

View



East Asia's Carbon Neutrality Progress: How Far?

By: Yoojung Kwon | Apr 18th, 2024



Figure 1: Solar power Generation at Rail Yard in South Korea. IMAGE / The Ministry of Land, Infrastructure and Transport (MOLIT)

Introduction

East Asia, home to three of the world's major economies - China, Japan, and Republic of Korea (hereinafter Korea) – is uniquely positioned to spearhead the global transition to carbon neutrality. In 2020, the international imperative for

climate action has been showcased by the three East Asian countries committing to carbon neutrality. Hence, redirecting the future through a climate resilient future has embarked a new milestone in the region.

Back in the 1960s, East Asia demonstrated the fastest growth in economic development than any other region in the world.¹ Specifically, the Asian Tigers consisting of the four developed East Asian economies (Hong Kong, Singapore, Korea, and Taiwan) have secured their long-sustained growth. Whereas the three developed East Asian countries, China, Japan, and Korea has been accounted to “represent one-quarter of the global GDP and one-third of the global carbon emissions.”² Moreover, according to the Global Carbon Atlas, the largest emitters in 2020 included China and Japan alongside the US, India, and Russia.

Considering other dynamic shifts including demographic transition and urban rural imbalance, this continues to challenge the discussions of climate action to guarantee proper adaptation and mitigation strategies. Especially urbanization in East Asia has shown the fastest growth than elsewhere, exceeding the world average urbanization level.³ Consequently, rapid urbanization and industrialization has exposed the region to high risk to the rising heat temperature, projected to grow as high as 2.6C in 2050 and higher than 5.2C by 2090 across the region.⁴ This entails that the region’s commitment is crucial to ensure carbon neutrality is aligned with the global agenda. Particularly, focused on densely populated cities and urban

environments to lower carbon emissions and to foster resilience and positive impacts for the living standards.

Climate Commitment

Today, Japan, China, and Korea as parties to the Paris Agreement, are at the forefront of technological innovation for renewable energy, decarbonizing the economy for a safer and cleaner transition.⁵ Hence, regional cooperation centered around the key players has come together to set common agendas to safeguard environmental stability, economic growth, and human development.

At the national level, China declared to achieve carbon neutrality before 2060; increasing non-fossil fuels, developing adaptation strategy to enhance resilience of the ecosystem and economy, and actively engaging in international cooperation to phase out new coal-fired power projects abroad.⁶

Japan declared carbon neutrality by 2050, through “energy transition from fossil fuels to renewable energy and hydrogen”, domestically and internationally.⁷ In addition, has shown that Japan and Korea’s green growth strategy commonly aims to foster the key energy sources of hydrogen and offshore wind power, emerging as a promising field for cooperation. South Korea also declared carbon neutrality by 2050, mobilizing green innovations and advanced digital technologies aligned with Korea’s Green New Deal and the Digital New Deal launched in 2020.⁸ In addition, Korea’s state-owned utility KEPCO had announced it will ‘scrap or convert’ its two coal projects in the Philippines and South Africa.

However, according to the Climate Action Tracker, an independent science-based assessment to track government climate action, all three nations have been assessed as highly insufficient or insufficient in terms of its policies and action, NDC target and climate finance. This calls for regional cooperation to better position the countries to meet their climate commitments through sharing best practices, knowledge, and technological innovation.

Regional Cooperation

The three East Asian nations growing ambition have been considered to have a snowball effect, catalyzing climate action across the region. As accumulating climate action have foreseen efforts to prioritize adaptation and mitigation measures in the neighboring countries such as Viet Nam especially in the energy sector.⁹

Regional cooperation at the core of the three economies in East Asia has favored committing to collaborative dialogues on the key objectives of climate change. The Trilateral Cooperation Vision 2020 was initiated in 2010, adopted by the three leaders recognizing that climate change is a top tier for cooperative agendas. Prior to this forum in 1999 Tripartite Environment Ministers Meeting had aim to tackle the common environmental challenges. Subsequently, policy dialogues were consistently held to discuss the issue on air pollution in 2014. This was the year China embarked on an unprecedented new growth under its new administration to prosper in their leadership against the impacts of climate change with a focus on air pollution.¹⁰

As the world sets an ambitious yet timely agenda on carbon neutrality, this attracts unconventional possibilities and opportunities across the region to collaborate on new cross-cutting sectors. Following the First Forum on Carbon Neutrality Goals of China, Japan, and Korea, it aimed to build a new platform of cooperation, further assisting other countries to accelerate in their energy transition. Consecutive forums have been hosted with the upcoming third forum in early March this year with a key focus on digital innovation and just transition.¹¹ The aim is to serve as a hub for knowledge exchange and further collaborate on tangible interests inviting high-level government officials, experts, and international organizations. As the stakes rise with prolonged climate action, regional forums have reflected progressive ambition to act accompanied by cooperation and collaboration.

Other means of regional cooperation has been performed in various platforms from the ASEAN Strategy for Carbon Neutrality, ADB-ADBI East Asia Forum 2023, 2023 East Asia Forum – Regional Knowledge Sharing Initiative to path the way for a carbon neutral future together. New and emerging dialogues are progressing where the first roundtable of the Asian Climate Finance Dialogue has set stage in 2023 to discuss the financing gaps that hinder progress on carbon neutrality.¹² This calls for better accessibility to climate finance, especially across Asia.

