HSBC GBA ESG Index Report

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Executive Summary

Executive Summary

This report is the quarterly update of the HSBC GBA ESG Index (the Index), which analyses the ESG and sustainable development performance of the Guangdong-Hong Kong-Macao Bay Area (GBA) in Q2 2025.

The GBA ESG Regional Index reached
a value of
128.29
in Q2 2025, a slight year-on-year increase of
0.40%

1 Recent policies in GBA are significantly aligned with the key topics identified in the preliminary study phase of the 15th Five-Year Plan.

Policies issued by the GBA in Q2 2025 demonstrate significant alignment with the preliminary priorities identified in the 15th Five-Year Plan, particularly with regard to technological innovation, environmental protection, and population strategy. Our study observed that the policies issued by the GBA in Q2 are focused on three strategic pillars: strengthening social welfare systems for vulnerable groups, accelerating technology-driven industrial transformation, and enhancing environmental governance mechanisms. These policies reinforce the region's commitment to sustainable development in the upcoming planning cycle.

2 Over the past several years, and within the framework of the 14th Five-Year Plan, the GBA has invested successfully in economic and social areas. The GBA is increasingly focused on addressing the needs of the upcoming years, setting the stage for the next phase of development.

In recent years, the GBA has effectively translated the guidelines outlined in the 14th Five-Year Plan into measurable outcomes. Specifically, fuelled by sustained government and market support, the GBA has honed its technological edge and delivered strong results across innovation and industry. Furthermore, by leveraging trade-in programs, the region has boosted domestic market consumption, with a particular emphasis on green consumption.

As the 14th Plan concludes, the region is building upon these foundations to address the expected priorities of the 15th Five-Year Plan. For example, the region has increased investment in basic research to help overcome critical technological bottlenecks and promote high-level self-reliance amid global industrial transformation. Additionally, it has increased investment in the silver economy, empowered by technology and financial solutions to address the challenges of population ageing. This strategic transition underscores the GBA's commitment to sustainable, innovation-led growth as it prepares for the next phase of development.

3 The GBA was active in sustainable finance during Q2 2025, with GSSS bond[i] issuance reaching RMB54.62 billion, an 11% year-on-year increase.

The Hong Kong government was the leading issuer in the GSSS bond market in Q2, accounting for approximately 38% of the total issuance volume. Green bonds were the most actively traded. More cities participated in the GSSS bond market in Q2 compared to the previous quarter. 29 mutual funds were introduced in the GBA's sustainable investment market in Q2, and there was greater balance in the distribution of funds across different themes.

The average value of the GBA ESG Industry Sub-indices was
237.52
in Q2 2025, a slight year-on-year increase of
0.86%

4 This report examines the ESG performance of the healthcare sector, with a particular focus on how emerging technologies enhance medical services and drive the transformation towards smart healthcare.

This report examines the evolution of smart healthcare in the region and explores its impact on sustainability trajectories, with a particular focus on social inclusivity. By leveraging telecommunication technology and artificial intelligence (AI), smart healthcare is breaking down geographical barriers, enhancing resource sharing, and reducing costs. It is also shifting health interventions from a reactive to a proactive stance, prioritising emergency prevention and everyday health management. Furthermore, through the application of cutting-edge technologies, the region is effectively addressing key challenges and streamlining medical R&D processes. Collectively, these efforts aim to make healthcare services more accessible, inclusive, and efficient, ultimately optimising resource allocation and breaking down geographical barriers.

i. GSSS bonds include green bonds, social bonds, sustainability bonds and sustainability-linked bonds. GSSS bonds issued by issuers in the GBA or any specific GBA city in this report refer to both onshore and onshore GSSS bonds issued by entities registered or primarily operating in the GBA or any specific GBA city.

GBA ESG Regional Index

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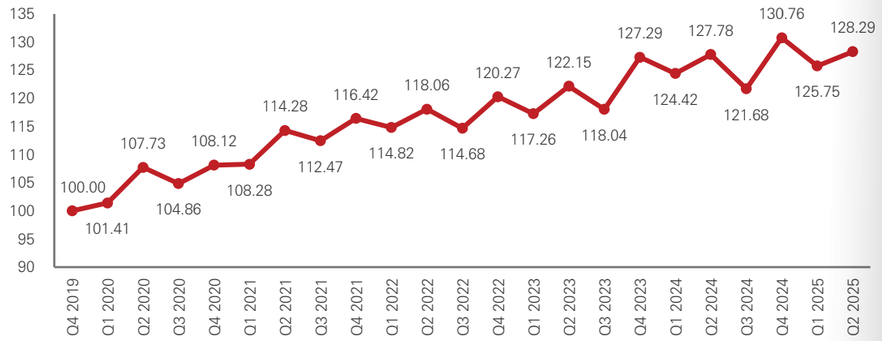
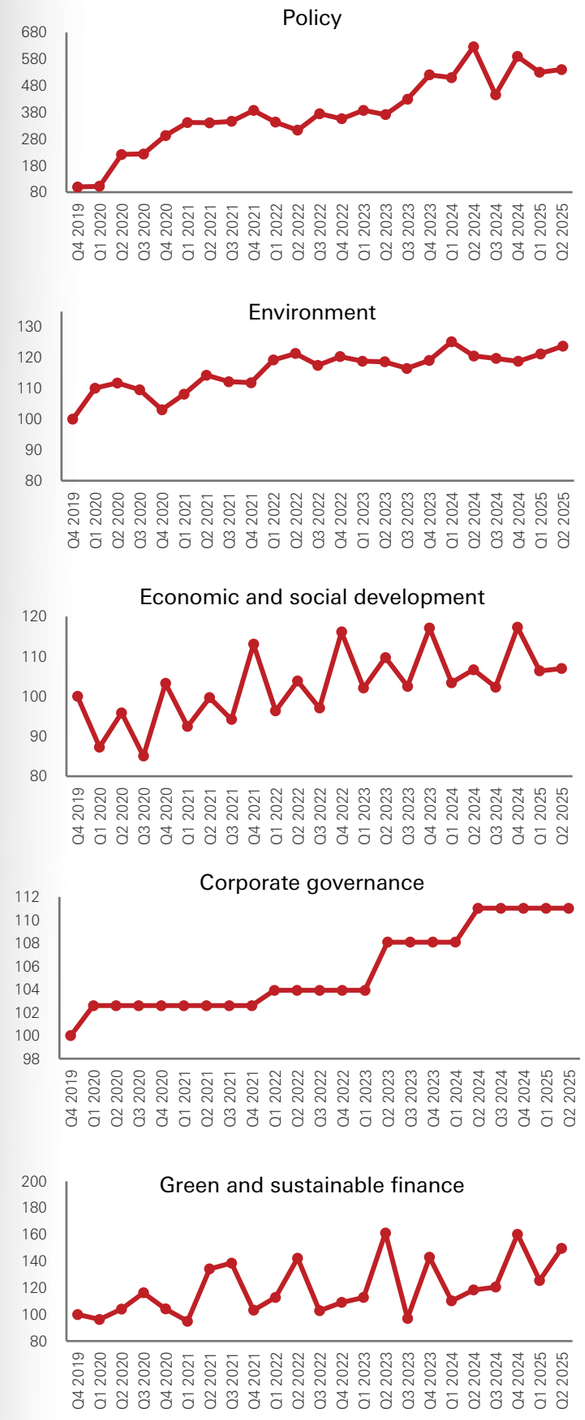
Figure 1. The GBA ESG Regional Index



Source: China's official statistical database, public disclosure of listed companies, public information from relevant third-party databases, other public sources, CECEPEC

Figure 2. Breakdown of the GBA's performance in the five areas



Note: The values are normalised. The base values were 100.00 for Q4 2019 (base period).
Source: China's official statistical database, public disclosures of listed companies, other public sources, CECEPEC

Our study shows that the GBA witnessed improvements across all areas in Q2 2025 with the exception of corporate governance which was stable. During Q2, governments introduced a range of policies, most of which were centred on promoting sustainable development within the GBA. Our study reveals that these policies contribute to three strategic pillars: social welfare, technology-driven industrial development, and environmental initiatives.

The environmental area experienced a year-on-year increase in Q2, primarily attributable to the GBA's progress in addressing climate change-related issues. There was a significant improvement in the area of green and sustainable finance in Q2, primarily driven by the significant issuance of GSSS bonds by the Hong Kong government as well as continuous activity in the launch of new ESG mutual funds within the GBA.

Policy

The GBA continued to advance its sustainability agenda in Q2 2025, with policy efforts focused on three strategic pillars: social welfare for vulnerable groups, technology-driven industrial transformation, and environmental stewardship. These areas align with the priorities mentioned in the preliminary study on the China's 15th Five-Year Plan.

