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Cover Story
Bangladesh : 2025
A Story of Resilience, Reform, and Ambition.

Official News Magazine of APTA Chamber of Commerce and Industry

APTA CCI

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PEN THOUGHTS

Dear Reader,

It's my great pleasure to issue the seventh edition (March 2025 – June 2025) of Asia Pacific Business Magazine(APBM).

According to the Asian Development Bank's forecast, Asia-Pacific regional growth after announcing the USA tariff hike on 2 nd April, has been set at 4.9% in 2025 and 4.7% in 2026. Inflation will moderate to 2.3% in 2025 and 2.2% in 2026 as global commodity prices are expected to decline in 2025, while many regional central banks are expected to ease monetary policy to spur growth. Furthermore, the negative impact of tariffs is expected to be offset by higher growth in South Asia, solid domestic demand, and electronics exports. etc.

Many countries have taken countermeasures such as granting subsidies and support for domestic industries, diversification of trade partners, and optimizing trade opportunities under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), the Regional Comprehensive Economic Partnership (RCEP), and the Association of Southeast Asian Nations (ASEAN) have gained momentum.

However, the trade prospects of the region will be challenged by escalating geopolitical tensions, rising trade barriers, significant trade uncertainty, and disrupted supply chains etc.
What is more, superseding all trade issues in Asia Pacific is the climate crisis now rebranded as climate urgency, which intersects with digital transformations through a complex mix of challenges and opportunities.
The Asia-Pacific Digital Transformation Report 2024 of ESCAP proposes how digital transformations will impact the trajectory of climate urgency. In this transformative process, five key important dimensions are Strategy, Technology, Processes, People, and Customer Engagement. These dimensions represent key areas that organizations need to address when undergoing digital transformation.

Ajith D Perera,
Editor In Chief / Executive Secretary –APTA CCI,
28th of February 2025.

(APBM is the official news magazine of APTA CCI and the views expressed by authors do not necessarily reflect the views of APTA CCI. We welcome your comments and criticism about our publication and welcome articles on trade, economics, and development issues for the publication.) exe-sec@aptacci.com/ajithspeak@gmail.com

COVER STORY

Bangladesh: A Story of Resilience, Reform, and Ambition.


Source: AI created

Over the past 16 years, Bangladesh has undergone significant economic transformations, marked by periods of robust growth and notable challenges. Read on to get a comprehensive analysis of the economic trajectory during the transition of the political power from the Awami League to an Interim Government to explore prospects for sustainable development for the years to come.

By Maimun Ur Rashid Mustafa

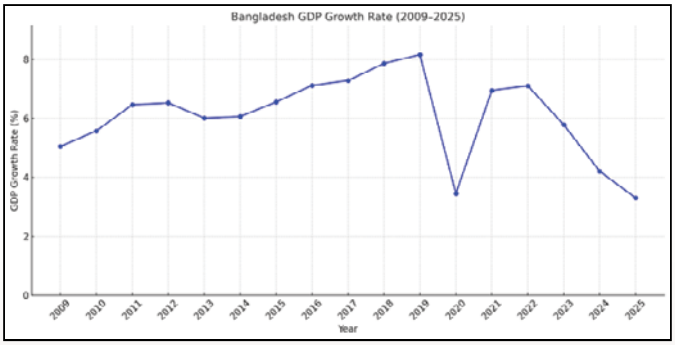
About the Author:
Maimun Ur Rashid Mustafa is an entrepreneur with 17+ years of experience working in SMBs, Social Enterprises, Trade Organizations, as well as, startups in roles that include support, operations, administration, account management, and communications. He is the Founder of MCFG, a consultancy company based in Bangladesh. He also holds the roles of Executive Director in the Global Chamber and APTACCI. Maimun is currently the Joint Convener of the Trade Facilitation and Regional Integration Standing Committee at the Dhaka Chamber of Commerce and Industry.

Driven by both military and civilian rule since independence, Bangladesh has stood out over the past decades and has once been identified as one of the fastest-growing economies in South Asia. From the turbulent yet hopeful years post-2008 to the present transitional phase under an Interim Government, the country's economic journey tells a tale of challenges faced and opportunities seized. This article examines the 15-year performance of the economy under the Awami League (AL), assesses the present outlook under the interim leadership of Nobel laureateDr. Muhammad Yunus (the father of Grameen Micro Credit Banking) and maps the way forward for Bangladesh's economic revival.

The Growth Factors

Bangladesh's Gross Domestic Product (GDP) grew from approximately $102 billion in 2009 to soaring over approximately USD 460 billion in 2023, according to World Bank data. The country consistently posted 6–8% GDP growth from 2011–2019, peaking at 8.2% in 2019.
This growth was largely driven by the ready-made garment (RMG) sector, which accounted for over 80% of export earnings. RMG exports rose from USD 12.5 billion in 2010 to **USD 35.89 billion in 2023, making Bangladesh the second-largest apparel exporter globally. In 2024, RMG exports totaled $38.48 billion, reflecting a 7.23%** increase from the previous year. The European Union remained the largest market, importing $19.37 billion worth of apparel, while non-traditional markets like

like Japan and Australia also showed significant growth.



The Post-pandemic recovery was swift, albeit challenged by global inflation and war-induced trade disruptions.

Infrastructure development was also a priority, with projects like the Padma Bridge enhancing connectivity and contributing an estimated 1.23% to GDP. Additionally, the "Vision 2041" initiative aimed to transform Bangladesh into a high-income country by 2041, focusing on industrialization and human capital development.

According to the World Bank South Asia Economic Update 2022, “Bangladesh’s growth model was one of the fastest among developing countries, driven largely by exports and a young, productive population.”

Challenges and Criticisms

Despite these achievements, the government faced several economic challenges:

Over-reliance on the RMG Sector:

The heavy dependence on textiles made the economy vulnerable to external shocks. In 2024, textiles and clothing constituted a significant portion of total exports, underscoring the need for diversification. Leather, IT services, and shipbuilding grew slowly but couldn’t match the scale of RMG.

Financial Sector Vulnerabilities:

The financial sector faced serious issues, especially in state-owned banks. Non-performing loans (NPLs) reached an estimated Tk 3.46 trillion by end-2023. Critics pointed to poor regulatory oversight and crony lending. The banking sector grappled with high levels of non-performing loans (NPLs). By December 2024, NPLs had surged to approximately Tk 3.46 trillion, accounting for 20.20% of total loans disbursed. This alarming increase raised concerns about the stability of financial institutions.

External Account Vulnerabilities:

Import bills surged due to fuel and food inflation. Foreign exchange reserves dropped from USD 48 billion in 2021 to under USD 22 billion in early 2024. The national currency, Taka, depreciated rapidly, worsening inflation.

Inflationary Pressures:

Inflation hovered around 5-6% until 2021, but spiked post-pandemic and following global supply shocks. By late 2023, inflation had reached 10.87%, with food inflation exceeding 14%. However, inflation remained a persistent concern, with rates reaching 10.87% in September 2024, driven by rising food prices and supply chain disruptions. Food inflation floated around 12%–14% for most of the year, significantly impacting household purchasing power.

Political Instability:

The political landscape was marked by unrest, culminating in the fall of the government in August 2024 following mass protests. This upheaval disrupted economic activities and deterred investment.

Resetting the Compass

In August 2024, an Interim Government led by Nobel laureate Muhammad Yunus assumed power, inheriting a complex economic environment. Key developments during this period include:

Remittance Flow:

From July 2024 to May 2025, Bangladesh experienced a robust inflow of remittances, reaching record-breaking levels. According to data from Bangladesh Bank and UNB, monthly remittance figures showed a consistent upward trend: $1.91 billion in July, $2.22 billion in August, and $2.40 billion in September. October saw a slight dip to $2.39 billion, followed by $2.20 billion in November. In December, remittances surged to $2.64 billion, while January recorded $2.19 billion. February and March witnessed significant increases, with $2.53 billion and a record-high $3.29 billion, respectively. April brought in $2.75 billion, and May followed closely with $2.97 billion—the second-highest monthly figure during this period.

Between July 2024 and January 2025, the United States emerged as the largest remittance source, contributing $2,903.07 million. This was followed by the United Arab Emirates with $2,276.96 million, Saudi Arabia with $1,993.29 million, the United Kingdom with $1,472.81 million, and Malaysia with $1,419.89 million. These strong inflows underscore the importance of the Bangladeshi diaspora in sustaining the country's foreign exchange reserves and supporting its economic resilience.

