

CHAPTER 13

Climate Change, Trade Policy, and the WTO¹

ZHANG Jianping and XIE Zhiyu

Chinese Academy of International Trade and Economic Cooperation; Peking University

China aims to achieve 'peak carbon' by 2030 and carbon neutrality by 2060 through a variety of policies. The Chinese example illustrates the need for the World Trade Organization (WTO) to recognise and support the use of a range of measures to reduce carbon emissions and strengthen the governance of trade-climate policy. Developed and developing countries disagree on the equitable allocation of carbon emission reduction obligations and the legality of carbon border adjustment taxes. A prominent example is the European Union's (EU) planned introduction of a carbon border adjustment mechanism, which may result in discrimination against developing countries. From a trade-climate perspective, the WTO should conclude negotiations to liberalise trade in low-carbon and environmental products and launch discussions on alternative approaches to address climate issues.

INTRODUCTION

The achievement of sustainable development, including the 17 objectives defined in the global Sustainable Development Goals (SDGs), requires the gradual improvement of the global sustainable development governance system. Sustainable development is rich in connotation, and sustainable governance includes global economic governance, environmental governance, social governance, and other interrelated components. Global trade, investment and financial governance together constitute the three pillars of the global economic governance structure, reflected in the Bretton Woods system led by Western countries after the end of World War II – represented by the International Monetary Fund, the World Bank, and the General Agreement on Tariffs and Trade (GATT) (now the World Trade Organization (WTO)).

The WTO has played an important role in promoting the sustainable development of the global economy. Trade has been an effective driver of economic development. International trade expands production possibilities, allowing the specialisation and fragmentation of production through regional and global value chains, which in turn greatly improves

¹ Cite as: Zhang, J and Z Xie (2021), 'Climate Change, Trade Policy, and the WTO', in B Hoekman, X Tu, and D Wang (eds), *Rebooting Multilateral Trade Cooperation: Perspectives from China and Europe*, CEPR Press, London.

the production capacity of enterprises and the welfare of consumers. The WTO is the mainstay of global trade governance, supplemented by regional trade agreements. It provides a platform for the negotiation and implementation of international multilateral trade rules to maintain the openness and fairness of global trade. The rapid development of international trade calls for the upgrading and reform of the global trade governance system, serving a fairer and freer global trade environment.

The challenges facing the multilateral trading system have become increasingly severe, making WTO reform imperative. Since China joined the WTO, it has been an active participant and firm defender of the multilateral trading system. China supports the WTO to carry out necessary reforms to improve its ability to maintain and promote trade liberalisation (Tu 2021). In 2019, China submitted to the WTO the ‘Proposal Document of China on the Reform of the World Trade Organization’, which argued that WTO reforms should adhere to three basic principles:

1. To maintain the core values of non-discrimination and openness of the multilateral trading system.
2. To ensure the protection of developing members development interests.
3. To follow a consensus decision-making mechanism

The proposal highlights several key areas for WTO reform. The first is to resolve key and urgent issues that endanger the survival of the WTO, notably breaking the deadlock in the selection of Appellate Body members, tightening disciplines on the use of national security exception measures (strengthening requirements pertaining to notification and multilateral deliberation) and bolstering disciplines on unilateral measures that do not comply with WTO rules. A second area for action is to resolve the problem of unfair disciplines on agricultural support,² improving rules on trade remedies (measures to countervail the effects of subsidies and anti-dumping), completing negotiations on fishery subsidies, promoting the open and inclusive development of e-commerce negotiations, and promoting multilateral discussions on new topics. The proposal also notes the need to improve the operational efficiency of the WTO, including strengthening the implementation of member notification obligations, the importance of respecting the rights of developing country WTO members to enjoy special and differential treatment and adhering to the principle of fair competition in trade and investment.