The GBA has continued to strengthen its focus on the silver economy. In Q2, Foshan released an action plan targeting improved elderly-care services and the development of age-friendly products and healthcare services. At the same time, Shenzhen, Huizhou, and Zhuhai refined social-assistance policies to deliver targeted support for low-income, disabled, and other disadvantaged residents.

With regard to innovation and technology, governments within the GBA continued to demonstrate a strong commitment to frontier technology industries in Q2, with a clear focus on strategic pillars such as AI and robotics, intelligent connected vehicles (ICVs), and healthcare technology.

- **AI and Robotics:**
  In Q2, Zhuhai and Foshan both rolled out dedicated policies to advance AI and robotics, emphasising a full-chain-approach: "R&D – scenario deployment – intelligent manufacturing".
- **ICV:**
  Guangzhou unveiled a three-year ICV roadmap in Q2, aiming for over 90% of new vehicles to achieve Level 2[ii] autonomous driving by 2027.[1] At the same time, Foshan, published detailed rules for ICV road testing and demonstrating application, establishing a clear pathway from remote testing to commercial pilots in order to support large-scale autonomous driving deployment within the city.
- **Healthcare:**
  Shenzhen launched a full-chain support package for pharmaceuticals and medical devices. The measures also highlighted the accelerated application of AI in biomanufacturing and medical-device R&D.

Our study also observed that several environmental policies were issued in Q2. The GBA adopted a dual strategy of mandatory compliance coupled with incentive-driven support to accelerate the transition to a green and circular economy. For example, Shenzhen and Zhuhai both integrated Sponge-City requirements into new, renewed, or expanded projects. Shenzhen set out policies on penalties for non-compliance. Additionally, in Q2, Shenzhen issued its Clean Production Guidelines, encouraging districts to establish dedicated funds for those enterprises that voluntarily adopt clean production.

ii. Level 2 (Combined Driver Assistance): The combined driver assistance system sustains vehicle control both laterally and longitudinally under its designed operating conditions (Source)

Environment

In Q2 2025, certain green technology pilot projects within the GBA achieved key milestones in their transition to low carbon.

As mentioned in the report dated October 2024, Hong Kong identified opportunities for local hydrogen application and released the Strategy of Hydrogen Development in Hong Kong in June 2024. At that time, a total of 14 projects, including cross-boundary hydrogen transportation, supply facilities, and specific applications in transport, construction sites and remote areas, were agreed to in principle. In April 2025, a further eight additional trial projects on hydrogen fuel technology were given agreement-in-principle[2] leading to a total of 26 trial projects. The following key milestones have been achieved:

- **Three hydrogen fuel cell street washing vehicles** from the Food and Environmental Hygiene Department were issued with Certificates of Roadworthiness.[2]
- **Hong Kong's first public hydrogen filling station**, located at Au Tau, Yuen Long, commenced operations in June 2025.[3]

The steady progress of hydrogen fuel technology pilot projects paves the way for the low-carbon transition of the transport sector within Hong Kong.

The GBA is simultaneously advancing decarbonisation across other areas. Large-scale event decarbonisation represents one of the region's visible and scalable initiatives. In March 2024, Shenzhen released the Shenzhen Implementation Plan for Carbon Neutrality in Large-scale Events. In June 2025, the city showcased the progress achieved: all 15 projects in the first batch successfully achieved the goal of event carbon neutrality.[4] These 15 projects span five different themes: sports, environmental protection and sustainability, culture and arts, commercial and industrial, and technology and innovation.[5] Through piloting innovative practices in diverse fields and scenarios, the city has created a carbon neutrality framework for large-scale events, guided by the government, driven by the market, and with the participation of the public.

The successful implementation of these projects has provided a replicable model for the green and low-carbon transition of large-scale events including the upcoming 15th National Games to be hosted in the GBA this coming November.

Guangdong Province, Hong Kong, and Macao have jointly proposed the goal of "Creating a Carbon-Neutral Games", embedding green and low-carbon principles in event planning to advance regional sustainability. As the 15th National Games approach, the host cities have put forward initiatives such as "Green Games" and a "Zero-Carbon Games," and are actively piloting innovative pathways to turn these ambitions into reality.

Guangzhou

Guangzhou is exploring carbon-neutral Games solutions with preliminary estimates projecting around 500,000 tonnes of carbon emissions attributable to city-hosted events.[6] To achieve neutrality the city has adopted solutions such as 100% Green Power and the direct purchase of carbon allowances. Guangzhou is also promoting the construction of "waste-free sports venues" and "waste-free hotels" as part of its Green Games initiatives.

Shenzhen

Guided by the vision of "Green, Shared, Open, and Clean", Shenzhen has set emission reduction targets and nine specific tasks across five domains: building, energy, transportation, operations, and carbon offsetting, to achieve carbon-neutral Games.

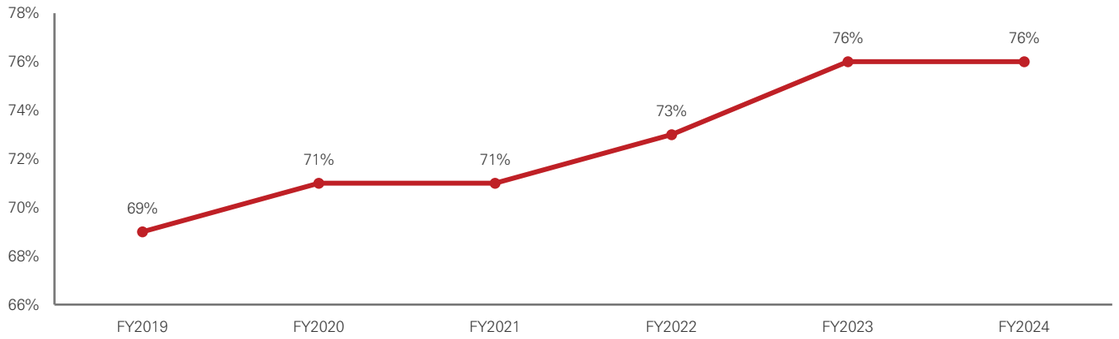
Throughout the entire life cycle of the Games, Shenzhen is advancing green and low-carbon practices, providing strong support for its slogan "Zero-Carbon and Conservation Together, Venues in Harmony with Nature". For example, innovative technologies such as "integrated photovoltaic storage and ultra-fast charging" and "bi-directional charging between electric vehicle and power grid" have been adapted for the energy supply system.[7]

Our study also observed that GBA companies have continuously intensified their commitment to carbon reduction. A total of 34 GBA companies set carbon emission reduction targets or made commitments via the Science Based Target initiatives (SBTi) in Q2 2025, a year-on-year increase of 42%. Specifically, 20 companies set targets, while 14 companies made commitments.

Corporate Governance

Our latest data shows that **the ESG disclosure rate of listed GBA companies remained stable at 76% for FY2024, unchanged from FY2023** (Figure 3). On closer inspection, Hong Kong and Macao continued to lead the way in disclosure within the GBA, with disclosure rates of 95% and 88% respectively. However, both cities recorded decreases from FY2023, attributable to (i) an adjustment of the company pool used to examine the disclosure rate and (ii) delayed reporting by some listed companies. At the same time, the ESG disclosure rates for the nine Pearl River Delta (PRD) municipalities increased compared to FY2023. Among the PRD cities, Guangzhou had the highest ESG disclosure rate of 59%, followed by Zhongshan, with a disclosure rate of 56%.

Figure 3. The overall ESG disclosure rate of listed GBA companies



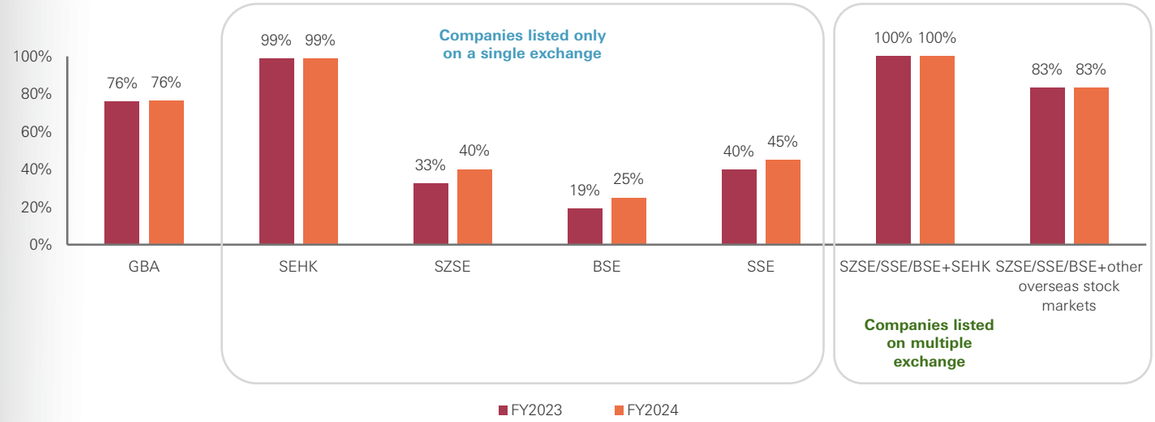
Note: We conducted a study of over 2000 GBA-listed companies to ascertain which had published ESG and other related non-financial reports in each financial year.
Source: Public sources, CECEPEC

The ESG disclosure rate of listed GBA companies is analysed below by stock exchange and by sector.