Inflation Control Measures:

The Bangladesh Bank adopted a contractionary monetary policy, raising the policy rate to combat inflation. Due to these efforts, although inflation peaked at 11.38% in November 2024, it nevertheless, fell to 9.05% in May 2025

Banking Sector Reforms:

The interim government restructured the boards of several state-owned banks and appointed a new central bank governor to address financial mismanagement and restore confidence in the banking sector. Additionally, there was a creation of a "Bad Bank" framework to isolate toxic assets.

Foreign Aid and Investment:

FDI in Bangladesh rose to $3.48 billion in 2022, marking a 20.2% year-on-year increase. The highest inflows were seen in textiles and garments ($1.3B), followed by power and energy ($691M), and telecommunications. Leading sources of investment included the United Kingdom ($622M), South Korea ($603M), and the Netherlands ($512M).

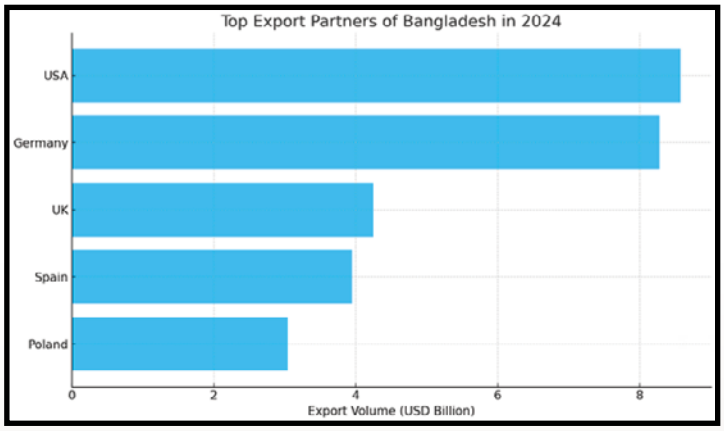
To further boost investment, the Bangladesh Investment Development Authority (BIDA) launched an FDI Heatmap, highlighting 19 priority sectors such as renewables, ICT, agribusiness, and health tech. BIDA also organized international investment summits with participants from over 40 countries, backed by streamlined policies and fast-track services. These initiatives are helping to position Bangladesh as a growing investment hub with strong regional and global connectivity.

Trade and Investment Challenges:

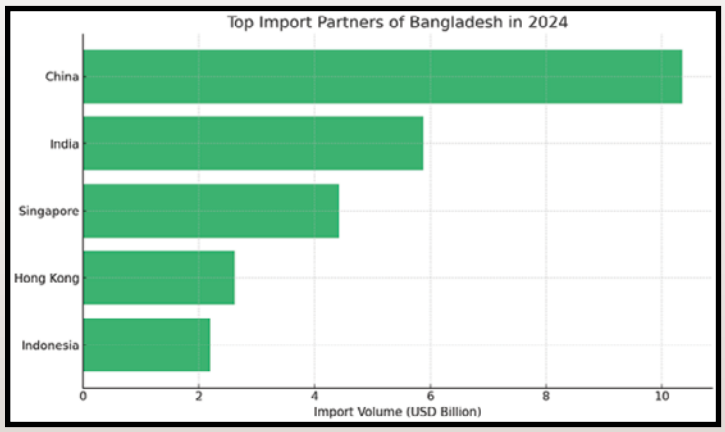
Foreign direct investment (FDI) declined, with net inflows dropping significantly due to political unrest and economic uncertainty. The interim government faced challenges in restoring investor confidence and revitalizing key sectors.

Global Growth Partners

Throughout recent years, USA, Germany, China and India remain dominant as the top trade trading partners of Bangladesh. However, market diversification to Japan, Australia, and Eastern Europe is noticeable



Source: World Bank WITS



Source: World Bank WITS

Lessons Learned

The economic journey of Bangladesh over the past 15 years offers several key lessons:

1. **Diversification is Crucial:** Over-reliance on a single industry, such as textiles, exposes the economy to external shocks. Diversifying the economic base can enhance resilience and sustainability.

2. **Good Governance Matters:** Effective governance and transparency are essential for financial stability. Addressing corruption and improving regulatory frameworks can bolster investor confidence and economic performance.

3. Political Stability Supports Economic Growth:

Political unrest can disrupt economic activities and deter investment. Ensuring a stable political environment is vital for sustained development.

Future Prospects and Opportunities

Looking ahead, Bangladesh has several opportunities to foster economic revival and sustainable growth:

Enhancing Infrastructure:

Continued investment in infrastructure, particularly in energy and transportation, can improve productivity and attract investment.

Strengthening Human Capital:

Investing in education and skills development can create a more competent workforce, driving innovation and economic diversification.

Improving the Business Environment:

Streamlining regulatory processes, enhancing transparency, and addressing corruption can make Bangladesh a more attractive destination for both domestic and foreign investors.

Leveraging International Partnerships:

Engaging with international financial institutions and development partners can provide the necessary support for structural reforms and development projects.

Looking Ahead

As of today, Bangladesh stands at a critical juncture, with the potential to build on past successes and address existing challenges. By focusing on economic diversification, good governance, and strategic investments in infrastructure and human capital, the country is expected to regain its economic momentum. However, Bangladesh too has to find the answer to the Trump Tariff, which is set to alter the export landscape in South Asian countries shortly.

APTA CCI meets UN-ESCAP – Trade, Investment and Innovation division on the construction of the Asia-Pacific Digital Trade Center.


Wang Yan guo


Ajith D Perera


Rupa Chanda

The online meeting was held by APTA CCI on May 20, 2025, with UNESCAP Trade, Investment and Innovation Division to explore and facilitate a joint working model for this flagship project.

APTA CCI is keen on focusing on a special study of constructing the Asia-Pacific Digital Trade International Rules, Standards, and System.

Background of the project: The Global digital trade is expanding, while WTO rules lag, covering only about 32% of the digital trade domain. Emerging areas such as cross-border data flows, digital tax face institutional gaps. Global governance is fragmented, with less than 23% rule compatibility. While Geopolitical risks are intensifying and have surged by 65% in 2023. In this context intelligent retrieval system for digital trade rules, a prototype of a cross-border data flow monitoring platform is becoming necessary.

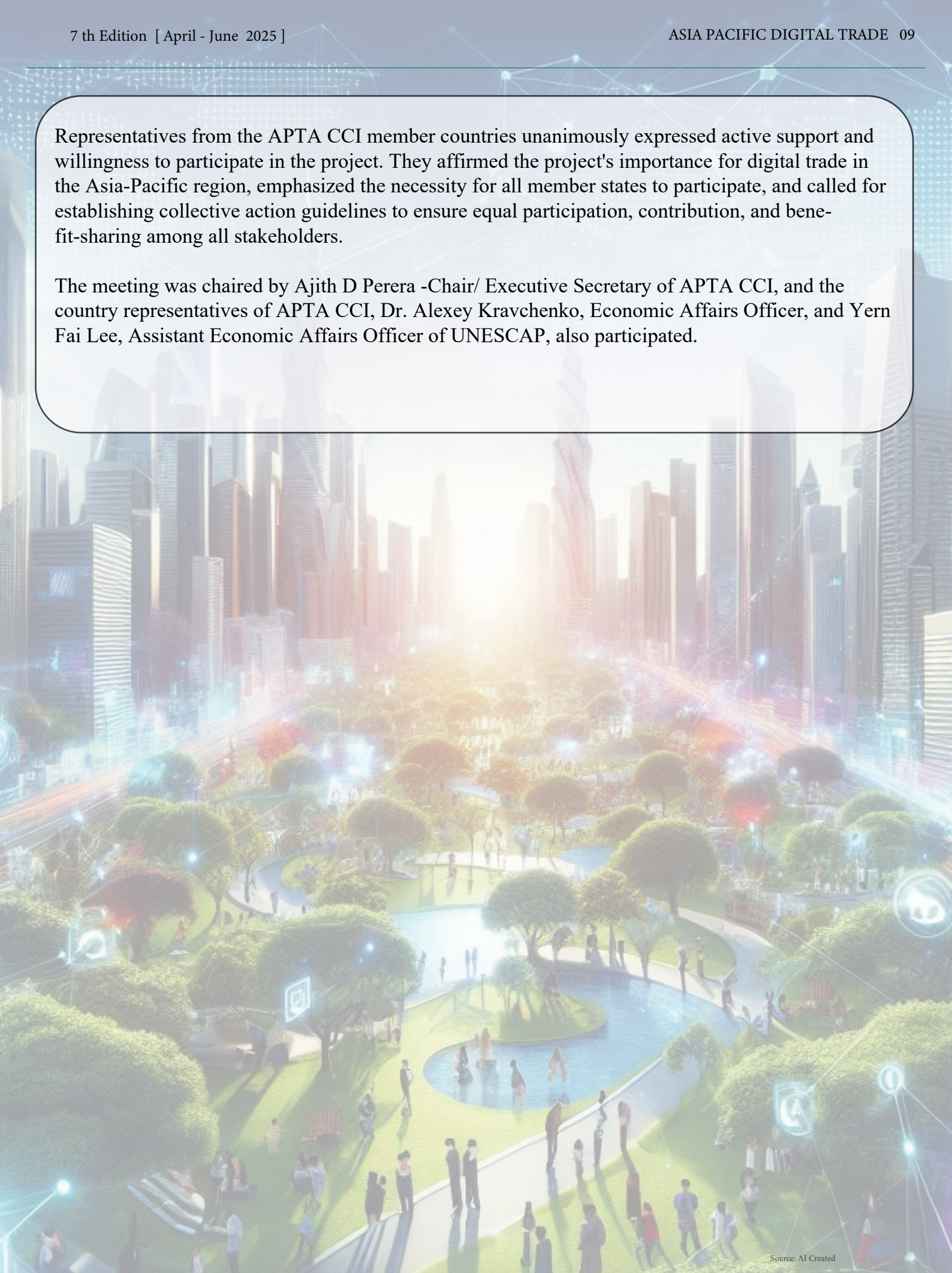
Speaking on the project Wang Yanguo, Chairman of the APTA CCI Headquarters and Chairman of the China National Committee explained the project's background and necessity. He pointed out that the project aims to provide institutional support for the development of the digital economy and digital trade in the Asia-Pacific region through the systematic advancement and rules and mechanisms for innovation, and the practice of innovation, thereby contributing to an inclusive and sustainable regional digital transformation and upgrading.

