Developing countries being prospective players in climate governance: a case study of China's carbon market

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ABSTRACT

Although most of the developing countries around the world currently remain reluctant to make clear commitment to climate change, this does not mean that such a situation will not be changed in an expectable future while the climate risk is getting increasingly urgent. This reality also does not imply that there is substantive institutional barrier to establishing effective carbon markets in developing countries. In this article, we will take China as an example and examine its evolution of the domestic legal and regulatory systems of carbon markets to consider the essential roles of private law system of carbon markets in developing countries. Finally, we will analyze the role of Chinese overseas investment in developing countries to promote carbon neutrality among them and provide a feasible platform for them in means of introducing financial instruments through international cooperation.

1. INTRODUCTION

Although most of the developing countries around the world currently remain reluctant to make clear commitment to climate change, this does not mean that such a situation will not be changed in an expectable future while the climate risk is getting increasingly urgent. This reality also does not imply that there is substantive institutional barrier to establishing effective carbon markets in developing countries. In this research, we will review China's recent policy responses to the goals of UN's global climate governance and consider how the supreme authority's attitude towards climate change in a developing country can provide essential support for further development of institutional foundation for its carbon markets.

Carbon markets generally include the markets for trading carbon emissions and carbon finance, however, the experience of carbon markets in developed regions has shown that an effective and attractive carbon market essentially depends on the existence of a comprehensive and solid private law system, otherwise the protection for investors will be uncertain and weaken its

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attractiveness to investors. In this article, we will take China as an example and examine its evolution of the domestic legal and regulatory systems of carbon markets to consider the essential roles of private law system of carbon markets in developing countries. In addition, we compare the Chinese experience with the USAUS and the European Union (EU) in constructing legal framework of carbon market, by which we summarize generic blueprint for establishing effective carbon markets in developing countries. Also, we will analyse the role of Chinese overseas investment in developing countries to promote carbon neutrality among them and provide a feasible platform for them in means of introducing financial instruments through international cooperation.

2. INTERNATIONAL EXPERIENCES OF CARBON NEUTRALITY

Given the fact of increasing carbon emissions, some major economies, especially developed countries, have been increasingly committed to binding greenhouse gas emissions reductions as their momentous strategies.¹ Among eight countries in the world that have already made the goal of carbon neutrality into legislation, all of them are developed countries, with European countries accounting for 87.3 per cent.² To be specific, the UK, as the first country in the world to establish the target of carbon neutrality in means of law, formulated the Climate Change Act 2008 (2050 Target Amendment) in June 2019, which established the carbon budget system and revised the greenhouse gas emission reduction target to be reduced by 100 per cent by 2050 compared with that of 1990, representing that it will continuously strive to carbon dioxide reductions and achieve carbon neutrality by 2050.³ Europe as a whole, serving as the forerunner in achieving carbon neutrality by the year 2050, launched the Green Europe Deal across the region and adopting the European Climate Law as a part of its ambitious mission, marking a significant progress towards zero-carbon emission across Europe.⁴ To be specific, in order to achieve carbon neutrality by 2050, Europe has made a number of measures, which are significantly meaningful to have impact on global actions to some extent in means of sharing its rich experiences in practice. Since European carbon market was established in 2005, a series of financial resources have been introduced and widely adopted, which were then grown substantially with extensive and solid experiences. For example, emission allowances that were classified as financial instruments in the revised Directive on Markets in Financial Instruments (MiFID2), have been largely adopted in European carbon market.⁵ Furthermore, with the purpose of adequately addressing potential climate risks, a number of innovative attempts governing oversight were adopted in the trading market as well.⁶

In addition, at the same time, Asia witnessed similar attempts on addressing carbon emissions. Both Japan and South Korea promised to achieve carbon neutrality by the same year which was once announced by Europe, and South Korea further issued the Green New Deal as a

¹ Jeffrey D Sachs, 'Speech on China International Financial Annual Conference' (International Finance 2012) 13.

² These eight countries are the UK, France, Germany, Sweden, Denmark, Hungary, New Zealand and Spain.

³ The Parliament of United Kingdom, Climate Change Act 2008 <<u>https://www.legislation.gov.uk/ukpga/2008/27/con</u> tents> accessed 22 May 2022; Averchenkova Alina, Fankhauser Sam and J Finnegan Jared, 'The Impact of Strategic Climate Legislation: Evidence from Expert Interviews on the UK Climate Change Act' (2021) 21(2) Climate Policy 251.

⁴ ibid; Guiyang Zhuang and Xianli Zhu, 'European Green Deal: Contents, Influences and Implications for China' (2021) 157(1) International Economic Review 117.

⁵ EUR-Lex, Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and Amending Directive 2002/92EC and Directive 2011/61/EU Text with EEA Relevance <<u>https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32014L0065></u> accessed 22 May 2022.

⁶ European Commission, *Ensuring the Integrity of the European Carbon Market* (2022) <<u>https://ec.europa.eu/clima/eu-ac</u> tion/eu-emissions-trading-system-eu-ets/ensuring-integrity-european-carbon-market_en> accessed 22 May 2022.

response.⁷ The goal of achieving carbon neutrality by 2050 has been recognized worldwide. At the United Nations Climate Action Summit in 2019, there are already 66 countries and more than 100 local governments that made a promise to achieve carbon neutrality by 2050.

In USA, even though in June 2017, former President Trump announced that the USA would withdraw from the Paris Agreement and this agreement had brought harsh financial and economic burdens to the USA, this withdrawal was widely criticized both by US domestic society and international community.⁸ On 19 February 2021, US officially rejoined the Paris Agreement and claimed that the Paris Agreement is an unprecedented framework for global action which will help avoid catastrophic global warming and enhance the ability to cope with the impact of climate change on a global scale on the same day in a statement. President Biden signed an executive order on the first day of his inauguration, announcing that USA would rejoin the Paris Agreement on climate change.⁹ The process of carbon neutrality in USA began with the Clean Air Act of 1963, which was adopted to control greenhouse gas emissions in several factories. After the oil crisis in 1973, US Congress and the Federal Government successively introduced a series of laws and regulations to promote the development of clean energy, mainly including the Public Utility Regulatory Policies Act of 1978, the Energy Tax Act of 1978, Energy Security Act of 1980, the Energy Independence and Security Act of 2007, the American Clean Energy and Security Act of 2009, etc.¹⁰

Quite different from these developed countries discussed above that have actively taken a number of measures to achieve carbon neutrality, developing countries are more likely to be called upon to participate meaningfully in this green mission.¹¹ According to the statistic concluded by the Center for Global Development, developing countries are responsible for 63 per cent of current carbon emissions.¹² In addition to eight countries around the world have made the goal of carbon neutrality by the year 2050 clear in means of law, such as the UK, France and other six countries and regions that have already proposed their draft legislations, like Chile and Fiji there are other 14 countries have made it clear on their policy agendas to achieve carbon neutrality.¹³ Among these countries that have at least made actions in carbon neutrality, it could be found that developed countries accounted for 64 per cent, while developing countries only accounted for 36 per cent.¹⁴ Furthermore, among these developing countries that announced carbon neutralization as a strategic goal, there are several differences that should be noticed. First, some of these developing countries that are not relatively dependent on manufacturing industry with a quite lower economic scale, are much earlier to implement the goal of carbon neutrality. For example, Bhutan, as a poor developing country, with a population of less than 1

⁸ Jason Bordoff, 'Withdrawing from the Paris Climate Agreement Hurts the US' (2017) 2(9) Natural Energy 631.