By stock exchange (Figure 4)
The disclosure rate of companies listed only on the Stock Exchange of Hong Kong (SEHK) remained close to 100%. The disclosure rates of those listed only on either the Shenzhen Stock Exchange (SZSE), the Shanghai Stock Exchange (SSE), or the Beijing Stock Exchange (BSE) were lower. However, our study observed that **the latter achieved incremental improvements, with disclosure rates increasing 7% year-on-year compared to last year. The greatest increase was in companies listed only on the SZSE**. This progress could be attributed to the sustainability reporting guidelines issued by mainland China, which **set out a standardised sustainability information framework with detailed indicators for listed companies within mainland China.**

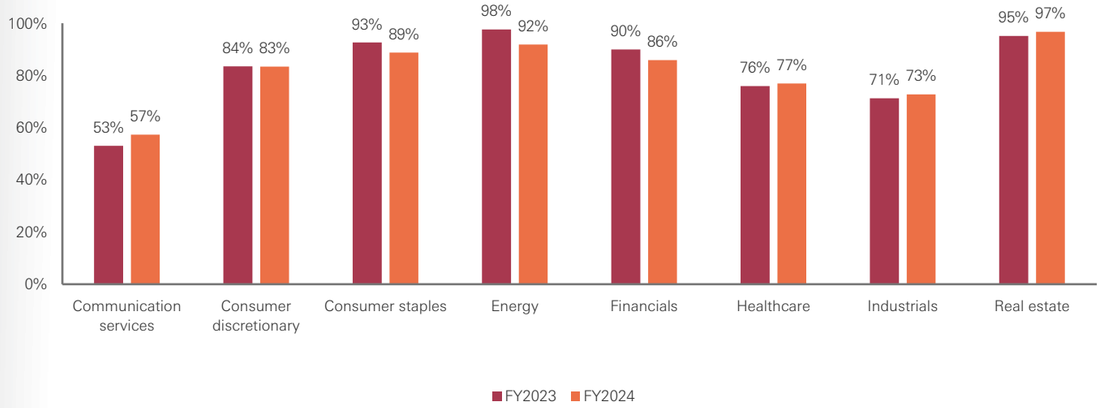
By sector (Figure 5)
Prior to FY2024, the disclosure rates across eight sectors increased substantially before stabilising in FY2024. During FY2024, four sectors, namely communication services, healthcare, industrial, and real estate, improved compared to FY2023; the greatest improvement being in the communication services sector.

Figure 4. ESG disclosure rate of listed GBA companies by stock market for FY2024



Note: The ESG disclosure rate of companies listed only on SEHK was 99% instead of 100%, as some companies announced a delay in publishing ESG reports for FY2024.
Source: Public sources, CECEPEC

Figure 5. ESG disclosure rate of listed companies by sectors in FY2024



Source: Public sources, CECEPEC

Global efforts to enhance and refine ESG and sustainability disclosure requirements continued to evolve in Q2 2025.

Internationally, the International Sustainability Standards Board (ISSB) advanced its framework in April by issuing an Exposure Draft proposing targeted amendments to IFRS S2 Climate-related Disclosures. These amendments aim to streamline implementation, particularly by easing greenhouse gas (GHG) emissions disclosure requirements to enhance practical applicability for companies.

Concurrently, mainland China significantly advanced its sustainability framework. The Ministry of Finance released the *Draft of the No. 1 Enterprise Sustainability Disclosure Standard - Climate (Trial)* for public comment in April. This draft represents a major move towards establishing standardised climate disclosure aligned with domestic needs while referencing international practices like those of the ISSB.

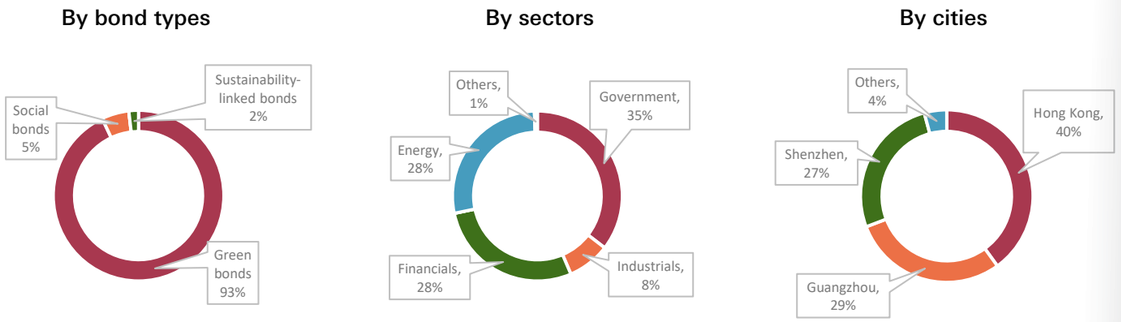
Green and Sustainable Finance

In Q2 2025, the issuance volume of GSSS bonds saw a year-on-year increase, primarily due to significant issuance by the Hong Kong government. Meanwhile, the investment market remained active with new ESG mutual funds.

In Q2 2025, the GBA recorded a total of RMB54.62 billion in GSSS bond issuance, representing a year-on-year increase of 11%. Government entities emerged yet again as the dominant issuers, led by the Hong Kong government which issued RMB19.36 billion in green bonds accounting for 38% of the total volume for the quarter.

The distribution of bond types and sectors remains similar to that of the previous quarter: (i) green bonds remained the most active segment; (ii) financial institutions, energy companies, and industrial firms continued to be the top three sectors. In addition to the three leading cities—Hong Kong, Guangzhou, and Shenzhen—four other GBA cities also entered the GSSS bond market in Q2, compared to only one city in the previous quarter.

Figure 6. Issuance volume of GSSS bonds within the GBA in Q2 2025



Note 1: By bond type: The proportion refers to the issuance volume of the specific type of bond / the GBA's total issuance volume. By sectors: The proportion refers to the issuance volume by the specific type of issuer / the GBA's total issuance volume. By cities: The proportion refers to the issuance volume by the specific city / the GBA's total issuance volume.
Note 2: GSSS bonds issued by a specific city refer to both onshore and offshore GSSS bonds issued by entities registered or primarily operating within the city.
Source: Wind, CECEPEC

With regard to the sustainable investment market, we found that fund management companies within the GBA were more active in launching new ESG mutual funds in Q2 2025 than in 2024, continuing the positive trend established in Q1 2025. A total of 29 new ESG mutual funds were introduced over the period with the fund management companies primarily based in Guangzhou, Shenzhen, and Zhuhai; Shenzhen being the most active.

The distribution of fund types was more balanced compared to previous periods. Pure ESG funds[iii] accounted for 52%, environmental-themed funds[vi] for 17%, and social-themed funds[v] for 31% of new launches.

Due to market saturation, the rate of new signatories to the Principles for Responsible Investment (PRI) has slowed. In Q2 2025, our study observed only one new signatory within the GBA to the UN PRI.

iii. Pure ESG mutual fund: Incorporate all three dimensions, i.e., environmental, social and governance, into their investment strategies (Source).
iv. Environmental themed fund: Incorporate the environmental dimension into the investment strategies. (Source).
v. Social themed fund: Incorporate the social dimension into the investment strategies. (Source).

Economic and Social Development

In Q2 2025, a series of policies were progressively issued or implemented, supporting key areas of innovation, green consumption and the development of the elderly care industry, which have been a strategic economic and social focus in the GBA over the past few years. Our subsequent analysis looks in detail at the growth of these three areas within the GBA over recent years, incorporating the latest developments.

Wrap-up of Economic and Social Development

Amid global economic restructuring and deepening integration of ESG principles, the GBA has emerged as a pioneering model for balancing economic development with ESG goals, combining economic vitality with social inclusion.

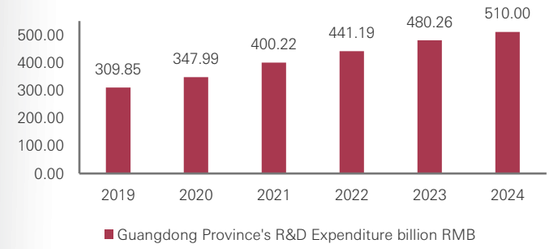
Innovation Drivers
The GBA has successfully translated innovation into tangible industrial and economic growth. Over the past few years, the region has rapidly expanded its R&D ecosystem, positioning itself as a leading international hub for innovation-driven development.