Dr. Rupa Chanda -Director, Trade Investment and Innovation Division of UNESCAP, speaking on behalf of UN-ESCAP, requested more concrete and detailed presentations to benefit all participating member states. Further, she explained the supportive roles which can be provided by UN-ESCAP in the project, namely, as a facilitator and providing expert views, etc., concluding her brief speech, she expressed her hope that all member countries will benefit through the project.
Yann Duval (UN-ESCAP), Chief, Trade Policy and Facilitation Section, while agreeing to the project idea in principle, said that promoting digital trade and digitalization is something that is very important, and very much in line with what ESCAP is doing. He further said that this is a very welcome initiative from APTA CCI. Speaking on cooperation between UN-ESCAP and APTA CCI, he said UN-ESCAP can also engage in the project as an arm to provide feedback on the project guidelines for the implementation of the project. He also said that since UNESCAP has already developed some of the research tools in digital trade and the project can use these tools, and UN-ESCAP can also collaborate with the different governmental organizations.

Source: AI Created

Representatives from the APTA CCI member countries unanimously expressed active support and willingness to participate in the project. They affirmed the project's importance for digital trade in the Asia-Pacific region, emphasized the necessity for all member states to participate, and called for establishing collective action guidelines to ensure equal participation, contribution, and benefit-sharing among all stakeholders.

The meeting was chaired by Ajith D Perera -Chair/ Executive Secretary of APTA CCI, and the country representatives of APTA CCI, Dr. Alexey Kravchenko, Economic Affairs Officer, and Yern Fai Lee, Assistant Economic Affairs Officer of UNESCAP, also participated.



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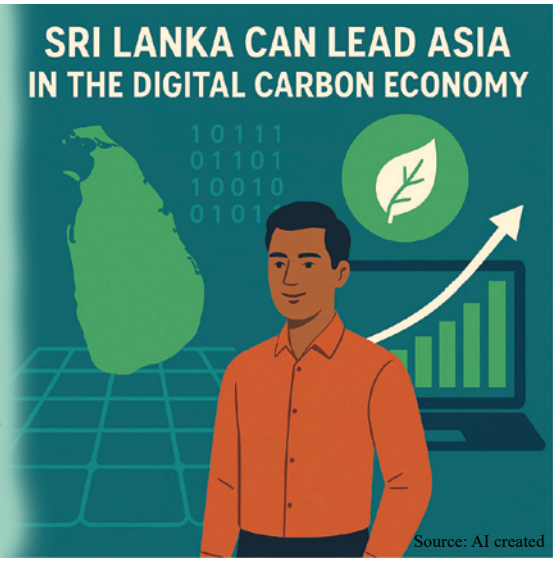
INSPIRE

A New Class of Exports: How Sri Lanka Can Lead Asia in the Digital Carbon Economy



Source: AI created

The world has a greenhouse gas emissions problem. As of 17th June 2025, atmospheric carbon dioxide concentrations have reached 428 parts per million - well above safe planetary thresholds - driving rising temperatures, extreme weather events, and growing economic and ecological instability across the globe. This is not only one of the defining challenges of our time, but also the largest business opportunity on the planet.

After nearly a decade of negotiations, the global carbon market framework known as Article 6 of the Paris Agreement was finalized at COP29 in Baku, Azerbaijan, in November 2024. This mechanism allows countries to trade positive environmental outcomes - known as Internationally Transferred Mitigation Outcomes (ITMOs) - representing one tonne of carbon dioxide reduced or removed.

Don Sandev Ferdinando is a carbon specialist at Serendib Assets, where he leads the development and go-to-market strategy for carbon, renewable energy, and plastic credit projects. He played a key role in establishing the Sri Lanka-Singapore MoU on carbon trading, and has been instrumental in positioning Sri Lanka within the emerging Article 6 carbon market under the Paris Agreement.

With a background in environmental economics and climate policy, Don has represented Sri Lanka at international climate negotiations and previously worked at the Permanent Mission of Sri Lanka to the United Nations. His earlier experience includes working in the sustainability teams at BNP Paribas in Singapore and Doha Bank in Qatar. He holds a BA in Economics with a minor in Environmental Studies from Yale-National University of Singapore College.

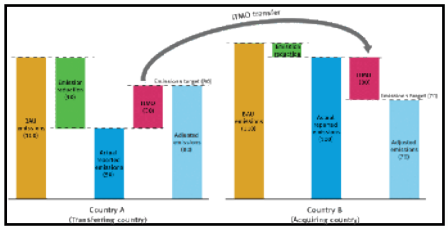


Fig. 1: How an ITMO Transfer Works under Article 6 of the Paris Agreement

In effect, it enables developing countries to finance low-carbon development by exporting carbon credits to nations seeking cost-effective ways to meet their climate goals. It is a transformative shift: emissions reductions are no longer just a climate imperative, but also a tradable economic asset. Serendib Assets, a carbon project developer based in Colombo and London, focuses on harnessing this opportunity - connecting international capital to high-quality,locally

rooted projects that can generate this new class of exportable environmental outcomes.

Some countries are already capitalizing on this opportunity. Ghana announced at COP29 that it had generated USD 800 million through carbon trading agreements. Fiji, facing a USD 3 billion climate finance gap, is using Article 6 to bring in foreign capital to meet its 2030 targets. These early movers signal that carbon trading is no longer theoretical - it is a viable pathway to attract international finance and diversify national income streams. Sri Lanka, if strategically positioned, can become one of the next breakout players in this space.

Sri Lanka has made progress in laying the groundwork. In August 2023, the government signed a Memorandum of Understanding with Singapore to collaborate on carbon trading under Article 6.2. This was followed by the introduction of an "Article 6 Positive List" by the Ministry of Environment, outlining project types eligible to generate ITMOs across key sectors such as energy, transport, forestry, and waste. The country's Nationally Determined Contributions (NDCs) include a commitment to reduce emissions by 14.5% by 2030 compared to business-as-usual levels, with a substantial portion contingent on international finance. These are foundational steps - but they must now be supported by robust project pipelines and digital infrastructure.

Digital technology plays an increasingly vital role in enabling the credibility, traceability, and liquidity of carbon credits. Monitoring, reporting, and verification (MRV) systems are shifting from manual audits to satellite-based, blockchain-verified platforms. For example, rice-methane reduction projects in Southeast Asia now use remote sensing to track emission reductions in real time, while afforestation programs in Yunnan Province, China, rely on AI-enhanced land monitoring to validate forest growth. These technologies not only improve data accuracy but are also key to meeting the transparency requirements of international buyers. Sri Lanka's growing IT sector - set to contribute to a USD 15 billion digital economy by 2030 - can play a central role here by developing or hosting climate tech platforms tailored to global market standards.

2: Visualization of remote sensing using satellite imagery
Source: European Space Agency

Carbon trading must be understood not just as an environmental or financial instrument, but also as a strategic export opportunity. The Export Development Board of Sri Lanka has set a national target of USD 45 billion in export revenue by 2030. Carbon credits, sustainability services, and climate-related software offer a compelling path toward meeting this target. Already, international demand is rising for MRV platforms, emissions accounting software, ESG advisory services, and climate risk assessments. These services complement traditional exports while positioning Sri Lanka as a hub for the new sustainability economy in Asia.

