

EXECUTIVE SUMMARY

NORTHEAST ASIA IS EMERGING AS THE EPICENTER OF GLOBAL CARBON MARKET ACTIVITY.

The region's nascent carbon markets have unrivalled potential along with a range of challenges to overcome. The domestic effectiveness and regional connectivity of these markets will define the next generation of emissions trading, and significantly impact future international climate change mitigation policies and resource flows.

Considerable emissions trading system (ETS) expansion in Northeast Asia is creating questions about the future of regional market integration. While China, Japan, and the Republic of Korea (hereafter Korea) are understandably fixated on domestic progress, formative phases need to yield markets that are flexible and “linkage ready” if the benefits of market connectivity are to take shape. This report explores the key characteristics of each of these markets and locates them within the wider policy contexts of each country. It then offers analysis on promising pathways for regional market cooperation during the 2018–2020 period.

China's prioritization of carbon market policies has the potential to remake the sector regionally and globally, and substantially impact global climate response efforts. Its pilot and soon-to-be-launched national ETSs are policy instruments not just for lowering emissions but also for aiding the country's transition to cleaner, more balanced growth. China must continue to build its operational capacities, particularly on monitoring, reporting, and verification (MRV), and manage the difficult transition from pilots to a national scheme. Prospective linkage partners will need to reconcile themselves to China's emissions intensity-based targets and find symbiotic avenues for cooperation.

Japan will need to scale-up its regional and international carbon market engagement to meet its current and future climate change goals. The 2011 earthquake, tsunami, and Fukushima nuclear crisis continue to loom large over Japan's energy and environmental policy-making arenas. As the country struggles to replace former nuclear capacity with low-emissions alternatives, market mechanisms that facilitate emissions reductions through international partnerships grow in importance. Without a national ETS, Japan faces parity issues when considering regional linkage that need to be overcome by creative approaches.

Korea has codified international carbon market cooperation as a core strategy for meeting its emissions reduction targets. Its current market—while making impressive strides—will fall short of making critical contributions to the country's climate goals unless it scales-up cooperation outside its borders. To make such cooperation a reality, Korea must maintain more governance and regulatory stability at home.

The report elaborates on each of these national contexts in Sections 2, 3, and 4. Section 5 offers practical pathways for deepening regional carbon market cooperation in Northeast Asia. Section 6 concludes the report by arguing that rather than precluding linkage, the differences among the three countries and their markets offer synergies to be taken advantage of through market connections.

CHINA PRIORITIZES ITS CARBON MARKET POLICIES

China's economic growth has increased its strategic influence and brought hundreds of millions of its citizens out of poverty. It has also brought with it wealth gaps, economic bloat, graft and inefficiency, and pronounced pollution. China now searches for continued economic vitality while reversing this emissions trajectory and is using carbon markets as key tools for doing so.

China is moving from a period of pilot carbon market experimentation to a national ETS. These pilot schemes were formed to reflect the varied economic, environmental, and sociopolitical conditions that define China. They encapsulate the political and business hubs of Beijing and Shanghai, the sprawling industrial municipalities of Tianjin and Chongqing, the manufacturing locus of Guangdong province, the iron and steel center of Hubei province, and the Hong Kong–affixed special economic zone of Shenzhen. They have yielded unique lessons on issues of allowance allocation, openness to innovative financial products, coverage, compliance obligations, and penalties among others. These lessons provide the foundation for China's national ETS.

The national market will come online—likely in early 2018—in a complicated and often overlapping environmental policy space marked by existing and proposed trading and subsidy policies for energy efficiency, air pollution, and renewable energy. These policy tools have complex effects on the supply and demand of carbon credits, and they may interact with the ETS in both reinforcing and countervailing ways. There are also questions about interministerial and provincial-to-central-government coordination, with the ETS under National Development and Reform Commission (NDRC) leadership but with rules spread across the jurisdictions of multiple government agencies. Poor collaboration between these players could foment operational problems for the ETS as it moves to the national level.

China's national ETS will impact international carbon trading and climate mitigation efforts in yet untold ways. The scale of its market and presence of covered industries in international supply chains means that it will influence trade, competitiveness, and carbon prices in other markets around the world. Market cooperation and selective links could create revenue-generation possibilities for China as it sells credits to neighbors that face higher abatement costs and could yield geopolitical dividends as a form of regional and international climate change leadership. These efforts hinge on their capacity to forge symbiotic relationships that contribute to disparate national interests in Northeast Asia and beyond.

JAPAN'S NEED FOR CARBON MARKET CONNECTIONS

Japan's response to the 2011 Fukushima nuclear crisis is fundamentally altering its approach to energy security, climate mitigation, and by extension the role that carbon pricing plays and is likely to play in the country. Nuclear power was poised to become Japan's keystone energy source, contributing roughly 60 percent of primary energy in 2100. With nuclear growth plans shelved due to public opposition, Japan must look elsewhere for low-carbon growth outcomes. It is already very energy efficient and is struggling to bring renewable energy online at rates that can replace growing fossil-fuel consumption. These factors make international carbon market cooperation particularly appealing as an emissions-reduction tool.

Despite having no mandatory national ETS, Japan has an existing carbon market portfolio from which to extend. It has experimented with ETSs for most of the past two decades and continues to operate a voluntary scheme (J-Credit) that helps facilitate emissions reductions in participating firms. The Tokyo

Metropolitan Government (TMG) launched an ETS in 2010 covering large offices and factories, which has subsequently increased its emissions-reduction requirements and linked with a second ETS in Saitama Prefecture. These mandatory schemes have operated largely as designed, but relatively low levels of ambition call into question their overall emissions impact.