Public data (Figure 7) shows that Guangdong Province's R&D expenditure grew from RMB309.85 billion (2019) to RMB 510.00 billion (2024), representing an average annual growth of 10%. The province has maintained its leading position in the R&D expenditure being the top province in China for eight consecutive years.[8] Concurrently, the R&D intensity of the province increased from 2.87% (2019) to 3.60% (2024), surpassing the national average (Figure 8). Hong Kong experienced an annual increase in R&D investment of 8% (HKD 26.55 billion in 2020 to HKD 33.00 billion in 2023). Collectively, these trends have significantly increased the region's innovation capacity.

Companies remain the backbone of R&D, consistently contributing over 85% of Guangdong Province's total expenditure in this area over the past several years. This dominance underscores their pivotal role in technological advancement.

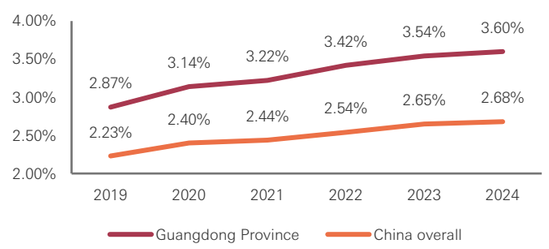
Additionally, Guangdong Province has seen a significant increase in its expenditure on basic research. Investment in basic research has risen from RMB204.10 billion in 2020 to RMB266.74 billion in 2023; an average annual growth rate of 9%. According to the preliminary study on the 15th Five-Year Plan period, China is currently at a stage where a new round of technological revolution and industrial transformation is accelerating breakthroughs. Within this dynamic context, competition in the field of basic research is expected to become even more intense. The significance of robust investment in basic research cannot be overstated. It is not only crucial for overcoming key technological bottlenecks but also essential for achieving high-level technological self-reliance and self-improvement. The data reflecting Guangdong Province's increased expenditure on basic research not only highlights the region's strategic deployment but also demonstrates its emphasis on laying a solid foundation for long-term technological innovation.

Figure 7. Guangdong Province's R&D Expenditure (RMB billion)



Source: Public sources

Figure 8. R&D Intensity: Guangdong Province vs. China Overall



Source: Public sources

Aligned with national priorities, governments within the GBA have intensified support for strategic emerging and future industries, especially since 2024, as evidenced by policy unveilings and substantial financial allocations. Strategic emerging and future industries within the GBA include:

Strategic Emerging Industries: Semiconductors, high-end equipment manufacturing, intelligent robotics, blockchain, quantum information, advanced materials, new energy, lasers, digital creativity, safety/environmental tech, and precision instruments.

Future Industries: Electronics, intelligent equipment, life and health, materials science, and green/low-carbon sectors (e.g., hydrogen, energy storage).

To translate policy into impact, governments have launched targeted financial support. Typical examples are given below.

Guangdong Province:
In 2024, a special sci-tech fund worth RMB10 billion was launched, with RMB4.23 billion allocated for technical innovation[9]. In 2025, an additional RMB10 billion is earmarked, prioritising integrated circuits, display manufacturing, and industrial software.

Hong Kong:
In 2024, HKD6 billion was invested in life and health tech research institutions at universities, as well as HKD3 billion for frontier research[10]. The government plans to launch a HKD10 billion I&T Industry-Oriented Fund targeting AI, robotics, and life science in 2025.

Financial institutions have actively responded to government calls, enhancing support for sci-tech industries. As can be seen in Figures 9 and 10, recent data shows a slowdown in sci-tech financing growth across the GBA. Specifically, the year-on-year growth of mid-to-long-term loans to advanced and high-tech manufacturing sectors fell from 40% in Q3 2023 to 4% in Q1 2025 within Guangdong Province. Similarly, the year-on-year increase in Shenzhen's loans to sci-tech enterprises dropped from 32% to 8% from Q4 2023 to Q1 2025. This deceleration does not indicate weakening support but may signal that the financial institutions now prioritise precision funding for high-potential projects over blanket credit expansion.

Figure 9. Year-on-Year Growth of Mid-to-Long-Term Loans to Advanced and High-Tech Manufacturing in Guangdong Province

	Types of loans	Outstanding Loans (year-on-year growth)			
		As of Q3 2023	As of Q1 2024	As of Q4 2024	As of Q1 2025
Guangdong Province	Mid- and long-term loans to the advanced manufacturing sector	40.70%	29.30%	7.20%	4.00%
	Mid- and long-term loans to the high-tech manufacturing sector	38.60%	31.20%	7.00%	4.70%

Source: Public sources

Figure 10. Year-on-Year Growth of Loans to Sci-Tech Enterprises in Shenzhen

	Types of loans	Outstanding Loans (year-on-year growth)			
		As of Q4 2023	As of Q1 2024	As of Q3 2024	As of Q1 2025
Shenzhen	Loans to sci-tech enterprises	32.34%	27.00%	6.75%	7.89%

Source: Public sources

Collaborative advancement across the GBA is pivotal for fostering scientific and technological innovation. By leveraging the unique strengths of each region—Hong Kong's global perspective and resources, Macao's research accomplishments, and Mainland China's industrial prowess—the GBA is establishing a comprehensive innovation chain. Key platforms like the Hetao Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone and the Guangdong-Macao In-Depth Cooperation Zone in Hengqin serve as critical hubs for partnership and commercialisation.

Fuelled by sustained government and market support, the GBA has honed its technological edge and delivered strong results across innovation and industry.

- Innovation Milestones
  - Global patent leadership: From 2017 to 2021, the GBA filed 136,800 Patent Cooperation Treaty (PCT) applications, outpacing New York (3.19×) and San Francisco (3.81×) Bay Areas and ranking second only to Tokyo[11]. Half of China's top 14 PCT filers in 2023 were GBA enterprises,[12] underscoring the region's international competitiveness in patent application volume.
  - Domestic Innovation Surge: Invention patents soared from 10,300 (2019) to 32,000 (2024); an annual growth rate of more than 25%. Their share of total patents rose from 28% to 35%, signalling a shift toward original innovation. Cumulative patents now exceed 510,000, concentrated in safety and energy-saving, smart terminals, and semiconductors[13].
- Industry Development:
  - High-Tech Enterprise Proliferation: To date, Guangdong Province hosts 77,000 high-tech firms (national leader).[14] The province is home to over 1,500 AI enterprises, with 147 Specialised Innovative "Little Giant" enterprises[vi], ranking first nationwide.[15]
  - High-Tech Industry Resilience: While global disruptions—such as COVID-19 and supply-chain shocks—temporarily slowed high-tech manufacturing growth, the sector rebounded strongly in 2024, with value-added output surging 10.20% year-on-year.

vi. Specialised and Innovative "Little Giant" enterprises have become role models for small and medium-sized enterprises (SMEs) in China and have been considered important actors in the strategy of strengthening and supplementing national supply chains(Source).

Green Consumption

The trade-in program, supported by policy initiatives and consumer participation, drives the sustainable development of the economy by accelerating the adoption of green products and industrial upgrades.

In 2024, the Chinese central government launched "Two New" policies, namely "Large-scale Equipment Renewal" and the "Trade-in Program for Consumer Goods". The trade-in program specifically targets products such as automobiles, household appliances and other designated consumer goods. The trade-in program covers automobiles, household appliances, and other designated goods, with automobiles and household appliances subject to environmental or high-efficiency standards, such as energy-efficient appliances, NEVs, or low-displacement fuel vehicles.

The trade-in program advances green and sustainable development by engaging both consumers and producers.

- For consumers, it spurs the adoption of eco-friendly products such as new energy vehicles and energy-efficient appliances, promoting a low-carbon lifestyle and raising environmental consciousness.
- For producers, it accelerates the uptake of advanced technologies and the replacement of outdated equipment, fueling industrial upgrades and the transition to smarter, greener manufacturing.

In response to the national initiative, the GBA has been actively implementing these policies, unveiling a series of supportive measures to facilitate their execution. To enhance the effectiveness of the trade-in program, the central government has issued Special Long-term Treasury Bonds, allocating a total of RMB450 billion to subsidise consumer goods trade-ins, ensuring sufficient funding and broad accessibility.

- In August 2024, approximately RMB150 billion was distributed to local governments to support the trade-in program's rollout, establishing a foundation for nationwide adoption.[16]
- In April 2025, an additional RMB300 billion was designated exclusively for the consumer goods trade-in program. Compared to the initial RMB 150 billion subsidy quota for consumer goods in August 2024, this represents a doubling of funding (a RMB150 billion increase), further strengthening the program's coverage and impact.[17]

With the strong backing of the national government, Guangdong Province has actively advanced the implementation of the trade-in program. It is worth noting that, to expand the beneficiary base, in April 2025, Guangzhou issued guidelines to facilitate the participation of Hong Kong, Macao, and Taiwan compatriots, as well as foreign nationals, in the trade-in program in Guangzhou.

