare, or manufacturing — managing large-scale laundry *daily*. The costs? Massive. The environmental impact? Even bigger.

That's where Singapore-based sustainable apparel brand Ultifresh are stepping in, with bacteria-killing technology that slashes laundry frequency, saving water, cutting costs, and driving sustainability—all without compromising hygiene.



Above: Ultifresh's Best Selling Performance Crew Neck T-Shirt

Using advanced antibacterial technology infused directly into the fabric, Ultifresh shirts are designed to kill 99.94% of bacteria on contact, breaking down the microbes responsible for odor and dirt before they can cling to the material. This innovation allows shirts to be reworn up to three times before needing a wash—saving time, effort, and, most importantly, water. Fewer washes mean less water and detergent used, cutting costs and reducing environmental impact.

PRODUCT FEATURE

Whether it's for team events, uniforms, or promotional wear, Ultifresh helps businesses hit their sustainability goals while keeping employees comfortable and maintaining a professional look. Big names like Microsoft, Meta, and Anytime Fitness are already on board with Ultifresh for their teams.

Beyond just convenience, Ultifresh lets companies turn their corporate apparel into a statement of sustainability. With customisable branding and eco-friendly design, Ultifresh helps businesses meet their needs while making a positive impact on the planet—and showing off their brand identity.

So that the next time businesses toss their uniforms into the wash, they'll stop to ask themselves: really must wash so often ah? With Ultifresh, the answer might just be a comfortable "not really".



Green In Future is a novel venture of like-minded professionals with

achieving a sustainable future as the target. Among the many services provided, the diffusion of technology to as many as possible and as far as possible, educating and generating awareness by being the link between the producer and the user, giving adequate training to the interested to adopt an innovation in Urban Landscaping, Urban farming, Education, Environmental issues and Health etc. are in the forefront.

OUR SERVICES:

- E-Newsletter
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- Training Programs & Workshops
- Research & Demonstrations
- Project Consultancy

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