Global trade governance is an indispensable part of the global sustainable development governance system. This Chapter reflects on one potential area for WTO reform: global governance of the use of trade measures as part of national programmes to address climate change. Liberalising trade in clean energy, low-carbon products, and other green products and technologies can support lower carbon emissions. Although the WTO has provisions

2 This has a climate dimension. See Haberli (2018).

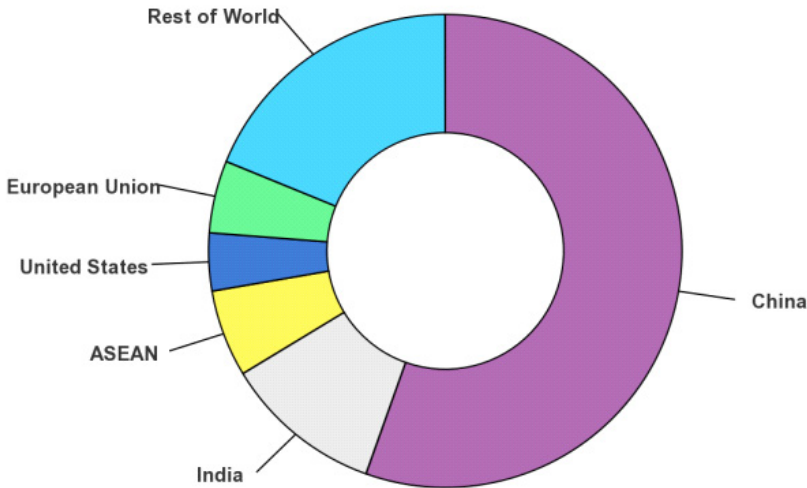
for exceptions and exemptions for the use of trade policy to achieve environmental goals, as discussed below, imposing climate-motivated trade barriers runs the risk of treating countries differently, violating the core nondiscrimination rules of the WTO.

Sections 1 and 2 discuss China's carbon reduction measures and related international climate-related engagement. Section 3 turns to carbon border taxes and the WTO, focusing in particular on the EU proposal to put in place a carbon border adjustment tax. Section 4 briefly discusses the Environmental Goods Agreement negotiations to liberalise trade in clean-energy and environmental products. Section 5 concludes with suggestions on a path forward at the WTO on climate change issues.

1. CHINA'S CARBON REDUCTION TARGETS AND MEASURES

The global climate change situation is becoming ever more perilous. The frequent occurrence of extreme weather events, the melting of glaciers, and the rising sea level threaten human survival. Most of the problem is caused by greenhouse gas emissions, that is, carbon emissions. China's carbon emissions are mainly caused by energy intensive industries. Following the reform and opening-up of China's economy, energy intensive industries have been a major driver of growth, generating a large number of jobs across a wide range of sectors.

However, the environmental pollution caused by energy-intensive industries is serious. The Chinese government is aware of the importance of carbon reduction and has the determination to implement Paris Agreement commitments and to significantly reduce carbon emissions. As a continuation of the theory of 'green water and green mountains are golden mountains and silver mountains' proposed by General Secretary Xi Jinping, China plans to achieve 'peak carbon' by 2030 and "carbon neutrality" by 2060. However, China is still in the developing stage, reflected in a certain gap in the degree of industrial development between China and high-income countries. China is the world's most populous country. With the further development of the country's industrialisation and rise in urbanisation, demand for fossil energy is still increasing. In 2020, China accounted for 56% of global coal consumption (Figure 1). In China's domestic primary energy consumption structure, coal consumption accounts for 60%. Therefore, China still has a long way to go to reduce carbon emissions.

FIGURE 1 SHARE OF GLOBAL COAL CONSUMPTION IN 2020

Sources: International Energy Agency at <https://www.iea.org/data-and-statistics/charts/share-of-coal-consumption-of-different-countries-and-regions-2020>.

China attaches great importance to the implementation of the ‘carbon neutral’ plan. As early as 2009, China formulated measures to reduce emissions in accordance with the Copenhagen Accord, and achieved a reduction in carbon emissions per unit of GDP by at least 40% by 2020. The proportion of non-fossil energy will increase to 15%, the forest stock will increase by 1.3 billion cubic meters, and the forest coverage will increase by 40 million hectares. In the 2021 Government Work Report, it is clearly stated that a specific implementation plan for ‘carbon peaking’ will be issued before the end of the year, and it has received positive responses from various Chinese ministries, commissions, and provinces.