These efforts have yielded significant results. In 2024, Guangdong Province saw trade-in sales of consumer goods reach RMB153 billion, benefiting over 11.28 million consumers and reinforcing its position as a national leader.[18]

- Over 400,000 vehicles were scrapped or replaced.[18]
- Retail sales of NEVs increased by 6%[18], while Guangdong Province's NEV production jumped by 43%, accounting for a quarter of the national total[19].
- Retail sales of household appliances grew by 17% year-on-year.[18]

These achievements highlight the program's success in stimulating consumption, driving industrial growth, and fostering sustainable economic development.

Social Inclusion

Population ageing is a challenge confronting cities across the GBA. In response, the GBA has adopted a forward-thinking policy approach, shifting from traditional elderly care models to actively nurturing the silver economy. For GBA cities, regional cooperation, technological innovation, and financial empowerment form a convergent force to drive sustainable and inclusive solutions.

Across the GBA, the ageing trend varies by cities but is, in general, intensifying year by year. Figure 11 shows the increases in the proportion of the aged population in all regions. Hong Kong faces the most acute demographic challenge, with its 65-and-above population exceeding the national average by more than 5 percentage points annually from 2021 to 2024.

Figure 11. Proportion of people aged 65/60 and above in the population by region

Year	Guangdong Province	Hong Kong	Macao
2021	12.4%	19.6%	12.1%
2022	13.5%	20.8%	13.3%
2023	14.2%	21.8%	14.0%
2024	14.9%	22.8%	14.6%

Note: For Guangdong Province, the parameter for the age group is people aged 60 and above.
For Hong Kong and Macao, the parameter for the age group is 65 and above.
Source: Public sources

The growing ageing population across the country underscores the need for innovative approaches beyond traditional elderly care. Recognising this, national policy has increasingly positioned the ageing population as an opportunity for economic growth through the silver economy. This strategic shift was signalled in 2021, when the silver economy was proposed in the 14th Five-Year Plan for National Ageing Development and Elderly Care Service System. In 2024, the priority of developing the silver economy increased – the country established it as a key socioeconomic driver.

Guangdong Province
Guangdong Province's policy focus has evolved in line with the national direction. While earlier efforts centred on consolidating basic care services like medical-elderly integration, the province's *Implementation Plan to Promote High-Quality Development of the Silver Economy and Enhance the Well-being of the Elderly in Guangdong Province* indicates a strategic shift. It prioritises cultivating the silver economy as a new growth engine, outlining pathways in smart health and elderly care, industrial parks (targeting areas like anti-ageing and rehabilitation tech), and stimulating consumption of elderly products and services.

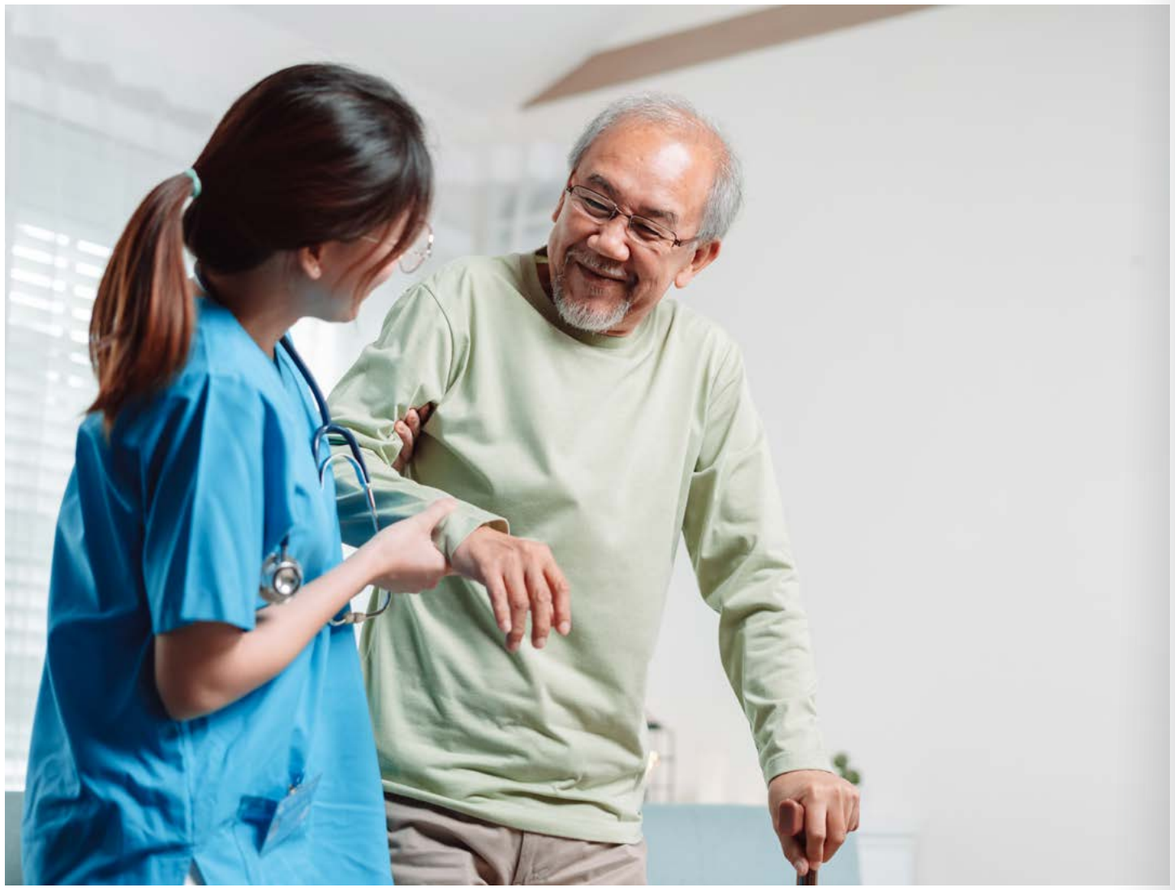
Hong Kong
Facing an even higher proportion of elderly residents, Hong Kong embarked on this transition slightly earlier. In the policy address, Hong Kong began integrating the silver economy concept in the 2023 Policy Address and announced the establishment of a dedicated Working Group. In 2024, approaches were proposed which focused on distinct areas such as boosting "silver consumption", developing the "silver industry", ensuring product quality, innovating financial security, and unlocking elderly productivity. Concrete measures are being rolled out across these domains in 2025.

The GBA's silver economy strategy is founded on three distinctive pillars, namely regional cooperation, empowerment by technology, and finance. These transform demographic pressures into engines of inclusive growth.

Regional cooperation in elderly healthcare:
Since 2020, elderly care healthcare collaboration has become a cornerstone of the GBA's regional strategy, driven by complementary strengths across cities. Hong Kong and Macao's advanced geriatric expertise and international medical networks, and mainland cities' extensive healthcare infrastructure, collectively enable the creation of a comprehensive regional elderly care ecosystem. The Elderly Health Care Voucher Scheme is a case in point within the GBA.

Elderly Health Care Voucher Scheme

- 2014: Became a regular programme in 2014.
- 2015: In terms of cross-border usage, the medical voucher was first used cross-border at the University of Hong Kong Shenzhen Hospital (HKU Shenzhen Hospital) in Shenzhen.
- 2024: The Elderly Health Care Voucher Greater Bay Area Pilot Scheme was launched, and seven medical institutions in PRD municipalities were included.
- 2025: The Hong Kong government expanded the pilot scheme of the Elderly Health Care Voucher in the GBA to include 12 new medical institutions and all nine PRD municipalities.[20]



Empowerment by technology:
The convergence of the Internet of Things (IoT), big-data analytics, and AI is revolutionizing every stage of elder care—from predictive disease prevention and precision diagnosis to intelligent rehabilitation and personalized caregiving—delivering unprecedented reliability in health management and quality-of-life enhancement for elderly people. The forthcoming section on Smart Healthcare & ESG will showcase how these technologies help elderly people in proactive health intervention through case studies.

As well as creating welfare for users, the extensive application of cutting-edge technology unlocks potential for growth for companies in both traditional industries and the technology sector.

Some GBA cities with extensive manufacturing industries, such as Foshan and Guangzhou, have already established an elderly care-related industry. The scale of the silver economy industry in Huangpu District in Guangzhou currently exceeds RMB50 billion and encompasses nearly 600 high-quality enterprises or institutions.[21] The Huangpu district will focus on developing three major fields: smart health and wellness, beauty and anti-ageing, and medical health by leveraging cutting-edge technologies such as artificial intelligence and big data.