¹⁰ Paul L Joskow, 'Public Utility Regulatory Policy Act of 1978: Electric Utility Rate Reform' (1979) 19(4) Natural Resources Journal 787–809; Stephen L McDonald, 'The Energy Tax Act of 1978' (1979) 19(4) Natural Resources Journal 859–869; 'American Fuel & Petrochemical Manufacturers; AFPM Supports Bill and Amendment to Repeal Section 526 Energy Independence and Security Act EISA of 2007' Energy Weekly News (2013); Andrea M Bassi and Joel S Yudken, 'Climate Policy and Energy Intensive Manufacturing: A Comparative Analysis of the Effectiveness of Cost Mitigation Provisions in the American Energy and Security Act of 2009' (2011) 39(9) Energy Policy 4920–4931.

¹¹ Sachs (n 1) 13; Ramón López, 'Incorporating Developing Countries into Global Efforts for Greenhouse Gas Reduction' (Resources for the Future 1999) <<u>https://media.rff.org/documents/RFF-CCIB-16.pdf</u>> accessed 22 May 2022.

⁷ Sachs (n 1) 13.

⁹ Nabil Nasr, 'Collaboration Accelerates US Climate Action' (2021) 53(6) Industrial and Systems Engineering at Work 22.

¹² Center for Global Development, 'Developing Countries Are Responsible for 63 Percent of Current Carbon Emissions' https://www.cgdev.org/media/developing-countries-are-responsible-63-percent-current-carbon-emissions accessed 22 May 2022.

¹³ ibid.

¹⁴ ibid.

million and the added value of its manufacturing industry only accounted for 7.12 per cent of GDP, have already achieved carbon neutrality.¹⁵ However, China, with a large population and heavily relying on manufacturing industry in the path of its national economic development, was inevitably becoming more dependent on energy industries and other energy-consuming industries with high carbon emissions. In this case, the difficulties for these developing countries, like China, to achieve carbon neutrality is much harder. Second, even though 22 developed countries and 4 developing countries have already incorporated the goal of carbon neutrality in means of law or in their national strategies, most of them have successively realized carbon neutrality or will achieve carbon peak in the few coming years which makes the goal of carbon neutrality easily foreseen by 2050.¹⁶ That is to say, compared with other developing countries with great challenges and longer path to the goal of carbon neutrality that required much higher efficiency of carbon emission reduction, these countries will spend less time and cost to achieve the transition from carbon peak to carbon neutrality. For example, although Chile has not yet announced its carbon peak plan, it currently plans to achieve carbon neutrality in 2050 and close 8 of the 28 coal-fired power plants by 2024.¹⁷ However, in China, by the year 2030, it is announced that greenhouse gas emissions will be reduced by 30 per cent compared with 2007, and the proportion of renewable energy in China's total energy will be increased to 70 per cent.¹⁸ Despite quite tougher challenges, on 22 September 2020, at the general debate of the 75th United Nation General Assembly, an announcement made by President Xi presents that China will make efforts to hit peak emissions by 2030 and carbon neutrality by 2060, well known as the term of '30·60 Goal'.¹⁹ Since then, China has introduced a number of measures to achieve this promise, and China's experiences are significant and meaningful to present a possible and feasible model for other developing countries.

3. POLICY RESPONSE TO UN'S CLIMATE GOALS: FROM PARIS TO GLASGOW

During 31 October to 12 November 2021, the UN COP26 was convened in the Scottish city, Glasgow in the UK, China is also playing a more active role in making its own contribution to the UN climate goals. In the COP26, China not only literally claims its ambition to fight against climate change challenges but also takes essential actions to cope with the realistic problems in this area.

According to the Section III of the Glasgow Climate Pact,²⁰ the urgency and significance of developing adaptation finance among Parties of UN FCCC are highlighted. It is required that not only multilateral development financial institutions but also private sectors are called upon 'to enhance finance mobilization in order to deliver the scale of resources needed to achieve climate plans'²¹; and the parties are highly encouraged 'to continue to explore innovative

¹⁵ Analysis on the Necessity of Implementing Carbon Neutrality in Developing Countries and China's National Conditions (Analysis) <<u>https://max.book118.com/html/2021/0423/8032020123003077.shtm</u>> accessed 22 May 2022.

¹⁶ Center for Global Development (n 12).

¹⁷ China may Eliminate All Coal-fired Power by 2040, and the Approved Coal-fired Power Will Be Reduced by Nearly 80 per cent in the First Half of the Year <<u>https://baijiahao.baidu.com/s?id=1709234260663880207&wfr=spider&for=pc></u> accessed 22 May 2022.

¹⁸ Analysis (n 15).

¹⁹ Xinhua Net, 'Xi Focus: Xi Announces China Aims to Achieve Carbon Neutrality before 2060' (2020) <http://www.xin huanet.com/english/2020-09/23/c 139388764.htm> accessed 22 May 2022.

²⁰ Glasgow Climate Pact (UNFCCC/PA/CMA/2021/L.16).

²¹ ibid art 19.

approaches and instruments for mobilizing for finance for adaptation from private sources²².' This means that both developing and developed economies are expected to take joint actions to attract more private players to climate-related financing activities.