China is also making efforts to upgrade and reform the industrial structure, and has clarified several major directions for future emission reductions. One axis for action is to adjust the energy structure and accelerate clean-up. This encompasses energy infrastructure construction and development, promotion of equivalent substitution of coal consumption, a focus on renewable energy production and energy storage, and gradually increasing policy support for new energy vehicles, photovoltaic and wind power generation, UHV³ and other industries. This lays a solid foundation for future energy reforms. Another policy focus is to promote industrial low-carbon transformation, starting from emission-intensive production sectors, strictly formulating energy consumption and environmental protection standards, and transforming, upgrading, merging, and reorganising high-energy-consumption and heavy-polluting industries

3 Ultra-high-voltage electricity transmission.

such as electricity, heating, steel, chemicals, and metallurgy. Optimising the allocation of resources through industry consolidation and eliminating outdated and excess capacity will reduce carbon emissions per unit of capacity.

Another measure is to establish a carbon emission trading system as soon as possible, promoting the development of the carbon trading market from pilot to popularisation, and supporting green finance, carbon sink trading, and the carbon sink capacity of the ecosystem. In parallel, ecological environmental governance nationwide will be strengthened, promoting national land greening activities within the country, vigorously restoring vegetation and accelerating the development of carbon capture, utilisation and storage technology, and related infrastructure.

China's carbon market construction and carbon trading system

Carbon emission trading ('carbon trading') is a market-oriented means to control the total amount of carbon emissions and promote low-carbon transformation of industries. The carbon emission trading market (referred to as 'carbon market') is to promote the implementation of the long-term goal of 'carbon neutrality'. The EU Emissions Trading System (ETS) is currently the world's largest and most widely covered carbon market and is a reference paradigm for the construction of carbon emission trading systems in various regions of the world. Other developed economies such as the United States, Canada, Japan, and Australia have also established relatively complete carbon emissions trading systems.

The Chinese government attaches great importance to low-carbon emission reduction and is actively exploring the construction of a carbon trading system. As an important way to deal with global climate change, China's exploration of the construction of a carbon market can be roughly divided into three stages, from joining a relatively mature international carbon trading system as a participant to conducting pilot projects for the construction of a domestic carbon market, and then steadily advancing the construction of a unified national carbon market.

Domestic carbon trading pilot projects include eight provinces and cities in Beijing, Shanghai, Tianjin, Chongqing, Hubei, Guangdong, Shenzhen, and Fujian, which mainly cover carbon emission-intensive industrial industries such as electricity, petrochemicals, and steel. As of March 2021, carbon trading encompassed nearly 3,000 key emission companies, with cumulative carbon emissions of 240 million tons and a cumulative transaction value of RMB 5.86 billion. After years of pilot work on carbon trading, the construction of a national carbon market has been accelerated. A national carbon emission trading system and registration system will be launched in Shanghai and Wuhan, with the electric power industry the first to be included. A total of 2225 companies obtained carbon allowances, and the first compliance cycle was launched in the national carbon market in January 2021. Following the completion and regular operation of the national carbon trading system, China's carbon market will become the world's largest.

Gaps remain between China's carbon market construction and those in developed economies (Schwartz 2016). Carbon trading is a means to control carbon emissions by introducing a market mechanism. The market oriented operation of carbon trading requires the mandatory binding force of relevant laws and regulations. Developed economies started to practice carbon market construction earlier, and their basic laws and regulations are relatively complete. For example, the EU's 'Greenhouse Gas Emission Permit Trading Directive',⁴ New Zealand's 'Climate Change: The Response Act' (2002), Australia's 'Clean Energy Future Act', and California's 'Global Warming Response Act' (2006) are all regional carbon markets under the guidance of public law. During the pilot period of the carbon market in China, the laws and regulations of the local governments in the pilot areas proved to be the main constraints. The local laws and regulations lacked mandatory and limited binding force. China has not yet promulgated the upper-level law on carbon emissions trading, and the legal attributes of carbon trading cannot be clearly defined at the national level. The 'Measures for the Administration of Carbon Emission Trading (Trial)' cannot explain the 'laws to be followed', and there is a gap between China and developed economies on the legal basis of carbon trading.