In Shenzhen, which has an advanced level of R&D, the idea of the silver economy provides a variety of application scenarios in different fields, enabling companies to turn technology and technical expertise into business opportunities. As of now, Shenzhen is home to 8,889 enterprises related to the elderly care industry.[22] These include both leading companies and a large number of emerging tech forces, forming a relatively complete industrial and supply chain. The sectors covered include information technology, high-performance materials, intelligent manufacturing, artificial intelligence, robotics, high-end medical devices, biopharmaceuticals, elderly care finance, and intelligent caregiving.

Financial Empowerment:
The innovation of elder-related financial products by financial institutions plays a crucial role in the development of the silver economy. By offering tailored financial solutions, financial institutions not only provide economic security for the elderly but also ensure that the elderly can enjoy their life with financial confidence.

The financial empowerment of the silver economy in mainland China focuses more on the construction of an inclusive system. Hong Kong places greater emphasis on cross-border financial innovation by exploring cross-border elderly care finance, such as cross-border insurance and affiliated elderly-care services, to provide convenience for cross-border elderly care. Here are some innovative actions and financial actions offered by financial institutions in the GBA.

One Card for Multiple Areas of Elderly Care:
The People's Bank of China Shenzhen Branch collaborated with the Shenzhen Civil Affairs Bureau, guiding five banks within the city to launch the "Smart Elderly Care and Longevity Card" for seniors aged 60 and above. This card integrates multiple functions, including identity verification, preferential treatment for the elderly, distribution of policy-based allowances, financial debit accounts, and a local transportation card. It supports a wide range of applications in all areas of elderly care services.

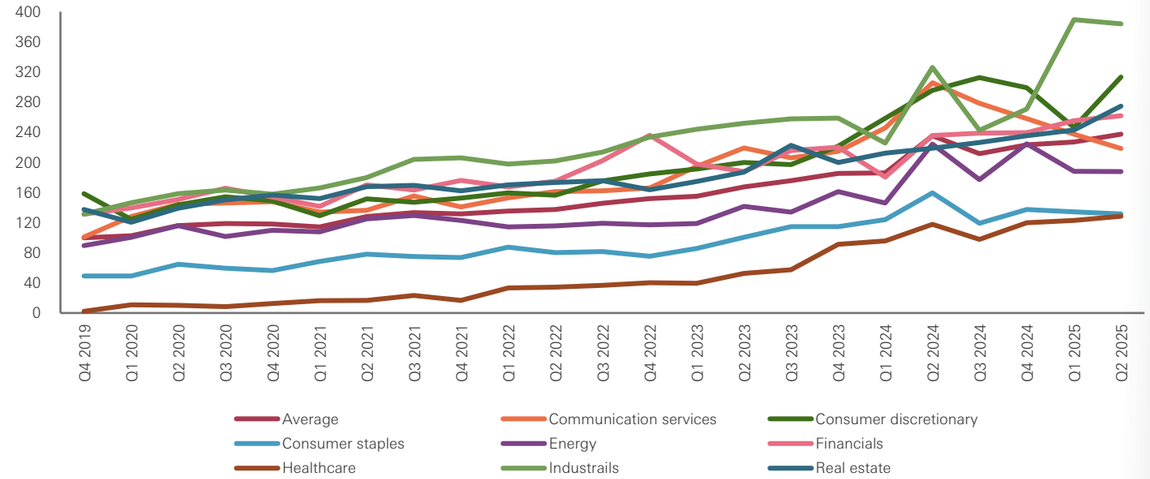
Wide Range of Financial Products for Securing Pension Assets:
To facilitate the preservation and appreciation of pension assets through wealth management services for the elderly, a Shenzhen branch of a major bank offers a range of financial products, including exclusive investment products for personal pension accounts, exclusive savings products, wealth management products, and pension insurance to meet the diverse and differentiated financial needs for elderly care.

"Insurance + Elderly Care" Innovative Solution:
"Elderly Care in GBA for Hong Kong Residents" is a comprehensive solution integrating "insurance + elderly care". Customers who purchase qualified products from a Hong Kong-based insurance company can earn points, which can be accumulated for eligibility to reside in elderly care communities in GBA cities that are part owned by the company. This enables Hong Kong seniors to enjoy the elderly care services in the GBA.

GBA ESG Industry Sub-indices

GBA ESG Industry Sub-indices

Figure 12. Relative ESG performance evolution of the eight sectors



Note: The average value of the GBA ESG Industry Sub-indices was set at 100.00 for Q4 2019 (base period), as a benchmark with which to compare each key sector's individual ESG performances as well as their average performance.
Source: China's official statistical database, public sources, CECEPEC

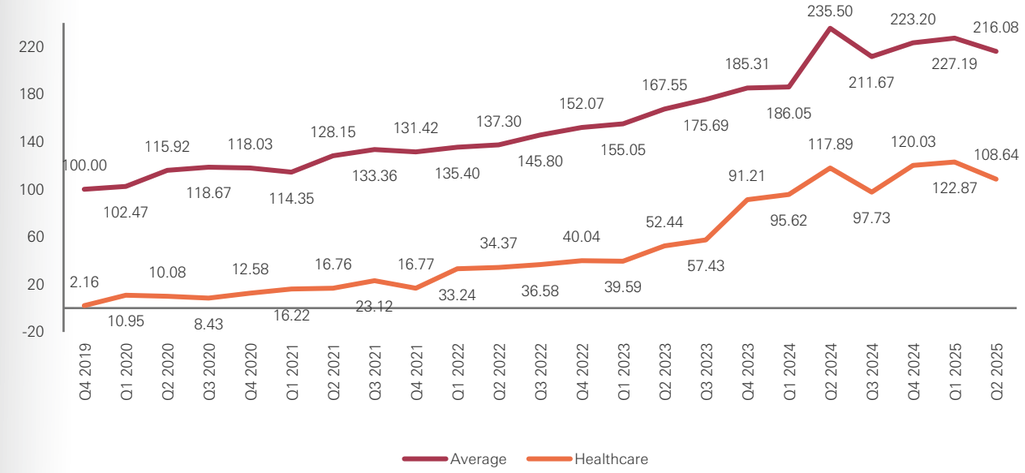
Our study shows that the average value of GBA ESG Industry Sub-indices reached a new high of 237.52 in Q2 2025; a slight year-on-year increase of 0.86%. Most of the eight key sectors improved during Q2, as shown in Figure 12. Of these, the industrials sector registered the most substantial year-on-year growth in Q2, primarily driven by significant advancements in addressing climate change issues and an enhanced ESG disclosure rate compared to the previous year.

Case Study:

Healthcare

The healthcare sector started from a very low point in ESG and has lagged behind the other key sectors over the period in question. However, it is worth noting that since 2019, the ESG performance of the healthcare sector has gradually improved in line with the average performance of the eight key sectors, as shown in Figure 13. Our study shows that the sector has improved significantly in ESG-related disclosure and the management of climate-related issues.

Figure 13. GBA ESG Sub-index – Healthcare



Note: The line chart shows the ESG performance evolution of the healthcare sector. The average value of the GBA ESG Industry Sub-indices was set at 100.00 for Q4 2019 (base period).
Source: China's official statistical database, Wind, public sources, public disclosures of listed companies, CECEPE

According to Figure 14, although the healthcare sector initially lagged behind the GBA average ESG disclosure rate in 2019 (62% vs. 69%), it has improved remarkably since then. By 2023, it had successfully closed the gap, achieving the average disclosure rate of the GBA which was 76%. In 2024, the healthcare sector advanced even further achieving a disclosure rate of 77%, higher than the GBA average of 76%.

Figure 15 reveals a similar pattern with regard to the CDP climate change questionnaire disclosure rate. Starting at 0% in 2019, significantly below the GBA average (16%), the sector began narrowing the gap from 2021 onward. As well as increased participation, our study found there to be substantial improvements in disclosure quality. While in 2021 leading companies in the sector achieved a B- grade, the latest assessment shows that four healthcare companies attained leadership-tier scores (A or A-). This qualitative shift shows that early adopters are advancing toward strategic climate governance.

The healthcare sector is increasingly translating climate commitments into actionable targets. Our findings reveal a notable acceleration in the SBT setting: while no company had set SBTs prior to 2023, five healthcare firms had established validated targets by 2024; 2 in 2023 and a further 3 in 2024.