South Asia holds a comparative advantage in the export of carbon credits relative to other regions. According to the IETA Greenhouse Gas Market Report 2023, the average cost of achieving national 2030 environmental targets under the NDCs is $11 per tonne of CO_2 equivalence (tCO_2e) in South Asia. In other credit-exporting regions, such as Southeast Asia and Southern Africa, the cost is higher - $25/$tCO_2e$ and

$21/tCO₂e, respectively. In contrast, countries that are net purchasers of carbon credits face much steeper abatement costs: $129/tCO₂e in Europe and $145/tCO₂e in Japan.

These figures are based on the cost of achieving emissions reductions from a given activity - known as the marginal abatement cost (MAC) of carbon - as illustrated in Figure 3 for Sri Lanka's energy sector. The Article 6 Positive List identifies eligible projects based on their sector-specific MAC, enabling ITMOs to be traded for projects with higher abatement costs. The resulting cost differential enables more cost-effective mitigation to be financed by the seller or transferring country. South Asia is therefore well positioned to export carbon credits at competitive prices, while capitalizing on the high and rising carbon prices in developed markets.

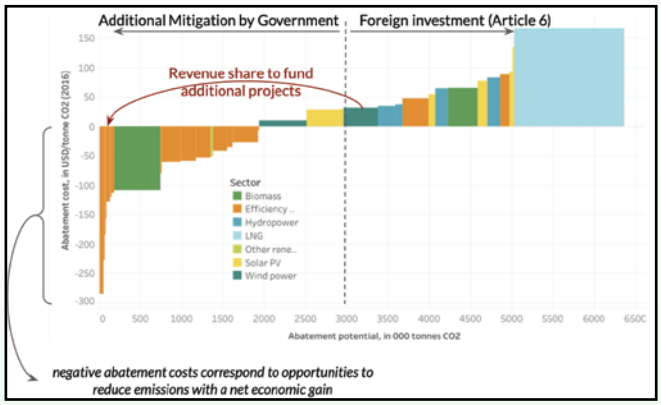


Fig. 3: Energy sector marginal abatement cost curve for Sri Lanka – emissions reduction in 2030 vs business-as-usual
Source: Carbon Limits AS report titled "Practical strategies to avoid overselling"

However, unlocking this opportunity will require targeted efforts to close gaps in policy, capacity, and investment readiness. Key among them are policy clarity, investor protection, and access to early-stage financing for carbon projects. The Ministry of Environment's forthcoming "Carbon Market Strategy and Guiding Principles" is expected to define the share of proceeds for the state, transaction fees,and quality safeguards for projects. These guidelines must strike a careful balance: protecting national interest while remaining competitive in a fast-moving global market. Ensuring interoperability with emerging sustainable finance frameworks - such as the Transition Credits mechanism spearheaded by the Monetary Authority of Singapore - will also be critical.

Sri Lanka spends nearly USD 5 billion each year on fossil fuel imports; replacing even a portion of this with domestically generated renewable energy - financed in part through carbon revenues - could yield significant economic and environmental benefits. Initiatives such as President Anura Kumara Dissanayake's "Clean Sri Lanka" campaign, launched in January 2025, offer a strategic umbrella under which carbon, biodiversity, and plastic credit systems can align. The program's Environmental, Economic, and Social Governance (EESG) pillars provide a credible framework for attracting foreign investment and strengthening Sri Lanka's position at future climate and biodiversity summits.

Fig. 4: Coal imports in Sri Lanka
Source: Ada Derana

In this new era, Sri Lanka has the potential to become more than just a recipient of climate finance - it can be an exporter of credible, transparent, and innovative environmental services. By integrating digital infrastructure with sustainability targets, and aligning its trade policy with Article 6 and emerging global standards, Sri Lanka can turn climate risk into climate opportunity.

What emerges is not only a path toward resilience but a new chapter in Sri Lanka's export economy - one that speaks to the future of Asia itself.

Serendib Assets is playing a catalytic role in this transformation. As a carbon project developer based in Sri Lanka, the company bridges the gap between international investors and high-quality, locally grounded sustainability projects. From early-stage feasibility to structuring and executing Article 6 transactions, Serendib Assets designs projects that go beyond emissions reductions - integrating biodiversity protection, agricultural co-benefits, and community development.

The firm also provides transaction support and investor-facing services, such as navigating host country approvals, securing third-party validation, and ensuring full compliance with UN and buyer jurisdiction standards. Serendib Assets was instrumental in supporting Sri Lanka's Article 6.2 MoU with Singapore and continues to contribute to national capacity building through policy engagement and market infrastructure development.

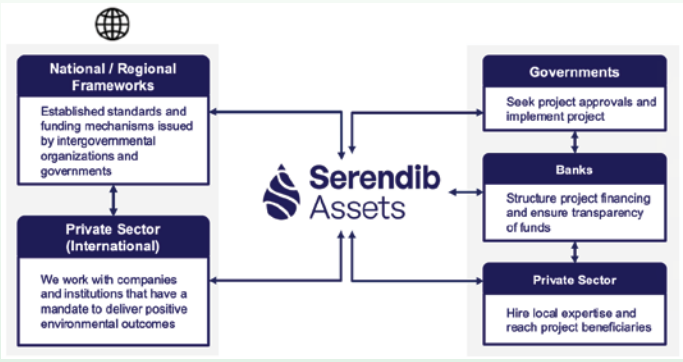
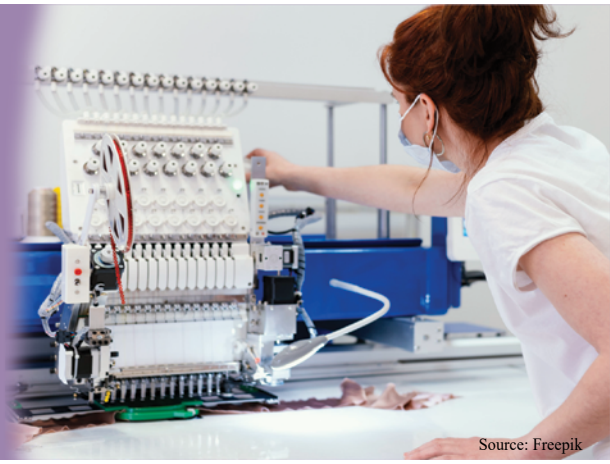


Fig. 5: Serendib Assets company overview – leveraging sustainable finance instruments

By combining project execution with strategic diplomacy and digital innovation, Serendib Assets aims to contribute to positioning Sri Lanka as a credible supplier of environmental services in the global marketplace. As international interest in carbon markets continues to grow, the company is actively exploring opportunities to replicate this model in other countries across the region - partnering with governments, financiers, and local stakeholders to turn climate ambition into investable, measurable outcomes.

Insight

Waterless textile processing technology: A way forward towards reducing textile water footprint



Source: Freepik

Introduction

Dr. Rekha Ramakrishnan is presently working as Scientist at SASMIRA, Worli, Mumbai, India. She holds Doctorate in Textile chemistry and has vast experience of 28 years in the field of textile processing viz. energy conservations, ecofriendly process, decentralized sector, zero liquid discharge, waterless dyeing technology, etc. She has several publications to her credit.

The textile industry stands out as among the most water intensive sectors globally. It is one of the biggest consumers of water. Water is used as a solvent in many pretreatment and finishing processes, such as washing, scouring, bleaching and dyeing. Waste stream generated in this industry is essentially based on water-based effluent generated in the various activities of wet processing of textiles. At the end of the process, this water contains large quantities of chemicals, salt and alkali, and becomes chemical waste, which is difficult to treat and leads to large amounts of untreated wastewater directly being dumped in water bodies such as lakes, rivers and others, leading to damage to the aquatic environment. This severely impacts the flora and fauna dwelling in the water resources. The indirect consequences would be on the animals and humans would consume such infected water. On average, an estimated 100–150 litres of water is needed to process 1 kg of textile material, with some 28 billion kilos of textiles being dyed annually.

Water recycling presents a global challenge to the textile wet processing industry because of the high cost involved in the effective effluent treatment plant viz., membrane filtration technology. Most of the textile industries have shut down because of these problems. The textile wet processing industry is today interested in a newer technology which can address both effluents as well as ecofriendly process. Hence, the elimination of process-water and chemicals would be a real breakthrough for the textile dyeing industry. Waterless dyeing technology using super-critical carbon dioxide (SC-CO2) can solve the problem.

Water footprint in textile industry

A water footprint (WF) is a measure of the total volume of fresh water used to produce goods and services consumed by a population or entity. It encompasses both direct waters use and the indirect water use embedded in the supply chain of products.