Indeed, the Chinese government has been taking essential action to fulfil this obligation under the Glasgow Climate Pact. For instance, in October 2020, Guiding Opinions on Promoting the Investment and Financing in Response to Climate Change was issued by the Ministry of Ecology and Environment, the National Development and Reform Commission (NDRC), the People's Bank of China (PBoC), the China Banking and Insurance Regulatory Commission and the China Securities Regulatory Commission (CSRC), in which the statutory requirement of establishing detailed criteria of climate-related investment and finance in the Chinese financial system is clarified.²³ It also clearly encourages the foreign institutional investors to participate in the green projects in domestic markets of China.²⁴ One year later, the Central Bank of China, NDRC and Ministry of Ecology and Environment promulgated a more detailed guideline for climate finance, namely the Blueprint of Climate Investment and Finance.²⁵ The significance of this regulation can be understood from the following two dimensions, first, it encourages local financial institutions to explore carbon financial services including carbon funds, carbon asset-backed loans, carbon insurance and other carbon financial services under the premise of compliance with laws and regulations and controllable risks, so as to effectively prevent financial risks and promote the carbon financial system innovative development;²⁶ and secondly, this regulation also clearly requires the Chinese local governments to assist those local SMEs to actively invest in green projects or use climate assets to finance or refinance through capital markets.²⁷

4. THE CASE STUDY: INSTITUTIONAL FOUNDATION OF CARBON MARKETS IN CHINA

Although currently most countries making official commitment to carbon neutrality are those developed countries, more and more developing countries tend to play an increasing important role in tackling climate change issues. However, due to the relatively weak tradition and foundation of the private law and regulatory environment, most developing countries still did not establish their own efficient carbon markets and trading rules. In this section, by examining the development of regulatory regime of China's carbon markets and comparing with the experience of carbon markets in developed regions, we will try to illustrate a series of essential elements and potential steps for developing countries to establish their own carbon markets and regulatory system.

Crossing the river by feeling the stones: pilot programme of carbon markets in China

China initially developed the carbon markets as a way to support the achievement of national and provincial targets for CO2 intensity, in line with the national pledges and alongside other supporting Policies. When policymakers first introduced targets for CO2 emissions intensity in the 12th Five-Year Plan (2011–16), the carbon market began to gain traction as a cost-effective alternative to command-and-control approaches for addressing climate change. National targets for reducing CO2 emissions intensity, or CO2 emissions indexed to output, correspond to

²⁴ ibid.

²⁶ ibid, s 5(3).

²² ibid.

²³ s 4(3), Guiding Opinions Promoting the Investment and Financing in Response to Climate Change (October 2020).

²⁵ Blueprint of Climate Investment and Finance (2021).

²⁷ ibid, s 5(4).

mitigation commitments pledged as part of the United Nations Framework Convention on Climate Change process.²⁸

The first national adaptation plan for establishment of carbon markets in China can be traced to 2013. It was reported that climate change issues have cost China 200 billion RMB (\$32.9 billion) since 1990, and called for more support to be directed to farmers, in particular, it highlighted rising levels of soil erosion, poor water supply and a lack of access to drought-tolerant crops.²⁹ As an action to tackle the climate risk in Chinese economy, China acted rapidly to control its climate risk by introducing carbon trading markets even before a well-sound institutional foundation is ready. In fact, China's carbon trading system has been piloted for nearly a decade. As early as October 2011, the NDRC issued the Notice on carrying out the Pilot Work of Carbon Emission Trading, and piloted the carbon emission trading system in Beijing and Shanghai as the earliest pilot programme in carbon trading and carbon finance.³⁰

In fact, the nature of carbon trading means trading 'carbon permits' as a commodity. It should be noted that the source of 'carbon emission right' is different from general commodities, instead, it is a kind of quota granted by the government, that is, the government allocates certain carbon emission quota to the enterprises according to its potential impact on climate change.³¹ If the volume of carbon emitted by a given emitter exceeds the quota within a certain period of time, then this enterprise must buy the excess quota from other market participants in carbon market before it can emit, so as to achieve the total carbon emission control.³² Based on the above trading principle, in addition to quotas, other carbon trading products are derived, such as China Certified Emission Reduction (CCER), which means the emission reduction achieved by the emitters through clean energy and other clean technique innovations certified by a third party. This carbon emission reduction can also be used to offset the excess carbon emissions of the emitters.³³

In particular, the Chinese authorities have very high profile emphasized its ambition in pushing forward the contribution to global climate change. For example, the Comprehensive Work Plan for Energy Conservation and Emission Reduction during the 12th Five-Year Plan Period issued by The State Council sets out fifty specific requirements for energy conservation and carbon emission reduction over the next five years, covering more than ten areas and covering the overall requirements and major targets for energy conservation and emission reduction.³⁴

From a practical perspective, there are two points in China's pilot schemes of carbon trading markets during the past decade are particularly noteworthy. First, China has set clear targets for reducing energy consumption and carbon intensity during the 12th Five-Year Plan period, with corresponding tasks assigned to different sectors and industries. Second, the authorities are to strengthen the responsibilities of governmental officials at all levels. China has made the achievement of the energy conservation and emission reduction targets and the implementation of policies and measures an important part of the comprehensive assessment of its leading bodies and

²⁸ Valerie J Karplus, 'China's CO2 Emissions Trading System: History, Status, and Outlook' (Harvard Project on Climate Agreements, Cambridge, MA, June 2021) 2.

²⁹ 'Chinese Government Releases First Draft of National Adaptation Plan' *Climate Policy Watcher* (2013) <<u>http://www.climate-policy-watcher.org/?q=node/582></u> accessed 22 May 2022; Zhongxiang Zhang, 'Carbon Emissions Trading in China: The Evolution from Pilots to a Nationwide Scheme' (2015) 15(S1) Climate Policy 104.

³⁰ Amal-Lee Amin, Shin Wei Ng and Ingrid Holmes, 'China's Low Carbon Finance and Investment Pathway' (July 2014) E3G Policy Paper.

³¹ Yao Wang, Carbon Finance: Global Version and Distribution in China (China Economic Publishing House 2010) 28–55.

³² Sonia Labatt and Rodney R White, Carbon Finance: The Financial Implications of Climate Change (Wiley Finance 2007) 137-40.

³³ ss 18, 22 and 47, Interim Measures for the Administration of Carbon Emissions Trading (2014).

³⁴ State Council of the PRC, 'The Twelfth Five-Year Plan of Energy-saving and Reduction of Carbon Emission' (2012); Zhang (n 29).

officials. This demonstrates the Chinese government's determination to actively address climate change and accelerate green and low-carbon development.