However, there lies room for improvement despite the milestones and achievements made. Collaborative systems are called to be taken on a higher level such as with a state level agreement focusing on practical goals and

methods to reduce GHG emissions every five years.¹³ Furthermore, standalone policies on climate change will not be sufficient, and need to be reflected in trade and foreign investment policies to ensure all key stakeholders are aligned with the country's goal.¹⁴ Urbanization continues to be at the forefront of building resilience for climate change hence urban decarbonization in smart cities will be key for the three East Asian countries to reach their goals.¹⁵

As the three countries are the key providers of international support in finance, technology, and best practices, its joint mobilization enables them to maximize their synergies and complement their capacities across Asia. Furthermore, to reach carbon neutrality calls “to establish common standards, systems, and transparency” to enhance mutual trust in associated projects to reduce emissions and enhance participants.¹⁶ Especially where study has shown emission trading system (ETS) to be effective to significantly reduce overall carbon emissions per capita.¹⁷ Hence, regional cooperation should further identify the establishment to monitor and model carbon assessment especially in highly populated regions, prominently used in Korea and China.

Conclusion

Declaring carbon neutrality by 2050-60 in East Asia has embarked on a new era that commits to transitioning its economic structure. However, pledges must be met with proper action where each country is at stake to halt ongoing fossil fuel consumption and production, boost their renewable energy sector, and ensure policies are embedded to smooth their transition. This continues to highlight the importance and necessitates collaborative dialogue to work

together as the path towards carbon neutrality is still fraught with unforeseen and unpredicted challenges.

Author's Bio: Yoojung Kwon is intern at CIPR for Spring 2024. She is a Master Student in International Cooperation and Development, Graduate School of International Studies at Korea University, Seoul, Korea. Her research interests include Climate, Sustainable Development, Trilateral Cooperation, and U.S.-ROK Relations.

Reference

-
- ¹ Sarel, Michael. "Growth in East Asia What We Can and What We Cannot Infer." IMF, September 1, 1995. <https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Growth-in-East-Asia-What-We-Can-and-What-We-Cannot-Infer-From-it-1291>.
- ² "Forum on carbon neutrality goals of China, Japan and the Republic of Korea affirms the need for trilateral and multilateral cooperation to enhance climate action." ESCAP, November 30, 2021. <https://www.unescap.org/news/forum-carbon-neutrality-goals-china-japan-and-republic-korea-affirms-need-trilateral-and>.
- ³ Iossifova, D. "East Asian Urbanization." The Wiley Blackwell Encyclopedia of Urban and Regional Studies, April 15, 2019. <https://doi.org/10.1002/9781118568446.eurs0084>.
- ⁴ "Climate risk country profile: China." ADB, May, 2021. <https://www.adb.org/publications/climate-risk-country-profile-china>.
- ⁵ "Leveraging science, technology and innovation for low carbon and resilient cities." ESCAP, April 4, 2022. <https://www.unescap.org/kp/2022/leveraging-science-technology-and-innovation-low-carbon-and-resilient-cities>.
- ⁶ "China's Policy Strategies for Green Low-Carbon Development: Perspective from South-South Cooperation." UNCTAD, November, 2023. <https://unctad.org/publication/chinas-policy-strategies-green-low-carbon-development-perspective-south-south>.
- ⁷ Kim, Gyu-Pan. "Japan's Carbon Neutrality and Green Growth Strategy." World Economy Brief, March 2, 2023.
- ⁸ "2050 Carbon Neutral Strategy of the Republic of Korea Towards a Sustainable and Green Society." December, 2020. https://unfccc.int/sites/default/files/resource/LTS1_RKorea.pdf.
- ⁹ Madera, Sherry. "Will Asia Outshine the West in a Bid for a Sustainable Future?" ADB SEADS, October 22, 2021. <https://seads.adb.org/insights/will-asia-outshine-west-bid-sustainable-future>.
- ¹⁰ Rudd, Kevin. "The New Geopolitics of China's Climate Leadership." China Dialogue, December 11, 2020. <https://chinadialogue.net/en/climate/the-new-geopolitics-of-chinas-climate-leadership/>.
- ¹¹ <https://www.unescap.org/events/2024/3rd-forum-carbon-neutrality-goals-china-japan-and-republic-korea>.
- ¹² <https://www.adb.org/news/events/first-roundtable-of-the-asian-climate-finance-dialogue>.

-
- ¹³ HAN, YANG. “Experts hail East Asian carbon-neutrality pledges.” CHINA DAILY, November 17, 2020. <https://www.chinadaily.com.cn/a/202011/17/WS5fb30392a31024ad0ba94754.html>.
- ¹⁴ “FDI Qualities Policy Toolkit.” OECD, June 08, 2022. <https://www.oecd.org/publications/fdi-qualities-policy-toolkit-7ba74100-en.htm>.
- ¹⁵ “Low carbon cities: Engines for driving carbon neutrality in Asia and the Pacific.” ESCAP, December 07, 2022. <https://www.unescap.org/op-ed/low-carbon-cities-engines-driving-carbon-neutrality-asia-and-pacific>.
- ¹⁶ HAN, YANG. “Experts hail East Asian carbon-neutrality pledges.” CHINA DAILY, November 17, 2020. <https://www.chinadaily.com.cn/a/202011/17/WS5fb30392a31024ad0ba94754.html>.
- ¹⁷ Jung, Hail and Song, Chang-Keun. “Effects of emission trading scheme (ETS) on change rate of carbon emission.” Scientific Reports, January 17, 2023. <https://www.nature.com/articles/s41598-023-28154-6>.