The textile industry has a significant water footprint, with high water consumption and pollution levels. It uses a substantial amount of water in

various processes, from growing raw materials like cotton, Wool to dyeing and finishing fabrics. This usage contributes to water scarcity and pollution, impacting both the environment and local communities. Research indicates that the annual water footprint of the textile sector is approximately 1.8 billion m^3. The high water usage and resultant pollution potentially lower groundwater levels, leading to severe health issues for local populations. Since textile industry is highly water intensive and India had been identified as a highly water-scarce region, the long term viability of the Indian textile industry hinges heavily on sustainable water management. As per one of the study, the water consumption of Indian Textile industry alone is about 200 – 250 m3/tone of cotton cloth.

The quantity of water required for textile processing is large and varies from mill to mill depending on fabric produce, process, equipment type and dyestuff. The longer the processing sequences, the higher will be the quantity of water required. In addition to water use, the impact of textile wastewater on the quality of water resources (the streams, lakes, rivers) must also be considered.

Techniques for reducing water footprint

There are best available techniques available for reducing intake of fresh water and primarily aim at reduction in the quantity and quality of waste with a view to combat water pollution . The various water and waste minimization options that are available for the textile industry can be listed out as follows:

1.Improved working practice (good housekeeping, incorporation of automation)

2.Process modification (combining processes)

3.Machine modification (reduced liquor ratio)

4.Chemical management (reduction and reuse in process chemicals, substitution of hazardous chemicals with the eco-friendly ones)

5.Efficient washing techniques (counter current and using final rinse of one process as a first rinse for another one)

6.Segregation of waste streams (coloured and non coloured streams, less polluted from more polluted, biodegradable and non biodegradable) and then effluent treatment

Applications of Supercritical carbon dioxide technology in textile processing

Shri Ravi Prakash Singh is currently working as Assistant Director at SASMIRA, Worli Mumbai, India. He is actively involved in research, development, and innovation in the field of technical textiles with a special focus on smart fabrics, Agrotextiles, and Geotextiles. He holds M.Tech in Fibre Science & Technology from IIT Delhi, and presently pursuing his Ph.D. from IIT Delhi. He has several publications and one patent to his credit

The applications of supercritical fluid originated from replacing traditional solvent extraction of caffeine from coffee bean or nicotine from tobacco. This technique has reached the economic scale of mass production. The application of Supercritical carbon dioxide has extended continuously in various domains including textile industry. Dyeing with SC-CO2 has already been proven for synthetic fibers.

Conventional water-based dyeing of textile fabrics has intrinsic environmental problems due to the inevitable use of water and the discharge

of various chemical additives. Moreover, a subsequent drying process with high energy consumption is necessary. Researchers have worked and are still working on various aspects related to dyeing of textiles with supercritical fluids. SC-CO2 exhibits densities and solvating powers similar to those of liquid solvents yet has extremely rapid diffusion and viscosity similar to those of a gas. In order to develop compatible dyes and design a proper SC-CO2 dyeing process, the solubility of dyestuffs in SC-CO2 fluid is one of the most important parameters which determine their appropriate selection and dosage. Solubility behavior of dyes in SC-CO2 is important for level or uniform dyeing. This would minimize the problem of unleveled dyeing, shading and streaking might be minimized, with less time required for correction of the uniformity problems.

Dyeing of any textile material in SC-CO2 depends on (but not limited to) dissolution of dyes in SC-CO2 medium and the diffusion of SC-CO2+dye into the polymer matrix. Thus, study of polarity of dyes and the textile substrate is important. Non-polar dyes are used to enable proper dissolution in SC-CO2 medium. Synthetic substrates like polyester, nylon, polypropylene, etc are also non-polar or hydrophobic and during the dyeing process, the dye molecules can diffuse into the polymer matrix, where they are physically bonded. Because of its non-polarity, these substrates can be dyed in SC-CO2 with non-reactive, so-called disperse dyes. On the other hand, natural textile substrates like cotton, silk and wool are polar or hydrophilic and therefore have no affinity for the non-polar dye molecules. It is only possible to dye these textiles in SC-CO2 when the dyes are reactive towards the reactive groups in these materials. These non-polar reactive dyes are generally called disperse reactive. . Another way is to impart hydrophobicity onto the natural substrates making them non-polar and can be dyed with disperse dyes in SC-CO2. Dyeing of synthetic hydrophobic textiles using SC-CO2 dates back to 1982 where Chou and Wessinger studied the absorbance and swelling capacity of SC-CO2 for polystyrene, polycarbonate, polyvinyl carbonate, polypropylene, poly methyl methacrylate (PMMA) polyester and polyurethane polymers. The results showed that PMMA and polycarbonate have maximum affinity for CO2 due to carbonyl group.

Supercritical carbon dioxide has recently found different application types also in textile finishing. Apart from dyeing, another area which is gaining ground is cleaning or disinfection of textiles using SC-CO2 technology. SC-CO2 cleaning offers several advantages over conventional processes.

Conclusive Remark

Supercritical carbon dioxide (SC-CO2) waterless dyeing is widely known and applied green method for sustainable and eco-friendly textile industry. However, recently, not only dyeing but also pretreatment processes and different finishing applications take the advantage of SC-CO2 leading to enormous fresh water saving, cleaner and greener way of production and massive amount of contribution for world sustainability. Supercritical carbon-dioxide technology is seen as a proactive approach or pollution prevention approach in textile processing industry. It is a way forward towards reducing textile water footprint.

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SLIK ROAD

The Greater Bay Area: A Promising Land for Innovation

Today, I am honored to introduce the development status of China's the Greater Bay Area to dear readers. At the beginning of China's reform and opening-up, Guangdong and Hong Kong and Macao have always been important engines of China's development. It covers the Pearl River Delta region of Guangdong Province, the Hong Kong Special Administrative Region, and the Macau Special Administrative Region, with core cities including Guangzhou, Shenzhen, Zhuhai, Dongguan, Foshan, Zhongshan, and other frontier cities of reform and opening-up. At the end of the 20th century, Hong Kong and Macau ended their colonial rule and once again became a part of China. And cities such as Guangzhou, Shenzhen, and Zhuhai have also developed rapidly, forming a thriving and upward development pattern in the Greater Bay Area.

Where does the fertile ground for innovation come from

For the Greater Bay Area, innovation is the primary driving force. Since 1978, China has resumed the college entrance examination system, providing a large number of outstanding young people with opportunities to further their studies in universities and becoming an important source of innovation for China's economic development. At present, the Greater Bay Area has more than 100 universities, 50 State Key Laboratory, 29 national engineering technology research centers, and 11 major scientific and technological facilities. It has become an important place for personnel training in various fields, creating a complete talent echelon for the industrial and economic development of the Bay Area. According to statistics, the number of graduates from ordinary universities in Guangdong will reach 840000 in 2024; The proportion of undergraduate graduates from Guangdong Province who find employment in this region in 2021-2023 is 92.5%, significantly higher than that in the Yangtze River Delta and Beijing Tianjin Hebei regions.

In addition to focusing on talent cultivation and enhancing self-reliance, the Greater Bay Area also has strong employment attraction and absorption capacity, widely attracting foreign innovative and entrepreneurial talents to settle down and root in, and participate in economic innovation in the bay area. Core cities in the Bay Area such as Guangzhou and Shenzhen have introduced talent preferential policies, providing a series of talent attraction benefits such as talent settlement subsidies, resettlement allowance, and professional title rewards. At the same time, they have built platforms and ecosystems for high-end talent innovation and entrepreneurship, combining the introduction of innovative talents with the creation of innovative environment to empower efficient talent introduction through dual channels.

In addition, as a forward position of reform and opening-up, the Greater Bay Area has cultivated excellent market-oriented fertile ground and provided an innovative and friendly business environment for enterprise development. On December 26, 2023, the National Development and Reform Commission and relevant departments formulated and issued the "Three Year Action Plan for Building an International First Class Business Environment in the Greater Bay Area", further deepening cooperation between Guangdong, Hong Kong, and Macao, optimizing the business environment, enhancing the level of market integration in the Greater Bay Area, fully connecting with the international high standard market rule system, and jointly creating new advantages in international economic and trade cooperation.

Relying on a solid foundation of innovation, the economic innovation mechanism of the Greater Bay Area has been rapidly established. The government transformed into an "angel investor" to provide financial support for start-up companies; hosted numerous industry summits and forums, providing a platform for enterprises to attract investment; created and opened "double innovation" bases for small and micro enterprises to reduce the incubation cost of small and micro enterprises; introduced multiple incentive policies to motivate enterprises to innovate and start businesses... With the help of this series of innovative mechanisms, a large number of enterprises have sprung up like mushrooms and taken root in the Greater Bay Area.