As early as 2008, Shanghai and Beijing have set up environmental exchanges, on which CDM projects (clean Development Mechanism) and voluntary emission reduction projects have been traded. In 2012, the NDRC announced that Beijing, Tianjin, Shanghai, Chongqing, Hubei, Guangdong and Shenzhen have launched a pilot carbon emission trading scheme. Up to the end of 2020, China's seven carbon trading trials have included more than 2000 enterprises and institutions, including energy-intensive industrial enterprises, service enterprises and large public buildings in some pilot areas. The annual quota issued is about 1.2 billion tons of carbon dioxide equivalent (CO2 EQ), second only to EU-ETS (annual quota issued about 2 billion tons).³⁵

Since 2016, the industry coverage of the national carbon market has been defined, including 32 industries in eight sectors, mainly including high energy consumption and high emission industries, as well as civil aviation. It is estimated that it will cover nearly 10,000 enterprises and involve about 4–4.5 billion tons of carbon emissions annually, accounting for nearly 50 per cent of China's carbon emissions. Shanghai, Shenzhen, Beijing and other pilot markets have included public buildings and part of the service sector in carbon trading market, but still not included in the nationwide market.³⁶

However, the biggest weakness of China's carbon market development lies in the lack of deepening development and innovation of carbon financial system. At present, only Hubei province and Shenzhen have launched carbon forward products. Shanghai is exploring carbon forward products, but carbon futures are still blank. Carbon asset custody, mortgage/pledge loans, carbon lending and repurchase businesses are also very limited.³⁷ Ever since 2014, around 20 carbon financial products have been launched in Beijing, Shanghai, Guangzhou, Shenzhen, Hubei and other pilot cities for carbon emission trading.³⁸ However, a lack of strong market demand and the social capital to support the carbon finance business sustained, lead to some products market response insipid, this largely limits the trading main body of risk management ability, also limits the control line of enterprise development and carbon assets, participate in carbon trading.³⁹

Policy support by the supreme authorities: China's financial policy on carbon neutrality

The year 2015 witnessed a significant progress. In this year, the CPC Central Committee made a comprehensive strategy in green development by issuing the Opinions on Accelerating the Construction of Ecological Civilization⁴⁰ and the Master Plan of Ecological Civilization System Reform,⁴¹ and the State Council then provided guiding principles, objectives and measures for the construction of ecological civilization. Against this background, the term 'green development' was regarded as one of the five basic principles of development.⁴²

³⁵ A Review of the Pilot Programme in China during 2010s <<u>http://www.tanpaifang.com/tanjiaoyi/2016/0804/55209</u>. <u>html</u>> accessed 22 May 2022.

³⁷ Gørild M Heggelund, 'China's Climate and Energy Policy: At a Turning Point?' (2021) 21 International Environmental Agreements: Politics, Law and Economics 9.

³⁶ ibid; X Yu and AY Lo, 'Carbon Finance and the Carbon Market in China' (2015) 5 Nature Climate Change 15.

³⁸ Yu and Lo (n 36).

³⁹ WA Pizer and X Zhang, 'China's New National Carbon Market' (*AEA Papers & Proceedings*, 108,2018) 463–7 <<u>https://doi.org/10.1257/pandp.20181029</u>> accessed 22 May 2022.

⁴⁰ Opinions on Accelerating the Construction of Ecological Civilization <<u>http://www.gov.cn/xinwen/2015-05/05/content_2857363.htm</u>> accessed 22 May 2022.

⁴¹ Master Plan of Ecological Civilization System Reform <<u>http://www.gov.cn/guowuyuan/2015-09/21/content_2936327</u>. htm> accessed 22 May 2022.

⁴² Chen Lin, Liu Wei and Chen Yunhan, 'The New Direction of Green Finance International Cooperation under the Vision of Carbon Neutrality' (*China Forex* 2021) 30

The requirement of green development is also reflected in financial sectors. As a result, a variety of green financial products, such as green credit, green bond, appeared and developed in China.⁴³ the PBoC and other six departments, jointly issued the Guidelines for Establishing the Green Financial System, with the purpose of mobilizing and incentivizing more social or private capital to invest in green sectors, while restricting investment in sectors polluting environment.⁴⁴ In addition, the Green Credit Guidelines issued by the former China Banking Regulatory Commission (CBRC) in 2012,45 the Green Bond Endorsed Project Catalogue (2015 Edition) issued by the PBoC, 46 as well as the Guiding Catalogue for the Green Industry (2019) 47 led by the NDRC have basically formed a comprehensive regulatory framework for promoting green finance in China.⁴⁸ Since then, the Green Bond Endorsed Project Catalogue has been subsequently updated to ensure adaptation and transition from the previous policies regarding changing scopes and details and to better govern China's green bonds market.⁴⁹ In this case, the supporting role of green bonds on environmental improvement and sustainable development is highlighted.50

Legitimizing carbon assets: the promulgation of civil code (2020) in China

According to the newly promulgated Civil Code of the PRC (2020), the scope of pledge of rights includes bills of exchange, promissory notes and checks. Bonds and certificates of deposit; Warehouse receipt, bill of lading, etc.⁵¹ Moreover, according to Article 406 of this Civil Code, the flexible transferability of mortgaged property or rights in security are also clarified.⁵² This should be regarded as a significant progress in China's civil law reform, because in the original Property Law of China,⁵³ the mortgagor may not transfer the mortgaged property without the

45 Notice of the CBRC on Issuing the Green Credit Guidelines https://www.cbirc.gov.cn/en/view/pages/ItemDetail. html?docId=68035&itemId=981> accessed 22 May 2022.

⁴⁶ See the People's Bank of China Announcement No 39 [2015] Annex https://www.icmagroup.org/assets/documents/ Regulatory/Green-Bonds/PBOC-Announcement-No-39-2015.pdf> accessed 22 May 2022; Draft for Public Consultation of Green Bond Endorsed Project Catalogue (2020 Version) <https://www.hkgreenfinance.org/wp-content/uploads/2020/06/ Attachment-1-Draft-for-Public-Consultation-of-Green-Bond-Endorsed-Project-Catalogue-2020-.pdf> accessed 22 May 2022.

⁴⁷ Green Bond Endorsed Project Catalogue (2019 Version) <http://fgw.taizhou.gov.cn/module/download/downfile.jsp? classid=0&filename=73346f68db534c7aa5d44875cb3f1430.pdf> accessed 22 May 2022.

⁴⁸ Lin, Liu and Chen (n 42) 30; Preparation Instructions on Green Bond Endorsed Project Catalogue (2015 Edition).

⁴⁹ Notice on Issuing the Green Bond Endorsed Projects Catalogue (2021) Edition http://www.pbc.gov.cn/goutongjiao liu/113456/113469/4342400/2021091617180089879.pdf> accessed 22 May 2022. ⁵⁰ ibid.

⁵¹ art 440 of the Civil Code of the PRC (2020) provides that 'The obligor or a third party may pledge the following rights that are entitled to be disposed of (1) bills of exchange, promissory notes and cheques; (2) bonds and deposit certificates; (3) Warehouse receipt and bill of lading; (4) transferable fund shares and equity; (5) the property rights among intellectual property rights such as the exclusive right to use a registered trademark, patent right and copyright that can be transferred; (6) existing and future accounts receivable; (7) other property rights that may be pledged in accordance with laws and administrative regulations.'