Constructing China's carbon market involves action on several fronts. First, improving the national carbon market laws and regulations. A national carbon market requires a unified national legislation, including more rapid introduction of laws and regulations related to carbon trading (e.g. defining the rights and responsibilities of carbon trading and clarifying the legal status of the carbon market) and accelerating the improvement of the 'Regulations on Carbon Emission Trading Management' to promote coordination and cooperation among provinces, cities, and other authorities to refine the design of rules for quota control, carbon emission verification, and enforcement.

Second, improve the national carbon trading mechanism and promote the scientific and reasonable operation of China's carbon market. On the one hand, combining the goals of 'carbon peak' and 'carbon neutrality' with Chinese economic development, this requires determining the total amount of national carbon allowances, reducing the total amount of allowances and the proportion of free allowances, optimising the allocation of allowances, and making carbon trading an increasingly important feature of controlling carbon emissions and promoting low-carbon transformation of enterprises. On the other hand, the pilot carbon trading situation made obvious a trend of 'hot market before the compliance period and deserted trading after the period' of carbon trading. It is expected that there will be insufficient carbon trading liquidity at the beginning of the establishment of the national carbon market. This suggests exploring innovative trading products, promoting the construction of the carbon financial market, and steadily incorporating more industries and trading entities to increase activity on the carbon market.

4 DIRECTIVE 2003/87/EC, establishing a scheme for greenhouse gas emission allowance trading within the community and amending Council Directive 96/61/EC.

Third, capacity building of carbon trading participants is needed to foster consensus for the long-term sustainable development of China's carbon market. The participation of carbon trading entities is an important support for the smooth and long-term operation of the national carbon market. The steady expansion of coverage is inevitable for the development of the national carbon market, which places higher requirements on the working capabilities of government departments such as the Ministry of Ecology and Environment, but more importantly, the ability of companies to participate in market transactions. According to the experience of carbon trading pilots, carbon trading in the carbon market is still dominated by compliance trading, which shows that the main body of enterprises have insufficient understanding of the carbon market. This calls for strengthened industry-tailored training and education on carbon market participation, as well as establishing a long-term education system related to carbon market construction and key high emission industries such as steel and cement.

Finally, stronger cooperation with developed economies to lay the foundation for the internationalisation of China's carbon markets. Global climate change is a common problem faced by people all over the world, and 'carbon neutrality' is the consensus of all countries worldwide. After the formation of the national carbon market, China is the world's largest carbon market. Following the establishment of the domestic institutional framework, China is bound to actively seek carbon emission reduction exchanges between regions and strengthen project cooperation between the Chinese carbon market and other carbon trading systems.⁵

2. CHINA'S CONTINUOUS EFFORTS ON TRADE-RELATED CLIMATE AND ENVIRONMENTAL ISSUES

As an important participant and leader in the construction of global ecological civilisation, China has made other efforts and contributions in terms of trade-related climate and environmental issues. One attempt has been to actively carry out international cooperation and exchanges and promote green trade through the 'Belt and Road' initiative. As the initiator of the 'One Belt One Road' initiative, China has experienced the environmental pollution problems brought by low-end downstream industries in the process of gradually integrating into the global value chain, and can provide countries along the route with experience and practice to achieve coordinated environmental and economic upgrades. (Zhou Yamin 2019). Since the 'Belt and Road' initiative was put forward, China has helped countries along the route improve their ability to respond to climate change through various forms of cooperation – including green infrastructure, green energy, green transportation, and green finance. In 2015, China issued the 'Vision and Actions for Promoting the Joint Construction of the Silk Road Economic Belt and the 21st Century Maritime Silk Road'. In terms of facility connectivity, China proposed to strengthen the

5 See Keohane, Petsonk and Hanafi (2017).

green and low-carbon infrastructure construction and operation management and make full use of it in the construction. Taking into account the impact of climate change, the document also pointed out that the concept of ecological civilisation should be emphasised in investment and trade, and cooperation in the ecological environment, biodiversity and climate change should be strengthened to jointly build a green silk road.

In 2017, China issued the ‘Guiding Opinions on Promoting the Construction of Green “One Belt and One Road”’ and the ‘One Belt and One Road’ Ecological Environmental Protection Cooperation Plan. The guidance points to the need to:

- Promote the construction of green infrastructure, increase ecological and environmental protection services and support for major infrastructure construction projects along the Belt and Road.
- Support the development of green trade by increasing the level of environmental protection and expanding the import and export of green products and services.
- Strengthen green supply chain management, environmental management of foreign investment, promoting international cooperation in green supply chains and the development of green financial services.
- Bolstering green guidelines for corporate behaviour and encouraging environmental services companies to explore markets along the Belt and Road and ‘go out’ in clusters.