Tencent's Story

Many readers may also know of a Chinese company called Tencent. This is the largest Internet company in China. Some familiar products, such as WeChat、QQ、games and other products all come from this company. But you may not know that this company was once very difficult more than 20 years ago.

In 1998, Ma Huateng captured the huge market in China's instant messaging field and innovatively developed QQ, an Internet instant messaging software, in 1999. At that time, Tencent had only five people. As a startup, funding has undoubtedly become a major obstacle to Tencent's development. It is precisely because the Shenzhen government actively supports the development of small and micro enterprises and introduces investment for them that Tencent was able to obtain a key venture capital at the first Shenzhen High tech Fair in 1999, relying on stronger financial confidence to develop its own business empire.

Since then, Tencent has rapidly developed and grown relying on numerous preferential policies and support from the Shenzhen Special Economic Zone. In 2004, Tencent went public on the Hong Kong Main Board, opening a new chapter in the development of enterprise innovation driven growth. In the following years,

Tencent increased its research and development investment and recruited innovative fresh blood with the help of the Bay Area talent attraction policy. In 2011, it officially released WeChat and continuously updated it, successively launching functions such as voice intercom, friend circle, WeChat public platform, etc. In 2013, it launched WeChat Pay function, laying a solid foundation for the popularization of mobile payments

Behind Tencent's rapid development is the effective support of the Bay Area's economic innovation mechanism, as well as the strong support of the Bay Area government. Tencent Enterprise is not an isolated case, but a microcosm of countless companies that have benefited from the innovation mechanism of the Bay Area economy.

The excitement continues

The innovative takeoff of major enterprises has gathered strong economic development momentum, allowing one economic miracle after another to be staged on the hot soil of the Bay Area. Nowadays, leading companies such as Huawei, Tencent, DJI, Midea, BYD, and Guangzhou Automobile Group, which are deeply involved in the international market, have gathered in the hot land of the Bay Area and are playing an exemplary leading role as industry leaders. While continuously expanding their brand influence and product market, they are also giving back to the Greater Bay Area, fully demonstrating the responsibility of large enterprises in promoting growth, innovation, and job creation. Undoubtedly, they have promoted the overall level of technological innovation and high-quality economic development in the Bay Area

Under the guidance and driving force of large enterprises, many small and micro enterprises have followed the path of predecessors, innovated and grown rapidly. In the "2024 Global Unicorn List" released by Hurun Research Institute, there are a total of 70 unicorn companies listed in the Greater Bay Area. Meanwhile, by 2023, the number of national high-tech enterprises in Shenzhen will increase by over 1000, bringing the total to 24000; The Hengqin Guangdong Macao Deep Cooperation Zone has a total of 282 national high-tech enterprises, including 16 Australian funded enterprises; Nansha has introduced 29 investment projects from Fortune 500 companies (totaling 270); Thirteen national level specialized and innovative "little giant" enterprises have been added, and 13 Hong Kong and Macao youth innovation bases have been established, attracting over 700 Hong Kong, Macao, and Taiwan youth innovation project teams (enterprises) to settle in... These dazzling numbers all demonstrate the remarkable achievements of the development strategy of "big enterprises leading, small enterprises keeping pace", and also make us deeply feel the significant achievements of economic innovation in the Bay Area.

Looking back at the six-year construction process of the Greater Bay Area, the profound foundation of economic innovation, the improvement of economic innovation mechanisms, and the achievements of economic innovation in the Bay Area are all inspiring us to continue innovation. Now, I am also in charge of a student innovation team. They are building a small Internet news agency called Truth Seeker. This news agency tells the world the story of China's innovation. In short, the excitement continues in the Greater Bay Area, please stay tuned.

Author:

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Horizon

UNLOCKING DEI: THE POWER OF DIVERSITY, EQUITY, AND INCLUSION


Source: AI Created

BUSINESS ATTITUDES TOWARDS DEI IN SRI LANKA

A key objective of ECCSL's research was to determine the attitudes and beliefs of Sri Lankan businesses towards social cohesion and DEI. Almost all businesses expressed support for DEI principles and social cohesion more broadly, however, differences emerged in how each business conceptualised and implemented DEI.

This variance highlighted two main approaches to DEI among businesses: a narrow approach, which primarily aimed at preventing negative incidents and was hesitant to discuss more sensitive aspects of DEI; and a more sophisticated approach, which recognised the nuance of DEI, embraced a variety of implementation methods, and showed openness to address sensitive topics.

Many of the businesses interviewed had DEI programs, and some had staff dedicated to implementing these programs. These businesses were eager to speak about their DEI work, progress, and goals. Common priority areas for Sri Lankan businesses' DEI programs were gender, disability, and age. The work done by businesses in these areas showed a sophisticated approach that engaged directors and higher-level management, analysed data to set ambitious targets, used root-cause analysis to design strategies to achieve these targets, and involved appropriate accountability procedures (in line with international best practices, see chapter 4.3).

The DEI work done by businesses in these areas is highly commendable. Few businesses, however, explicitly addressed other dimensions of DEI, such as ethnicity and religion – identity markers that continue to be relevant in Sri Lanka – in their DEI programs. Some businesses stated that issues relating to ethnicity and religion were not problems within their organisations. These businesses stated that no issues had been reported internally, and that the business did not tolerate discrimination, harassment, or abuse of any kind. Other businesses acknowledged the importance of ethnic and religious dimensions of DEI, but stated that they had focussed their DEI strategy on the highest priority areas, which (based on research that included employee surveys) did not include ethnicity and religion. These businesses also noted their zero-tolerance policy for discrimination, harassment or abuse (see chapter 5.2.1).


Source: Freepik

Some businesses appeared hesitant to discuss other sensitive dimensions of DEI, such as ethnicity and religion. This could be due to one or a combination of different factors, such as the sensitive nature of these issues in Sri Lanka, the effect of the social desirability bias to give uncontroversial answers, or not being confident speaking about these dimensions of DEI due to a (perceived) lack of knowledge.

These findings highlight two different conceptualisations of DEI in Sri Lankan businesses.

The first conceptualisation is narrowly construed and focuses on preventing negative events. When asked about DEI in their workplaces, specifically related to dimensions of ethnicity and religion, these companies' answers focussed on the absence of recorded negative events. They felt that that this absence was evidence that their organisation did not have problems in relation to ethnic and religious issues, and that this meant the organisation did not need to specifically address these issues in a formal DEI program.

The second conceptualisation that has emerged is more nuanced. It recognises that DEI goes beyond preventing overt discrimination, abuse, or harassment, also focussing on creating workplaces where all employees feel comfortable, included, and respected. Businesses with this conceptualisation showed an understanding that DEI issues can be complex, subjective, and difficult to measure, and that DEI may include dimensions that they are less informed of and do not currently prioritise. They appreciated that some issues may go unreported, that employees may not be comfortable speaking about very sensitive issues, or that possible improvements to company culture may not be readily apparent to those within the culture.

These businesses also showed an openness to discussing more sensitive dimensions of DEI. They were willing to constructively discuss sensitive topics such as ethnicity and religion without needing to show that their organisation had no issues in these areas. In this way, these businesses acknowledged that they were on a journey of continual improvement to be the best business they could be. Such openness is crucial for reflecting on and advancing any organisation's DEI initiatives, as it fosters a culture of curiosity, learning, and growth – necessary traits for progress in any area of a business, not just DEI.

FINDING 3:

Conceptualisations of DEI among Sri Lankan businesses are varied. Some businesses exhibit a sophisticated understanding of the nuance and complexity of these issues and their implementation, while other businesses appear hesitant to go beyond a narrow approach that focuses only on preventing negative interactions between staff.

To successfully implement DEI practices, businesses must first establish a comprehensive understanding of what DEI is. This fulsome understanding is crucial as it lays the groundwork for nuanced and effective implementation. By acknowledging the complexity of DEI issues and the subjective nature of their measurement, businesses can approach DEI with a continuous improvement mindset.

RECOMMENDATION 3:

Sri Lankan businesses should ensure their approach to DEI acknowledges that: DEI goes beyond mere instances of discrimination, harassment, and abuse; DEI issues are complex, subjective, and challenging to measure; and all businesses are on a continual improvement journey. This nuanced approach is a necessary starting point for businesses to embrace DEI in their organisations.

When speaking to businesses about their DEI programs related to gender, many businesses showed a sophisticated conceptualisation of DEI in this area. Businesses noted that they had made progress but that there was still much work to be done, that programs included empowering the capabilities of women in the company (i.e. not just towards preventing instances of discrimination, harassment, or abuse), and that the business's approach to implementing DEI programs related to gender had evolved over time through review and reflection.