 $\frac{52}{10}$ art 406 of the Civil Code of the PRC (2020) provides that 'During the mortgage, the mortgagor may transfer the mortgaged property. If the parties agree otherwise, such agreement shall prevail. Where the mortgaged property is transferred, the mortgage right shall not be affected. Where the mortgagor transfers the mortgaged property, he shall promptly notify the mortgagee. Where the mortgagee can prove that the transfer of the mortgaged property may damage the mortgage right, he may request the mortgagor to use the proceeds from the transfer to pay off debts or put them in escrow with the mortgagee in advance. The part of the transferred price exceeding the amount of the obligatory right shall be owned by the mortgagor, and the short part shall be paid off by the debtor.'

⁵³ The Law of Property of the PRC was promulgated in 2007 and it came into force in the same year. Now this legislation has been abolished and replaced by the Civil Code (2020) since 1 January 2021.

⁴³ ibid.

⁴⁴ The People's Bank of China, The People's Bank of China and Six Other Agencies Jointly Issue, 'Guidelines for Establishing the Green Financial System' http://www.pbc.gov.cn/english/130721/3131759/index.html accessed 22 May 2022.

consent of the mortgagee during the mortgage period, except where the assignee liquidated the debts on behalf of the mortgagee and the mortgage right is extinguished.⁵⁴ In other words, prior to the enactment of the Civil Code (2020), the Chinese private law system generally forbids any transfer of mortgaged property without the consent of the mortgagee.

Now of the mortgaged property, even in the case of no cancellation of mortgage registration, or might not subject to consent by the mortgagee, mortgagor free transfer to a third person, unless otherwise agreed by the mortgagor and the mortgagee (eg although the civil code is no longer requires the consent of the mortgagee, mortgagor if voluntary agreement still needs the consent of the mortgagee, the agreement shall be binding on the mortgagor). It is obvious that the Civil Code of the PRC is more flexible than the PRC Property Law, facilitating the market transaction of 'mortgaged property', while at the same time guaranteeing the rights of the mortgagee.

The above essential changes to the property law system are crucial to the establishment of carbon finance markets in China, as the carbon trading unit as pledging asset and transferable property right is now fully recognized by the civil law system which paves the way for an active carbon finance market in the country. In fact, carbon trading units now have been put into practice for financing activities in 2021. For instance, under the guidance of natural Resources Planning Bureau, Finance Office and other departments, Anji Rural Commercial Bank (Baofu Sub-branch) successfully handled the first bamboo forest carbon sink secured loan in China, with the amount of 370,000 RMB, for a forest farm within its jurisdiction. This transaction innovatively use the increased number of 'bamboo planting' per year remit the amount of carbon reduction pledge financing mode, the operator contracts total more than 1000 mu of bamboo forest carbon emissions as the pledge, refer to the national carbon emissions trading market price of carbon emissions trading, by the PBoC credit reporting centre uniform registration of the public financing system for the pledge registration of chattel and the public.⁵⁵

Unification of trading rules in carbon markets: the establishment of China's nationwide carbon markets (2021)

The year 2021 is a milestone in the development of China's carbon markets, the new regulation over carbon trading came into effect in February and the nationwide unified market for carbon trading is officially launched in July. In terms of the nationwide market for carbon trading, more than 2000 key emission units have been included in the power supply industry, with carbon emissions exceeding 4 billion tons of carbon dioxide. This means that China's carbon emissions trading market will become the world's largest carbon market covering greenhouse gas emissions once it is launched. Based on actual conditions and international experience, the first batch of more than 2200 companies included is all power generation companies.⁵⁶

From a regulatory aspect, the newly published Interim Measures for the Administration of Carbon Emissions Trading sets out a well-sound regulatory framework for supervising carbon trading market in China. According to this regulation, first, the quota allocation mode is national and local, at the national level. The emission quota is allocated by the Ministry of Ecology and Environment of the PRC and provincial quotas are determined by the competent department of the ecology and environment protection,⁵⁷ while some quotas are reserved for compensated allocation, market adjustment and major project construction. In the initial stage, the allocation of

⁵⁴ art 191, The Law of Property of the PRC (2007).

⁵⁵ The First Carbon Sink Secured Pledge was Successfully Completed in Huzhou City <<u>http://www.tanpaifang.com/tanjin</u>rong/2021/0809/79007.html> accessed 22 May 2022.

⁵⁶ China is to become the Largest Carbon Emission Trading Market in Globe (July 2021) <<u>http://www.gov.cn/zhengce/</u>2021-07/16/content 5625374.htm> accessed 22 May 2022.

⁵⁷ s 6, Interim Measures for the Administration of Carbon Emissions Trading (2021).

quotas by local governments will be free of charge, and paid allocation will be introduced in due course, and the proportion will also be increased gradually.⁵⁸ The standards and methods for free distribution shall be determined by the Ministry of Ecology and Environment of the PRC and should be strictly implemented by local governments.⁵⁹

The Ministry of Ecology and Environment has managed greenhouse gas emission enterprises in the directory, and listed enterprises that meet the following conditions in the directory of key emission units: (i) Belong to the industry covered by the national carbon emission trading market; (ii) Annual greenhouse gas emissions reached 26,000 tons of CARBON dioxide equivalent.⁶⁰ In addition, listed enterprises will be removed from the list if their greenhouse gas emissions have not reached 26,000 tons of CARBON dioxide equivalent for two consecutive years, or if they are no longer engaged in production and business activities due to suspension or closure.⁶¹

To verify the carbon emissions each year, this regulation also provides that key emitters should report their greenhouse gas emissions for the previous year to provincial ecological and environmental authorities by 31 March each year. Once verification is completed, the provincial ecological environment department will inform the key emission units of the results. If the key emission units have objections, they can apply for review within 7 working days, and such review should generally be processed within 10 working days. In addition, key emitters can also use CCER to offset their carbon emissions, but not more than 5 per cent of the carbon emission quota due to be liquidated.⁶²

Finally, for the violation of the 'administrative measures' provisions of the enterprise, the Measures also provided for the corresponding penalties. According to Article 39 of the Measures for the Administration, key emitting units that make false or conceal reports on greenhouse gas emissions, or refuse to fulfil their obligations in reporting greenhouse gas emissions, shall be ordered to make corrections within a time limit and be imposed a fine of between 10,000 and 30,000 RMB. If it fails to correct within the time limit, the verified emissions shall be taken as the basis for the settlement of its carbon emission quota, and the carbon emission quota for the next year shall be reduced by the same amount for the part falsely reported or concealed. In addition, according to Article 40 of the 'Administrative Measures', key emission units that fail to pay their carbon emission quotas in full on time will be ordered to correct within a time limit and imposed a fine of more than 20,000 RMB but less than 30,000 RMB; if it fails to make corrections within the time limit, its carbon emission quota for the next year shall be reduced by the same amount for the next year shall be reduced by the same amount for the part falsely reported or concealed. In addition, according to Article 40 of the 'Administrative Measures', key emission units that fail to pay their carbon emission quotas in full on time will be ordered to correct within a time limit and imposed a fine of more than 20,000 RMB but less than 30,000 RMB; if it fails to make corrections within the time limit, its carbon emission quota for the next year shall be reduced by the same amount for the part in arrears.