Japan was an early adopter of international strategies to offset its emissions through investment and project development. The Joint Crediting Mechanism (JCM) allows Japanese firms to invest in emissions-reducing projects and programs in developing countries. The recipient country accounts for part of the resulting emissions reduction, and part accrues to Japan as offset credits. The Japanese government is scaling-up the role that these JCM credits will play in its climate mitigation strategy.

Market connections in Northeast Asia are a potentially high-value conduit through which Japan can pursue its future climate mitigation strategies, and links with Korea and particularly with China offer pathways for Japan to access lower-cost emissions-reduction options than those it enjoys domestically.

KOREA MOVES FIRST ON A NATIONAL ETS

Korea's rapid economic growth during the latter half of the twentieth century wrought significant environmental impacts, which it now seeks to redress through an official Low Carbon Green Growth (LCGG) strategy. The Korean ETS (KETS) is a core pillar of this transition and became the first national system in Northeast Asia when it launched in 2015. It is currently transitioning from the first to the second phase of a three-phase process, and as it matures it will seek international engagement to increase its emissions-reduction options.

The KETS is designed to be adaptable and uses banking, borrowing, and offset mechanisms to ensure flexibility. KETS performance has been mixed. Prices have proven volatile, liquidity and trading have been low, and regulatory uncertainty has abounded. Korean firms have expressed reluctance to actively participate in the market due to frequent interventions by the government, and difficulties in making market projections. The transferring of ETS authority from the Ministry of Environment (MOE) to the Ministry of Strategy and Finance (MOSF) and then most recently back to the MOE is emblematic of continuing governance fluctuations.

In part because of these limitations, Korea is not currently on track to meet its climate goals, and the KETS is not currently providing the large-scale emissions-reduction options that the country seeks. As Korea is typically a net purchaser in linked scenarios, carbon market connections could increase its abatement options significantly. It could also rekindle Korea's flagging reputation as a global climate change leader.

PATHWAYS TO NEAR-TERM CARBON MARKET COOPERATION IN NORTHEAST ASIA

The 2018–2020 period will shape the longer-term landscape of carbon pricing in Northeast Asia. Korea and China will progressively deepen their domestic ETSs and seek to optimize their functionality through experimentation and capacity building. Japan will review its domestic and international pricing efforts and likely be influenced by the progress in neighboring countries. These countries can pursue the following actions now to build a foundation for more extensive carbon market cooperation in the future:

- 1. Cultivate transparency around MRV rules and practices.** Regional MRV systems need to be partially harmonized and clearly spelled out so that each jurisdiction can develop confidence that the credits being allocated by linked partners have a sound economic and environmental basis. It will take time to foster this MRV confidence on multilateral levels, and lines of communication and openness are vital.
- 2. Move carbon market cooperation up the agenda of the China-Japan-Korea Trilateral Summit.** The annual trilateral summits offer opportunities for high-level political dialogue on carbon market cooperation, champions of which should work with partners at relevant ministries and beyond to encourage a focus on carbon pricing at future summits.
- 3. Build the regional linkage evidence base.** Regional scholarly collaboration is needed to develop and deploy quantitative models that offer pragmatic economic and environmental assessments of linkage impacts, and to evaluate legal and political processes from which linkage can extend. These include analysis on marginal abatement cost reductions, mitigation values, and cross-boundary revenue flows in linked regional markets. Findings must then be presented to policy-making communities in ways that can help inform their decision making.
- 4. Encourage regional collaboration to influence the implementation of Article 6 of the Paris Agreement.** Articles 6.2 and 6.4 of the Paris Agreement will be further defined during the 2017–2019 period, and Northeast Asian countries could have greater impact on their implementation through finding common negotiating positions and pursuing them at international climate change forums.
- 5. Facilitate real-time market linkage simulations on trading platforms.** The development of ETSs outside of Asia has benefited from simulated trading exercises on actual exchanges using hypothetical emissions credits. Similar progress could be made on Northeast Asia market linkage through such experimentation, which can be facilitated with no material risk.
- 6. Pilot linked subnational markets across Northeast Asia.** Piloting subnational connections in the region across a limited number of sectors for an initial test period would lower barriers for entry into regional market links and provide a test-bed for regional carbon market connectivity. Regional cities, capital regions, provinces, and prefectures should enter discussions to elaborate and pilot subnational linkages.
- 7. Agree upon a prospective date at which to begin official discussion on the launch of select market linkages.** It is essential to have a temporal goal for the beginning of official policy dialogue on regional market linkage while the foundation for these negotiations is being built. Government leaders should come to aspirational agreement, without binding commitment, on when to begin official talks.

CONCLUSION

Evidence from past linkage efforts demonstrates that while geographic proximity and close economic ties play a crucial role in building a relationship toward linkage, these factors do not guarantee successful market integration. Integrating carbon markets requires a series of preliminary steps and pilot initiatives to be successful. Because Northeast Asia is in the formative phase of carbon market construction, the countries have an opportunity to synergize some design elements in the near term and begin working through economic and geopolitical challenges that accompany market cooperation.

The key at this juncture is to create linkage-ready markets and a clear work plan for pursuing cooperation. Regional carbon markets will not become homogenous, share all design characteristics, or have a completely unified emissions cap or carbon price in the foreseeable future—or perhaps ever. The natural endowments, economic and political systems, and related climate change policies of these countries will continue to vary widely. These differences do not mean that their carbon markets cannot or should not be linked. Targeted, mutually beneficial links require harmonizing some aspects of domestic markets and designing the avenues of commonality needed to enable trading emissions allowances across different jurisdictions.