FINDING 4:

Many Sri Lankan businesses have sophisticated approaches to DEI in areas such as gender, age, and disability, and meaningfully implement these into their business activities. In contrast, most businesses are more hesitant to discuss and engage with other sensitive dimensions of DEI such as ethnicity and religion, and few businesses have programs specifically addressing these topics.

Sri Lankan businesses are well-positioned to make use of their proven experience in areas such as gender, age, and disability as a stepping stone to broaden their DEI approaches to include less commonly addressed dimensions such as ethnicity and religion.

This stepping stone metaphor echoes DEI movements in other countries, such as the USA, where the race-focussed civil rights movement sparked broader conversations about civil rights in other areas. As societal awareness grew, the public's experience and understanding of race-based issues informed conversations on gender, sexual orientation, disability, and other dimensions of identity. The struggles for racial justice acted as a stepping stone, inspiring subsequent movements and initiatives that aimed to address various forms of discrimination and promote a more inclusive and equitable society.

Sri Lankan businesses can similarly build upon the successes of existing initiatives in gender, age, and disability inclusion to expand their DEI approach to encompass other dimensions like ethnicity and religion.

RECOMMENDATION 4:

Sri Lankan businesses should use their sophisticated understanding and experience of DEI in relation to areas such as gender, age, and disability as stepping stones to broaden their approach to also address other sensitive dimensions such as ethnicity and religion.

"This study was conducted by The European Chamber of Commerce of Sri Lanka (ECCSL) in partnership with the Strengthening Social Cohesion and Peace in Sri Lanka (SCOPE) programme. SCOPE is co-financed by the European Union and the German Federal Foreign Office and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), in partnership with the Ministry of Justice and National Integration"

You can read a full report on
https://drive.google.com/file/d/1mFJdVWrx-Ous2DuOohAtQT-mWThrEmVJ2/view

SMART PLANET

The Mobile Economy: Driving the Future of Digital Transformation


Source: Freepik

Author-Prof Engr Zamir Ahmed Awan

The global economy is undergoing an unprecedented transformation, driven by rapid digitalization and the widespread adoption of mobile technologies

The global economy is undergoing an unprecedented transformation, driven by rapid digitalization and the widespread adoption of mobile technologies. Mobile networks and digital infrastructure have become the backbone of economic growth, fostering seamless connectivity, enhanced productivity, and innovative business models.

The significance of the mobile economy extends beyond mere technological advancement—it is fundamentally reshaping industries, commerce, and governance at an international scale.

According to the GSMA Mobile Economy Report, mobile technologies and services contributed approximately $5.8 trillion to global GDP in 2025, equating to nearly 5.8% of total economic output. By 2030, this figure is projected to surge to nearly $11 trillion, reinforcing the indispensable role of mobile networks, digital transformation, and intelligent connectivity in driving economic expansion. Countries and enterprises that embrace this shift will be at the forefront of global competitiveness, innovation, and sustainable development.

Key Features of the Mobile Economy

The mobile economy is defined by several transformative characteristics that are shaping the future of digital ecosystems worldwide:

Ubiquitous Connectivity

The proliferation of smartphones and mobile broadband has enabled seamless global communication. As of 2024, there were over 5.5 billion unique mobile subscribers, with penetration expected to reach 70% of the global population by 2030. High-speed mobile internet ensures that businesses, individuals, and governments can operate efficiently, regardless of geographic location.

The Evolution of 5G and Beyond

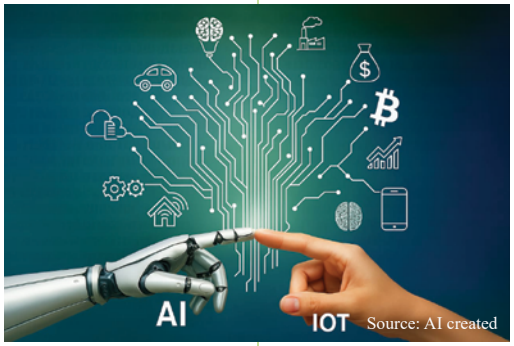
The introduction of 5G networks has revolutionized connectivity, enabling ultra-low latency

massive data transmission capabilities, and enhanced network reliability. Beyond traditional applications, 5G facilitates:

- Smart cities, optimizing traffic control, public safety, and energy management.
- Industry 4.0, enhancing automation, precision manufacturing, and AI-powered supply chain operations.
- Next-generation entertainment, delivering immersive AR/VR experiences and cloud gaming.
- Autonomous mobility, supporting self-driving cars, drones, and smart transportation solutions.

AI and IoT Integration

Artificial intelligence (AI) and the Internet of Things (IoT) are transforming industries by automating processes, enhancing decision-making, and enabling predictive analytics. The global IoT market is expected to reach $1.5 trillion by 2030, driven by advancements in smart healthcare, logistics, and agriculture.



Cloud and Edge Computing

Decentralized computing models, such as cloud and edge computing, are redefining data processing and storage. These technologies ensure faster access to information, lower latency, and enhanced cybersecurity. Huawei Cloud, for instance, has played a key role in optimizing enterprise cloud solutions, offering secure and scalable services for businesses worldwide.

The Role of 5G and 5G Plus in the Mobile Economy

5G networks represent a paradigm shift in mobile technology, unlocking economic opportunities and fostering global digital inclusion. The deployment of 5G Plus, an enhanced version of 5G, further amplifies the potential for next-generation applications in various sectors:

- Smart Cities: 5 G-powered infrastructure improves urban management through intelligent traffic systems, AI-driven surveillance, and sustainable energy solutions.
- Industrial Digitalization: 5G facilitates smart factories, predictive maintenance, and AI-driven automation, increasing productivity and reducing costs.
- Healthcare Innovation: 5G enables real-time remote surgeries, AI-powered medical diagnostics, and telemedicine, ensuring access to quality healthcare in remote areas.
- Financial Inclusion: Mobile banking and digital payment solutions, powered by 5G, empower underserved populations, promoting economic participation and reducing financial inequality.

Huawei: A Global Leader in 5G and Digital Transformation

As a pioneering force in telecommunications, Huawei has been instrumental in advancing 5G technology and driving digital transformation globally. With its unwavering commitment to research and innovation,Huawei has solidified its position as a leader in intelligent connectivity, AI-driven solutions, and cloud computing.

Huawei's Key Contributions to the Mobile Economy

★ AI-Centric Network Innovations

Huawei recently introduced an AI-powered autonomous network at the Mobile World Congress, revolutionizing the management of global digital infrastructures. This innovation enhances network efficiency, reduces operational costs, and ensures seamless connectivity.

★ Von Neumann Exhibition Hall

Huawei's Von Neumann Exhibition Hall serves as a global showcase for cutting-edge digital transformation solutions, highlighting advancements in AI, IoT, and cloud computing.

★ Huawei Cloud and AI-Powered Solutions

Huawei Cloud is a market leader in enterprise digitalization, providing scalable and secure cloud services to industries, including finance, healthcare, and logistics.

Case Studies: Huawei's Impact on Global Digital Transformation

Tianjin Port: A Model for Smart Logistics

Huawei's collaboration with Tianjin Port has transformed industrial logistics through AI, 5G, and cloud computing. Key benefits include:

★ Automated terminal operations, reducing labor costs and improving efficiency.

★ Real-time data analytics, optimizing supply chain management.

★ AI-driven security monitoring, enhancing workplace safety and operational transparency.

Ruijin Hospital: AI-Driven Healthcare

Huawei partnered with Ruijin Hospital to develop an AI-powered pathology model, revolutionizing medical diagnostics. The implementation of AI in pathology:

★ Enhances diagnostic accuracy by 20%.

★ Reduces turnaround times for critical diagnoses.

★ Optimizes medical resource allocation, ensuring better patient outcomes.

The Future of the Mobile Economy and Huawei's Role

As global digital transformation accelerates, Huawei remains at the forefront of technological advancements. Through continued investment in 5G, AI, IoT, and cloud computing, Huawei is enabling businesses and governments to navigate the digital future seamlessly.

Huawei's Vision for a Digital Future

Huawei's approach aligns with a global vision of technological progress, economic inclusivity, and sustainable development. Key strategic priorities include:

★ Bridging the digital divide by expanding 5G connectivity in underserved regions.

★ Driving sustainable innovation, focusing on green ICT solutions and energy-efficient networks.

★ Strengthening global partnerships to foster collaboration and knowledge-sharing in digital transformation initiatives

Way Forward

The mobile economy is an unstoppable force, redefining industries, enhancing efficiencies, and enabling a hyper-connected world. As 5G, AI, and intelligent cloud solutions continue to revolutionize global digitalization, businesses and governments must embrace these advancements to remain competitive.