From the national level, the continuous development of the industrialization level, as a responsible big country in the world makes emission reduction work has become increasingly urgent. Therefore, as a market-based financial tool, carbon finance and carbon trading markets are bound to achieve great development in the Chinese economy in the future. At the corporate level, carbon emissions will not only serve as an administrative measure, but more likely become great commercial opportunity for profits. At the same time, with the emergence of CCER and other associated financial products, the carbon market will be increasingly large. Therefore, those enterprises that have been experienced in carbon finance before 2021, will be more likely to get opportunity for making profit in the new-born carbon markets of China.⁶³

⁵⁸ ibid s 15.

⁵⁹ ibid ss 26 and 28.

⁶⁰ ibid s 8.

⁶¹ ibid s 11.

⁶² ibid s 25.

⁶³ See Jie-Sheng Tan-Soo and others, 'Do CO2 Emissions Trading Schemes Deliver Co-benefits? Evidence from Shanghai' (2022) 22(1) Climate Policy 64.

In the counterpart in the EU, the EU Emissions Trading System (EU ETS) is a 'cap and trade' system. It caps the total volume of GHG emissions from installations and aircraft operators responsible for around 50 per cent of EU GHG emissions.⁶⁴ Now the EU ETS covers more than 10,000 power plants in more than 30 countries, which is a major tool of the EU in its efforts to meet emissions reductions targets now and into the future.⁶⁵ In terms of the legal and regulatory system of the EU's carbon market, the EU ETS is a significant part of the EU sustainable regulation. In order to guarantee the unification of legislation and implementation of the EU carbon markets, the decisions about the EU ETS are made at the European level rather than the Member State (MS) (country) level. The key institutions involved are the European Parliament, the European Council.

The European Commission⁶⁶ is the only institution with the power to initiate a legislative proposal such as new regulations in the EU ETS or amendments to the EU ETS Directive.⁶⁷ The European Council and Parliament can suggest amendments to the legislative proposal, which the Commission can include in an updated legislative proposal. In the end the Council and Parliament both need to approve the proposed legislation before it is adopted. Any new legislative proposals and most amendments to the EU ETS need to follow this co-decision procedure.⁶⁸

In terms of the unified implementation of the regulation over the EU ETS, the Commission is responsible for ensuring that EU legislation is correctly implemented. In the circumstance where a given MS fails to comply with EU law, the Commission may start infringement proceedings.⁶⁹ The Commission can take action and impose sanctions, against an MS if government legislation is not being properly implemented. Ultimately the Commission may refer the case to the European Court of Justice, which is the legal authority responsible for ensuring that EU law is followed. It also has the power of judicial review over new legislation to ensure that it is legal under existing EU law. If the Court finds that an infringement of EU law by the MS has taken place, it could impose a lump sum or penalty payment on the MS up to the amount specified by the Commission in the case.⁷⁰

By comparing the legislative and regulatory experience of the EU ETS and China, it can be seen that the unification of trading rules of carbon markets is essential. The Ministry of Ecology and Environment of the PRC now plays a role as a centralized regulator of China's carbon market at the national level, this is aligned with the established regulatory experience of the EU ETS.

Expansion of financing function of carbon assets: carbon finance and the Chinese law on futures and derivatives

After 30 years of exploration and development, China's futures market has grown rapidly, and its value function of serving the real economy and national strategy has been continuously enhanced. At present, the Chinese futures market has a total of 70 futures products and 22 options products, basically covering major industries across the national economy, such as agricultural products, non-ferrous metals, thermal coal, ferrous building materials, etc.⁷¹ However, although the Chinese futures market has a set of industry regulations and systems, it has always lacked a market 'basic law' during the past two decades. On 20 April 2022, after its final reading

⁶⁹ ibid.

⁶⁴ European Commission, The EU ETS Handbook (2015) 4.

⁶⁵ ibid.

⁶⁶ Hereinafter referred to 'the Commission'.

⁶⁷ European Commission (n 64).

⁶⁸ ibid.

⁷⁰ ibid.

⁷¹ 'Chinese Market of Futures Derivatives Has Covered More than 70 Industries' *Xinhua Net* (October 2019) <http://www.xinhuanet.com/fortune/2019-10/11/c_1210307846.htm> accessed 6 October 2021.

at the 28th session of the Standing Committee of the 13th National People's Congress, Law on Futures and Derivatives of the People's Republic of China ('PRC')⁷² has been officially promulgated by the legislator. It can be concluded that the introduction of the 'Law on Futures' will be a milestone in the legalization of the Chinese capital market.

In particular, it has been widely recognized that carbon trading market should be positioned as a financial market, the Future Law should include carbon derivatives as tradable products.⁷³ Relying on the existing financial infrastructure, build a nationwide carbon trading market in a market-oriented and professional manner, effectively utilize the more mature market management experience, increase the participation of institutional investors and give full play to the self-regulatory function of market participants.

Moreover, the Future Law has extended the scope of non-cash collateral in the futures market. The types of financial collateral are expanded to meet the practical demands of increasingly diversified financial market structure and financial innovation. Therefore, the expanded scope of non-cash collateral in futures market is an essential component in the legal foundations of modernized and flexible future markets in financial system.⁷⁴ Therefore, China's Future Law has, on the basis of the 'Administrative Regulations on Futures Trading', drawn on the collateral principle of the IOSCO, and it also clarifies non-cash collateral in the futures market as 'assets with low credit risk, circulation risk, and market risk'.⁷⁵ The forms of margin include cash and strong liquidity standard warrants, treasury bonds and other marketable securities.⁷⁶ The expansion of the scope of non-cash collateral in the futures market in the newly enacted futures law of China conforms to the international trend of accepting a variety of financial assets as margin for futures trading. The requirements of flexibility in mortgage and collateral remove the legal obstacles to the use of financial assets that meet the three characteristics of low credit risk, low circulation risk and low market risk as margin for futures trading.

In all, the new Chinese law on futures and derivatives is a milestone for the development of the carbon finance market in China, the flexible collateral instruments recognized in this new legislation will motivate more institutional investors in actively participate in the carbon finance market for financing activities and of course, the promulgation of the law on futures and derivatives will provide more solid protection for institutional investors to use flexible financial instrument to hedge its risk in carbon finance markets, and of course, it will be a positive incentive for developing carbon finance markets in China.