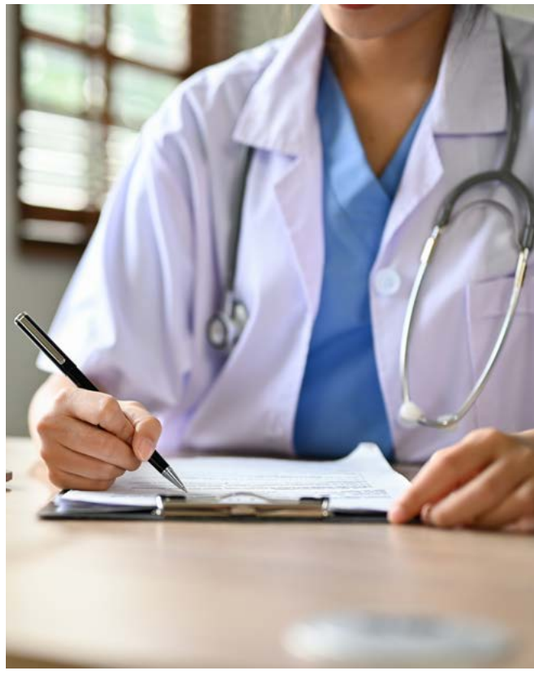
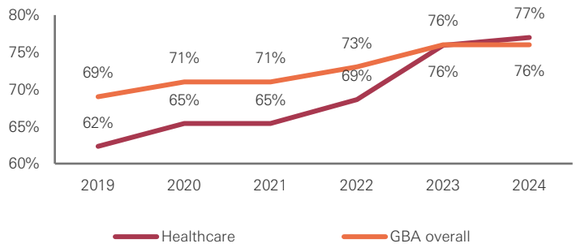
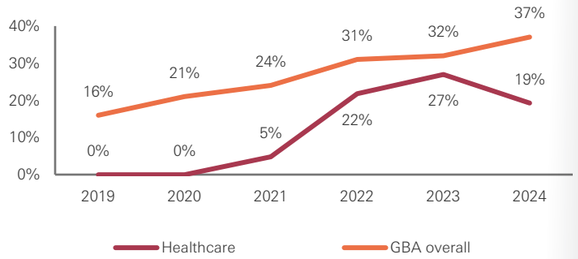


Figure 14. ESG disclosure rate, healthcare sector vs. GBA overall



Source: Public sources, CECEPEC

Figure 15. Disclosure rate of the CDP climate change questionnaire, healthcare sector vs. GBA overall



Note: Disclosure rate of the CDP climate change questionnaire = no. of companies that submitted the CDP climate change questionnaire / no. of companies invited to disclose via the CDP climate change questionnaire
Source: CDP, CECEPHK, CECEPEC

Alongside these advancements in ESG-related disclosure and climate target-setting, the rise of smart healthcare technologies presents a new frontier for sustainability innovation in the healthcare sector. The integration of smart healthcare technologies is poised to accelerate ESG outcomes, especially enhancing patient-centric services. In the following section, we explore how smart healthcare has evolved in the region and its impact on sustainability, emphasising social inclusion and positive environmental effects.

Topic: Smart Healthcare & ESG

Smart healthcare has emerged against the backdrop of the digital transformation of the healthcare sector, driven by the need for more efficient, accessible, and patient-centric services. The rise of smart healthcare is further propelled by an ageing population, the increasing prevalence of chronic diseases, and the growing demand for personalized medicine.

Smart healthcare:

Smart healthcare leverages a new generation of information technologies, such as the IoT, big data, cloud computing, and artificial intelligence, to transform the traditional medical system in an all-encompassing way, making healthcare more efficient, convenient, and personalized.[23]

The application of smart healthcare can be broadly categorised into three main areas:

Categories	Application of smart healthcare (examples)
Clinical/scientific research institutions, e.g., hospitals	◆ Assisting diagnosis treatment ◆ Disease prevention and risk monitoring ◆ Smart hospitals
Regional health decision-making institutions	◆ Disease prevention and risk monitoring
Individual or family users	◆ Health management ◆ Disease prevention ◆ Medical emergency monitoring and response

Source: Smart healthcare: making medical care more intelligent, CECEPEC

China began developing Internet + Healthcare in 2020 and has more recently highlighted the integration of big data, AI technologies, and 5G into the healthcare industry. The GBA has been at the forefront of this transformation in line with national strategies. Since 2020, the region has actively established smart healthcare ecosystems, leveraging technological advancements to enhance healthcare delivery and outcomes.

Key policy initiatives

Specific Measures of Guangdong Province for Empowering Thousands of Industries with Artificial Intelligence (2024) to:

- Improve healthcare services by leveraging smart healthcare, including building **smart hospitals** and creating a "**smart medical assistant**" system to improve diagnostic efficiency and quality.
- Promote **the elderly-adapted intelligent transformation** of internet applications, apps, mobile terminals and home appliances often used by the elderly in healthcare and other fields.

Guangdong Province's Working Focuses on the Digital Economy (2024)

- Smart healthcare is one of the working focuses, with initiatives such as **medical data sharing**, and the establishment of **a platform for mutual recognition** of medical examination results.

The Hospital Authority of Hong Kong's Strategic Plan 2022-2027 (2022)

- Committed to strengthening smart healthcare services, **leveraging big data and advanced technology, re-orienting service models, and exploring care options for high-demand services.**

Driven by policy support and its status as an innovation hub, the development of smart healthcare in the GBA has transitioned from policy to implementation, achieving significant progress across various areas.

- Connectivity and data-sharing infrastructure form the foundation for smart healthcare. Within the GBA, ubiquitous 5G coverage enables real-time data transmission, while computing hubs, such as the Shaxi Intelligent Computing Centre located in Pazhou Algorithm Valley, Guangzhou, support big health analytics. The GBA has also made notable advancements in data sharing through online platforms like "Yueshengshi"(粵省事), which facilitates the integration and sharing of health information across the region. While national and local initiatives have made progress in facilitating cross-border data sharing, the GBA may still encounter some challenges in achieving seamless data flow, given the differing regulatory frameworks and privacy laws within the area.

- There has been significant integration and application of advanced technologies in the healthcare sector. For instance, AI diagnostics are now operational in multiple healthcare institutions across the GBA with applications ranging from early disease screening to chronic disease management. Meanwhile, IoT-driven facility management systems have been implemented in various cities, including Guangzhou, Shenzhen and Hong Kong. The GBA is a leader in smart hospitals, integrating a multitude of technologies such as the IoT, big data, cloud computing, AI, and 5G communication. By 2023, all the Level 3 Grade A hospitals[vii] in Guangdong province had launched Internet Hospitals to provide integrated online and offline health medical services for residents throughout the province.[24]

- Multiple cities within the GBA have fostered the development of medical technology and AI medical enterprises by constructing medical technology industry parks and clusters. These parks are distributed across Guangzhou, Shenzhen, Zhuhai and other cities, forming a comprehensive industrial ecosystem that provides strong support for the development of smart healthcare in the region.

Collectively, the GBA's maturing digital infrastructure, proliferating AI and IoT deployments, and evolving data-sharing mechanisms (notwithstanding cross-border challenges) provide the necessary technological groundwork. As such, the region is uniquely positioned to effectively harness smart healthcare to deliver measurable ESG value, primarily in the area of social inclusivity, with potential positive environmental impacts as a secondary benefit.

vii. China's hospitals are divided into public and private institutions. Public hospitals, funded by the government, are classified into three levels based on their size, research capabilities, equipment, and other qualifications, with Level 3 Grade A hospitals being the highest tier(Source)

Smart Healthcare for Accessible and Inclusive Health Services

Leveraging telecommunication technology and AI assistance, smart healthcare is redefining the traditional mode of health services provision. It shatters geographical constraints, amplifies resource sharing, and slashes costs. Moreover, it propels health intervention from a reactive stance to a proactive approach, with focuses on emergency prevention and everyday health management. The GBA has taken the lead in implementing innovative practices and initiatives in smart healthcare by leveraging cutting-edge technologies to tackle key challenges, accelerate medical R&D processes, and enhance health outcomes. These solutions collectively strive to render healthcare services more accessible, inclusive, and efficient.

Breaking Service Barriers: Extending Equitable Access

Geographical Reach: Technology Bridges Physical Gaps

The accessibility of healthcare services can be significantly enhanced through the deployment of advanced technologies, which can expand the geographical reach of medical services and bridge physical gaps. This is particularly evident in the field of ophthalmology, where many pioneering smart healthcare initiatives are currently concentrated. The focus on ophthalmology can be partly attributed to the relatively straightforward nature of eye examinations and the high demand for eye care services in underserved areas.

Case Study: 5G Smart Ophthalmology Patrol Vehicle and Mobile Ophthalmic Operating Room Developed by Zhongshan

Zhongshan Ophthalmic Centre has developed two innovative solutions that exemplify the potential of technology to overcome geographical barriers in healthcare.

The 5G Smart Ophthalmology Patrol Vehicle functions as a mobile ophthalmology clinic, equipped with advanced diagnostic tools, and leverages 5G technology. Since its deployment in 2023, it has served over 150,000 people across 28 provinces, bringing preliminary screening and diagnosis directly to remote regions and reducing the need for patients to travel long distances for basic eye care services.[25]

Complementing this initiative is the Mobile Ophthalmic Operating Room model, which brings eye surgery services to underserved rural and remote areas. Under this model, expert surgeons can perform eye surgeries remotely, addressing the shortage of local medical resources and improving access to high-quality eye care in areas where such services were previously unavailable.