Huawei, with its pioneering role in next-generation connectivity, remains a pillar of this transformation. By facilitating seamless communication, driving industrial automation, and advancing digital inclusion, Huawei is not just a leader in telecommunications but a key enabler of the global digital economy.

With nations and enterprises accelerating their digital journeys, Huawei's vision of a fully connected, intelligent world is shaping the future, ensuring that societies worldwide benefit from a technology-driven era of progress and prosperity.

Breath

Addressing Climate Change: Asia-Pacific Dual Carbon International Cooperation and Innovative Development


Source: AI created

The Asia-Pacific region, home to one-third of the global population, contributes approximately 60% of global GDP and nearly half of world trade, serving as a primary engine for global economic growth. Yet the reality that it accounts for 62% of global energy consumption, 64% of carbon emissions from power generation and heating, and incurs over USD 300 billion in annual climate-related economic losses underscores its sustainable development challenges. This economic scale, coupled with environmental impact, positions the region as a key participant in the global dual carbon transition.


Wang Yanguo

Chairman of APTA CCI head Quarters and chairman of China chapter of Asia-Pacific Trade Agreement Chamber of Commerce and Industry. He has a Master's degree in Law, a researcher (professor) title, member of the China National Think Tank, member of China Private Economic Think Tank Committee. He has published more than 10 books on economic law, administrative law, resource and environmental management, transformation of resource-based cities, international private economy research, international NGO, international economic cooperation, and more than 100 articles in national core journals. He won the "National Figure Award" and the "Best Think Tank Strategic Communication Award" of China National Think Tank.

Current regional cooperation exhibits three key characteristics:

Technological Innovtion:

China supplies over 80% of global photovoltaic modules and wind power equipment, while Japan holds technological advantages in hydrogen fuel cell vehicles, and South Korea in energy storage systems.

Market Development:

ASEAN's renewable energy installation capacity grows at over 8% annually, and India's new energy investments have tripled in five years.

Institutional Development:

The RCEP framework incorporates environmental provisions, and the China-Japan-Korea-ASEAN Clean Energy Forum facilitates policy dialogue.

Future transformation pathways indicate: by 2030, non-fossil energy sources are projected to reach 45% of the energy mix; wind and solar installed capacity will triple compared to 2020; application scenarios for low-carbon energy sources like hydrogen and green ammonia will continue to expand; and blockchain technology will enhance carbon data transparency.

China's Role in Regional Collaboration

As a major developing country, China engages in regional transformation through technological and institutional innovation:

Technological Progress:

- Renewable energy accounted for 52% of installed capacity in 2024.
- New energy vehicle production and sales have led globally for nine consecutive years.
- Fuel cell costs have decreased by 80% since 2018.
- Compressed air energy storage and flow battery technologies have reached the commercialization stage.

Regional Cooperation Practices

Through the Green Development Alliance under the BRI framework:

- The China-Laos-Myanmar-Thailand cross-border green electricity trading zone transmits over 100 billion kWh of clean electricity annually.
- The Colombo Port City project in Sri Lanka employs eco-friendly breakwater technology, reducing emissions by nearly 1,000 tons per year.

Contributions to Rule Systems

China's national carbon market has facilitated cumulative CO2 emission reductions of 900 million tons, approximately equivalent to the country's annual automobile emissions. China is collaborating with ASEAN and South Asian nations to advance the development of regional standards for CCUS technology and green electricity certification.

Multilateral Mechanisms:

Collaborative Actions of the ASIA-PACIFIC TRADE AGREEMENT CHAMBER OF COMMERCE AND INDUSTRY (APTA CCI) As a multilateral international organization established at the 50th standing committee meeting of APTA, participating states and the fourth ministerial council of APTA countries held in January 2017 at UNESCAP- Bangkok, , the APTA CCI bears a special historical mission:

- Define innovative energy rules to overcome technical barriers;
- Build digital sharing platforms to enable ecological cooperation;
- Establish the Asia-Pacific Climate Exchange to activate market dynamics;
- Construct a new energy system to strengthen energy security.
- Establish the Asia-Pacific Climate Fund to support innovation and development.
- Formulate action roadmaps to consolidate regional consensus.

As biomass battery technology illuminates Asia-Pacific cities, as integrated wind-solar-hydro-nuclear-storage energy networks connect urban and rural areas, and as climate trading indices guide global capital flows, an Asia-Pacific Clean Energy Community, grounded in technological innovation, structured through rule coordination, and driven by market mechanisms, is taking shape. This will not only reshape regional development paradigms but also provide key solutions for global climate governance.

The APTA CCI aspires to be the "Rule-Setters" and "Eco-Architects" of this dynamic region. May every standard, every transaction, and every technological breakthrough become milestones in humanity's response to the climate crisis.

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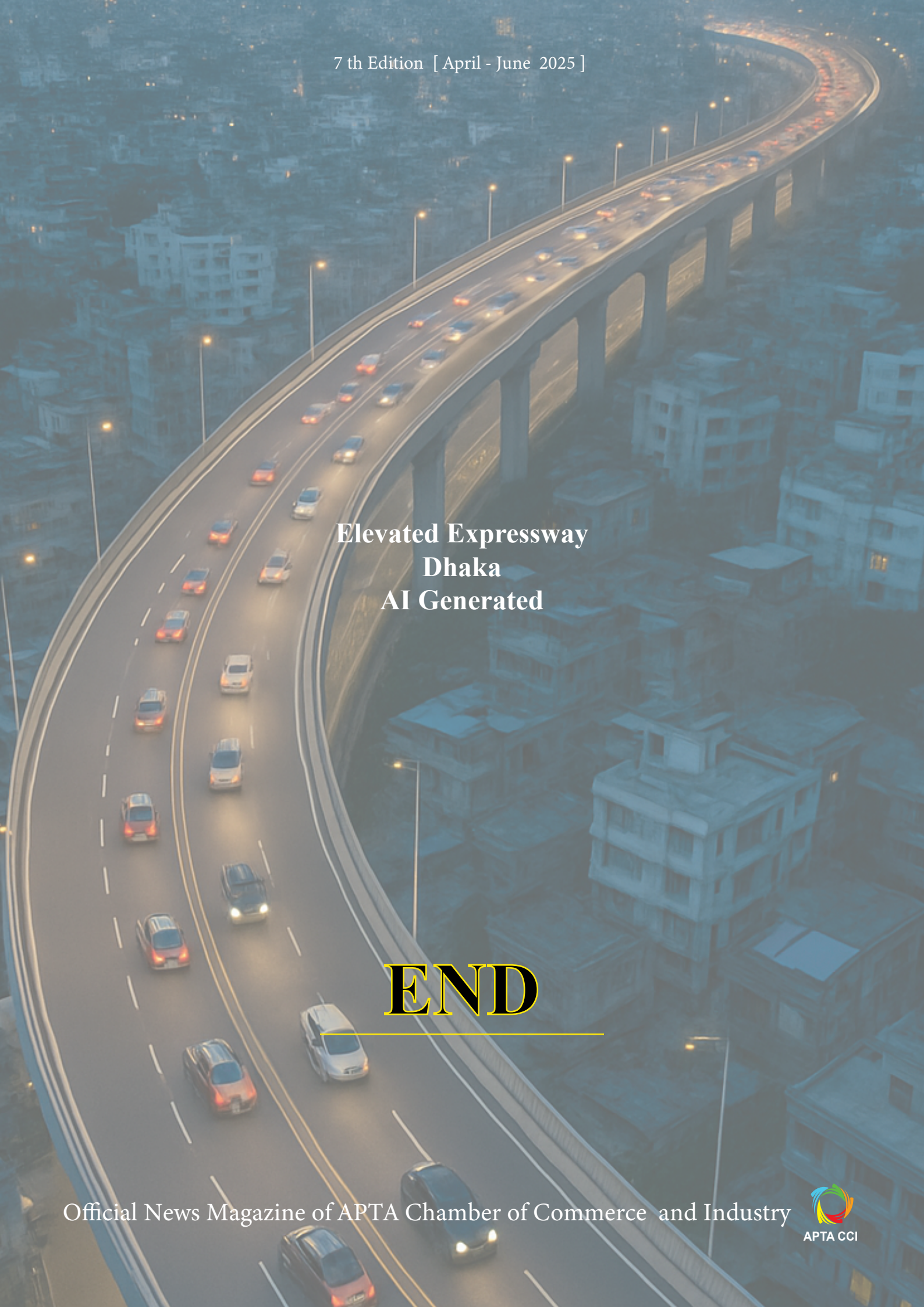

Elevated Expressway
Dhaka
AI Generated

END

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