5. CHINA'S OVERSEAS INVESTMENT TO CARBON NEUTRALITY IN THE FUTURE: PROVIDING A FEASIBLE PLATFORM FOR DEVELOPING COUNTRIES' PRACTICES

In addition to China's remarkable improvements in domestic financial market as discussed above, significant international attempts with more environmental friendly and sustainable activities and behaviours are expected to be made by China, seeking for recognition from developed countries and regional consensus among developing countries to resolve climate risks and create more sustainable environment, especially accompanied with the strategy of promoting the community of

⁷² Hereinafter referred to 'the Future Law'.

⁷³ Liqian Liu and Yang Peng, 'Accelerating the Establishment of Carbon Derivatives Market and Push Forward the Green Finance' (14 September 2021) *China Securities Journal.*

⁷⁴ Nankai University Research Group on Regulation on Futures, 'The Legal Construction of Futures Markets' Credit Trading and Guarantee System: In the Sight of Bank's Acceptance Bill and Fund Units Charge against Futures Trading Margin' (2016) 92(11) Futures and Financial Derivatives 30; Heggelund (n 37).

⁷⁵ art 22, the Future Law (2022).

shared future for mankind.⁷⁷ In this case, China has already made great efforts to emphasize the significantly technological role of green finance in carbon neutrality, and once announced climate disclosure for financial sector on agenda to contribute environmentally friendly economic growth at the Group of 20 Summit for the first time.⁷⁸ In consecutive years from 2016 to 2018, led by central banks of China and Britain, a G20 Green Finance Study Group was established and issued a series of synthesis reports with comprehensive guidelines and proposals on green finance, such as clarifying its definition and scope, identifying challenges and offered options for countries voluntarily to support the transit into a green and low-carbon growth model.⁷⁹ In December 2017, eight central banks and supervisors, including the PBoC, the Bank of England, the Bank of France and the Monetary Authority of Singapore jointly initiated the launch of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), at the Paris One Planet Summit, with the purpose of strengthening the global response to meet the goals of the Paris Agreement and enhancing the role of financial system to address risks related to climate change and environmental pollution, and mobilizing capital for green and low-carbon investments in the broader context of environmentally sustainable development.⁸⁰ This attempt has proved to be successful, as it received active responses and its membership has been expanded to 83 members and 13 observers in the following three years.⁸¹ As there is a huge demand of investment to create a secure and sustainable energy system, an international energy Internet with connectivity and cooperation is necessary to be established that may play a significant role.⁸² Against this background, in 2019, China initiated to launch Global Energy Interconnection Development and Cooperation Organization with the purpose of building a smart and clean energy Internet with zero-carbon emissions.⁸³ It could be found that to some degree, cooperation with developed countries actively push China to absorb green finance instruments for carbon neutrality and play a significant role in achieving this climate goal.

As an advocator and a major participant in the Belt and Road Initiative (BRI) context, China has responsibilities and becomes more willing to invest in green areas, especially in means of financing the establishment of large-scale facilities or infrastructure.⁸⁴ China's measures adopted in domestic carbon market could be introduced through overseas investment activities alongside the BRI. It could be optimistically anticipated that BRI could serve as a significant platform with great meaningfulness for both China and alongside developing countries to implement and practice green financial instruments for sustainable development and carbon neutrality, as most of countries along BRI are developing countries. Given the fact that a set of voluntary guidelines to manage environmental and climate challenges for the investment were introduced along the BRI, when the Green Investment Principles (GIPs) was jointly issued by the China Green Finance Committee and City of London Corporation's Green Finance Initiative in the year 2018,⁸⁵ the platform of BRI has already accumulated solid and practical foundation for further progress of carbon neutrality among developing countries along the BRI. Until April 2021, the

⁷⁷ Lin, Liu and Chen (n 42) 31; Xinhua Net, 'China Pushes Green Finance onto G20 Agenda' http://english.www.gov.cn/news/top-news/2016/09/03/content-281475432494202.htm> accessed 22 May 2022.

⁷⁸ Xinhua Net (n 71).

⁷⁹ ibid.

⁸⁰ NGFS, Origin and Purposes <<u>https://www.ngfs.net/en/about-us/governance/origin-and-purpose</u>> accessed 22 May 2022; Lin, Liu and Chen (n 42) 31.

⁸¹ Yaoyao Xin and Juelan Tang, 'China's Green Finance under the Goal of Carbon Neutrality: Policies, Practices and Challenges' (2021) 43(10) Contemporary Economic Management 91–97.

⁸² Sachs (n 1) 14; State Council Information Office of PRC, China Plays Growing Role in Global Governance http://www.scio.gov.cn/32618/Document/1535910/1535910.htm> accessed 22 May 2022.

⁸³ ibid.

⁸⁴ Sachs (n 1) 14.

⁸⁵ Green Investment Principles <<u>https://gipbr.net/Content.aspx?id=296&type=211&m=8</u>> accessed 22 May 2022.

membership of GIP to strengthen bilateral and multilateral cooperation on green finance policies and measures in the context of BRI, has been increased to 39 institutions from 14 countries across the BRI.⁸⁶ With the goal of carbon neutrality promised by China, BRI will continuously witness a huge demand for green investment and large green activities to accelerate green development and achieve carbon neutrality along the BRI. However, as indicated in the research by the Tsinghua University Center for Finance and Development, Vivid Economics and the ClimateWorks Foundation aimed to decarbonize the BRI,⁸⁷ the countries involved in the BRI, excluding China, accounted for about 28 per cent of global carbon emissions in 2015, and the proportion would increase dramatically over the next two decades, at the amount of 66 per cent of by 2050 if this carbon-intensive growth model continues.⁸⁸ On the one hand, against this background, there is an urgent need for international cooperation and communication to manage environmental and climate risks in developing countries in the BRI context. On the other hand, financial attempts and innovations in the context of BRI introduced by China will play a significant role both to the region and the world, as those financial measures introduced and adopted in BRI through green investment activities will provide practical and meaningful experiences for a large number of developing countries to learn in their ways of improving environmental management in means of financial instruments.