Resource sharing: Enhance Access to Healthcare Services in Underserved Areas

The GBA has implemented various smart healthcare initiatives that address the insufficient healthcare service capacity in underserved regions, enhancing social inclusion. These initiatives leverage AI, remote diagnostics, and telemedicine to enhance access to healthcare services, including AI-driven screening to replace manual diagnosis, real-time specialist collaboration to support complex cases, and networked diagnostic systems to provide continuous monitoring and support.

Case Study: "AI + Remote control" ophthalmic disease screening program

In 2024, Foshan launched an "AI + Remote control" ophthalmic disease screening program to address the shortage of ophthalmologists in rural areas. Many community health service centres or clinics in the country lack independent ophthalmology departments, and over 70% of ophthalmologists are concentrated in hospitals in first and second-tier cities. This leads to patients often missing the optimal period for treatment.[26]

The "AI + Remote control" model enables local clinics to conduct fundus photography, which is then preliminarily screened by AI and remotely transmitted to the hospital for expert re-examination. If intervention is needed, patients are notified to visit the hospital for further treatment. This initiative effectively reduces the risk of blindness, improves access to eye care services, and enhances the overall efficiency of the healthcare system in underserved areas.

Case Study: Zhuhai-Zhongshan Remote Ultrasound Alliance

In 2023, the Zhuhai-Zhongshan Remote Ultrasound Alliance was launched to leverage "5G + Internet" technology for tiered diagnosis and treatment. This alliance connects hospitals in Zhuhai and Zhongshan, enabling real-time remote ultrasound consultations. Experts provide immediate diagnostic support to primary clinics in rural and remote areas, addressing the shortage of specialised ultrasound technicians. This initiative enhances the diagnostic capabilities of primary healthcare facilities and ensures that patients receive timely and accurate diagnoses without having to travel long distances to urban hospitals.

Economic Affordability: Cross-Border Collaboration Reduces Costs

Against the backdrop of GBA integration, cross-border healthcare has gained momentum, especially among Hong Kong residents who are attracted to the cost-effective and efficient medical services in mainland cities. In response, mainland hospitals have set up cross-boundary medical and welfare co-operation pilot schemes. However, sharing medical information between different healthcare systems remains a challenge.

Acknowledging this issue, the GBA has been actively seeking solutions to streamline the cross-boundary healthcare information exchange and enhance the efficiency of these services. A significant step in this direction is the establishment of a GBA cross-border health data zone in early 2025. The Chinese University of Hong Kong (CUHK) and Nansha Hospital have collaborated first in the sharing of cross-border medical data, which includes clinical data and blood test reports, aiming to reduce duplicate tests for GBA patients.[27]

Another major development occurred in April 2025 with the launch of Shenzhen-Hong Kong Cross Border Data Security and Convenience Channel. This innovative infrastructure is specifically designed to facilitate secure and efficient data transmission between the two regions. It was successfully tested in July 2025, with medical data from the University of Hong Kong - Shenzhen Hospital being transmitted to Hong Kong's "eHealth" system. Moving forward, Shenzhen and Hong Kong will continue to explore ways to expand the application of this channel, with plans to enable the secure and compliant exchange of data, such as electronic medical records and test reports, in line with the regulatory frameworks of both regions. This will further enhance the integration of healthcare services and improve the overall patient experience in the GBA.

These cross-border initiatives can significantly reduce the financial burden of healthcare access for residents, particularly for routine care and diagnostics.

Expanding Healthcare Capacities: From Personal Monitoring to Medical Innovation

Proactive Health Intervention: Personal-Level Prevention & Management

In an ageing society, the prevention of diseases and the daily monitoring of health conditions are becoming increasingly important for improving quality of life. In this regard, smart healthcare plays a significant role. Moreover, intelligent cloud-based monitoring has solved the pain point of elderly people living alone, who find it difficult to seek help in the event of medical emergency.

Case Study: Nanshan District's smart care service for elderly living alone
In 2024, Nanshan District in Shenzhen launched an innovative intelligent care service for the elderly living alone, leveraging advanced smart healthcare technologies. Over 2,200 IoT devices were installed in the homes of 150 elderly residents, utilising cloud computing, big data, IoT, and AI algorithms to monitor their health and safety in real-time.[28] This system detects emergencies and promptly alerts family members or caregivers, ensuring timely assistance. This initiative has not only significantly enhanced the safety and well-being of elderly residents but also set a leading example in the GBA, demonstrating the potential of smart healthcare solutions to address the challenges faced by vulnerable populations.

Key Features and Outcomes:

- Advanced Technology Integration: The system integrates multiple technologies to provide comprehensive health monitoring, including heart rate, blood oxygen levels, and environmental safety.
- Real-Time Alerts: In the event of emergencies, such as sudden illness or accidents, the system immediately sends alerts to designated contacts, enabling rapid response.

Additionally, smart healthcare is increasingly facilitated by wearable technology, which enables individuals to monitor their health conditions in real-time and take proactive steps towards better health management. The GBA has emerged as a leader in developing innovative wearable health monitoring devices, leveraging its strong technological capabilities and forward-thinking approach to healthcare. For instance, a Hong Kong company has developed a blood glucose monitoring smartwatch, while a Shenzhen company has created a smart ECG monitoring cloth. These devices exemplify the seamless integration of wearable tech into daily life, providing continuous health data and supporting smarter healthcare decisions.

Transforming Medical Innovation: Technology-Driven Treatment Solutions

Smart healthcare technologies are transforming the development landscape of drugs and medical devices, addressing the inefficiencies and high costs that have long plagued traditional R&D processes. By harnessing the power of AI and automation, the industry can remove bottlenecks and expedite the discovery of new treatments.

A prime example within the GBA is a leading Shenzhen enterprise in the "AI + Pharma/MedTech" field. This company is leveraging digital modelling and automated experimental platforms to rapidly simulate drug molecular structures and screen for potential active ingredients. This innovative approach significantly shortens R&D cycles and reduces costs, transforming the drug discovery[viii] process from a "needle in a haystack" endeavour to one of "precision navigation".

Supporting such transformative efforts, the GBA has issued policies to promote AI R&D platforms for intelligent drug screening and antibody discovery, and offer subsidies to encourage enterprises to develop such platforms.

Smart Healthcare as a Pathway to Green Transformation in the Healthcare Sector

Smart healthcare also offers secondary environmental benefits by leveraging digital technologies to reduce carbon footprints and resource consumption. For example, by providing online healthcare services fewer patients needed to travel to healthcare facilities thereby reducing transportation-associated emissions. Similarly, the shift to paperless workflows through digitalisation significantly reduces paper consumption. Smart healthcare also supports the low-carbon and green transition of major healthcare players such as hospitals by optimising resource management through AI and IoT technologies and improving medical waste management through intelligent systems.

viii. Drug discovery is the first step in bringing a new drug to market: researchers evaluate compounds to determine which could be candidates for development as medical treatments(Source).

Appendices

Glossary

Term/Acronym/Abbreviation	Interpretation/Explanation
AI	Artificial intelligence
BSE	Beijing Stock Exchange
GBA	Guangdong-Hong Kong-Macao Greater Bay Area
GHG	Greenhouse gas
GSSS bonds	Green, social, sustainability and sustainability-linked bonds
HFC vehicles	Hydrogen fuel cell vehicles
ICV	Intelligent connected vehicle
IoT	Internet of Things
ISSB	International Sustainability Standards Board
NEVs	New energy vehicles
PRD	Pearl River Delta
PRI	Principles for Responsible Investment
R&D	Research and development
SBT	Science-based targets
SBTi	Science-Based Targets initiative
SEHK	Stock Exchange of Hong Kong
SSE	Shanghai Stock Exchange
SZSE	Shenzhen Stock Exchange
The Index	HSBC Greater Bay Area ESG Index

Note: In alphabetical order

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Table of Indicators

Figure 16. Indicators for regional/cities and industry level

First-level Indicator	Second-level Indicator
Environment	Corporate CDP disclosure performance
	Corporate science-based climate commitments
	Air quality
	Energy use efficiency
	Water use efficiency
	Electricity use efficiency
	Public sector's contribution to environmental protection
	Urban greenness
Economic and Social Development	Economic development
	Economic contribution of tertiary industry
	Employment situation
	Public sector's contribution to education
	Innovation and technological advancement
Corporate Governance	Activeness of market players
	Corporate ESG disclosure performance
Green and Sustainable Finance	Activeness of market players
	Investor commitment to sustainable investing
	Volume of sustainable debt instruments
	Number of ESG mutual funds
Policy	Policies related to sustainable development in the GBA

Source: CECEPEC

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