In addition, as the Regional Comprehensive Economic Partnership (RCEP) came into force on 1 January 2022, the RCEP provides a huge opportunity for the Asia-Pacific region, as 15 countries of RCEP, including China, Japan, ASEAN, Australia and New Zealand, represent a quarter of the world's population and nearly a quarter of the GDP.⁸⁹ Even more, major economies in the RCEP have announced agenda of carbon neutrality and developing countries consist of significant part of RCEP. In this case, the RCEP mechanism could serve as a significant platform for China to achieve carbon neutrality along with economic growth through investing and exporting renewable energy and introduce feasible green financial instruments for developing countries in the context of RCEP, especially in the current pandemic era.⁹⁰ The achievement of carbon neutrality made by developing countries is not just extravagant hope and impossible dream, as useful and feasible financial instruments would be introduced and shared, or even developed through green investment cooperation promoted by China, within developing countries while balancing national economic development and sustainability. Green finance attempts to the goal of carbon neutrality will inevitably introduced to developing countries through China's overseas investment in these countries. For example. in late 2021, the State-owned Assets Supervision and Administration issued the Guiding Opinions on Promoting the Highquality Development of Central Enterprises and Doing a Good Job in Carbon Peak and Carbon Neutralization (Guiding Opinions), which specifically claimed to actively develop green finance, orderly promote the development of green and low-carbon financial products and services, expand the business scope of green credit, green bonds, green funds and green insurance, and actively explore green credit business such as carbon emission mortgage loans.⁹¹ Driven by this national strategy, qualified central enterprises are required to strive to take the lead in peaking carbon emission and make significant contributions to create a clean, low-carbon, safe and

⁸⁶ ibid; Lin, Liu and Chen (n 42) 32.

⁸⁷ Ma Jun and Simon Zadek, 'Decarbonizing the Belt and Road: A Green Finance Roadmap' <<u>https://www.vivideconom</u> ics.com/wp-content/uploads/2019/09/BRI_Exec_Summary_v13-screen_hi.pdf> accessed 22 May 2022.

⁸⁸ ibid.

⁸⁹ Sachs (n 1) 14.

⁹⁰ ibid.

⁹¹ Notice of Issuing the Guiding Opinions on Promoting the High-quality Development of Central Enterprises and Doing a Good Job in Carbon Peak and Carbon Neutralization (2022) <<u>http://www.sasac.gov.cn/n2588035/c22499825/content.</u> html> accessed 22 May 2022.

efficient energy cycle, and they are encouraged to initiate the establishment of low-carbon funds to promote the implementation of green and low-carbon industry projects, without an exception of their overseas investment plans.⁹² It is expected to witness that China will continuously encourage overseas investment to align with its green policies. Align with the new development pattern of dual circulation which takes domestic market as the mainstay while letting domestic and foreign markets boost each other, green finance instruments will give full play to the supporting role of carbon neutrality, as a priority area of financial opening and reform, that guiding cross-border capital to invest in green projects. In order to achieve this national strategy and international promise for carbon neutrality, Chinese overseas investments will become much greener with innovative and feasible financial instruments. The Chinese overseas investments along BRI and RCEP always have deep relationship with infrastructure construction, which would be much earlier to make environment pollution. The attempts of Chinese overseas investment in these regions with green financial measures, driven by the domestic goal of carbon neutrality, would undoubtedly offer positive and sustainable solution balancing economic profits and environmental protection and play a leading role in alongside developing countries.

Meanwhile, a variety of innovative green financial instruments will become possible and feasible both for China and other developing countries, with a more opening China's domestic market. Due to Law of Hainan Free Trade Port was issued in 2021 and the leading role of Shanghai Free Trade Zone was strongly emphasized through central policies, Hainan Province and Shanghai could be anticipated to become the most popular destinations for attracting foreign investment. A number of green financial instruments in accordance with high-level climate standards created by developed countries might be tested and adopted in these areas through international cooperation with foreign investment, providing practical experiences for developing countries. For example, as for green credit, domestic banks might allow the issuance of crossborder green credit transfers and green ABS in free trade zones, especially in Shanghai, Hainan or Guangdong-Hong Kong-Macao Greater Bay Area.⁹³ Foreign financial institutions might be encouraged to issue green bonds in China, including panda bonds, and allow the raised funds to be transferred overseas for the construction of green projects under the BRI and RCEP.⁹⁴ In terms of green funds, foreign investors might establish green venture capital and private equity investment, rather than joint ventures with Chinese participants, to promote the innovation and application of green technology while bringing green funds.⁹⁵

Based on the above analysis of China's overseas investment through BRI, RCEP, where serves as a feasible platform to cooperate with a large number of development countries, China's attempts on addressing carbon emissions will provide significant and worthwhile experiences for developing countries to pursue carbon neutrality while on the path of balancing economic development and environment protection.

6. CONCLUDING REMARKS

It is obvious that establishing effective carbon markets in any country cannot be completed merely by legislators, the support from supreme policymakers will be important. In the Chinese context, as the supreme policymakers, the NDRC and PBOC's positive attitudes towards climate governance in China paved the way for legal development of carbon finance. It is also true that a coherent regulatory system of carbon markets requires smooth cooperation between local and central authorities,

⁹² The State-owned Assets Supervision and Administration Commission <<u>https://www.breakinglatest.news/business/the-</u> state-owned-assets-supervision-and-administration-commission-of-the-state-owned-assets-supervision-and-administration-commission/> accessed 22 May 2022.

⁹³ Lin, Liu and Chen (n 42) 33.

⁹⁴ ibid.

⁹⁵ ibid.

the Chinese experience shows that for developing countries particular those large ones (such as India and Brazil, etc), a clear delegation of enforcement and regulatory powers to local government will be a part of institutional foundation for their national carbon market. As explored by this research article, it can be seen that the establishment of carbon market institutions in China can be summarized as three tiers: the specific supporting policies, legal foundations and market regulations. The first-tier institution initiates the pilot programmes across the country, the second-tier one justifies carbon assets/trading rights in underlying private law system and removes the major uncertainties which is an essential prerequisite for carbon finance market, the third-tier institution unifies regulatory system of national carbon market and specifies detailed trading rules for market participants.

Furthermore, based on the above analysis on the evolution of China's carbon finance law, the following implications may be essential for other developing countries' institutional construction of carbon markets. First of all, a pilot legal system of carbon emission trading and carbon finance in those developed cities or regions will be a starting point for developing countries where a well-sound private law is still not ready. At such an early stage, the governmental regulation will play a pivotal role in protecting market participants and attracting more investors in carbon markets. Secondly, a solid and clear private law system (ie property law and contract law, in particular) is a prerequisite for building up a nationwide carbon market. In particular, the right of carbon emission is a sort of innovative private right in comparison of those traditional property rights, such as rights of ownership, rights in security or right to use. Therefore, if the private law infrastructure of a developing country cannot clearly legitimate the proprietary nature of carbon assets, the protection over the holders of carbon assets will be quite weak and as a result, the carbon market cannot be flourished. Moreover, as the study in this article on the carbon finance markets in China has shown, the recognition of carbon assets in underlying private law system is also a prerequisite for investors to use carbon assets as a kind of flexible instrument for raising finance or hedging risk in capital markets. Such green financial instruments through Chinese overseas investments would provide feasible experiences in the platforms of BRI and RCEP for developing countries.