China has also promoted the establishment of an environmental-related rule system in the negotiation of relevant international conventions, free trade agreement negotiations, and investment agreement negotiations. First, in response to global climate change, China has actively participated in international conventions such as the United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement, and signed joint declarations on climate change with the United States, France, Australia, the EU, and Japan. China has sought to earnestly fulfil the obligations stipulated in the conventions and declarations. Secondly, to facilitate the development of green trade, China has integrated environmental protection requirements into free trade agreements, and actively negotiated and implemented environmental and trade related agreements. These include the China-Korea FTA, China-Singapore FTA, China-Switzerland FTA, China-New Zealand FTA, The China-Iceland FTA, China-Chile FTA, and China-Georgia FTA, which all clearly stipulate environmental and trade related issues. Third, climate issues have also received increased attention during the investment agreement negotiations. For example, the China-Europe Comprehensive Agreement on Investment (CAI) has made relevant commitments on the environment and climate, including the effective implementation of the Paris Agreement.

Finally, China is strengthening the ecological and environmental protection of pilot free trade zones and promoting high quality economic development. In April 2021, the executive meeting of the Ministry of Ecology and Environment reviewed and approved in principle the ‘Guiding Opinions on Strengthening the Ecological Environment Protection of Free Trade Zones and Promoting High-quality Development’. The opinions aim to create a demonstration of synergistic promotion of high quality economic development and high-level protection of the ecological environment. The meeting also pointed out that it is necessary to fully implement the overall requirements for pollution reduction and carbon reduction, strengthen international cooperation, and actively explore new models of mutual support between the environment, trade, and investment.

3. CARBON TRADING, CARBON TAXES, AND THE WTO RULES

The WTO is not a global environmental protection organisation. Its capabilities are limited to ‘trade-related environmental policies’ (Baron and Garrett 2017, Santarius et al. 2004). In 2001, the Doha Ministerial Conference agreed to negotiations on three trade-environment issues:

1. The relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs) to which WTO members are a party.
2. Procedures for regular information exchange between MEA Secretariats and the relevant WTO committees, and the criteria for the granting of observer status.
3. The reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.

Under the WTO framework, discussions related to trade and climate change have never stopped. The main topics of the negotiations include the definition of environmental products and tariff concessions, border tax adjustments, carbon labels, intellectual property rights, and subsidies. Among these issues, border tax adjustment measures have always attracted the attention of WTO members. After the EU launched the carbon border adjustment mechanism (CBAM), the levy of carbon border adjustment taxes has once again triggered controversy.⁶ The focus of the debate is whether carbon border adjustment conflicts with WTO rules. Another area of focus is to support trade in environmentally friendly products and services by eliminating or reducing barriers to trade in such products.

6 See for example RECAP (2021).

China produces for the world, should consuming countries pay for carbon emissions?

On March 10, 2021, the European Parliament passed a proposal on the CBAM, which means that the EU is getting closer to implementing carbon tariff policies. Such policies are also being considered by other developed countries. In the United States, according to the agenda issued by the Office of the United States Trade Representative, the Biden administration is considering imposing a ‘carbon border tax’ or ‘border adjustment tax’ aimed at increasing import tariffs on products that the United States considers to be responsible for climate change. At the same time, the British Prime Minister Boris Johnson proposed to use his role as the chairperson of the Group of Seven to promote the coordinated collection of carbon border taxes among member states.

The purported purpose of such proposals is to limit ‘carbon leakage’, but this will be at the cost of developing countries that are at the stage of energy intensive industrial development and are seeking to increase their share of global industrial and manufacturing production. On the one hand, developed countries want to enjoy the benefits of cheap production costs in developing countries, which may have been associated with relocation of high-polluting, high-energy-consuming industrial manufacturing companies to developing countries. A side effect is to reduce their own environmental pollution and improve their own environment and climate without improving global emissions. Measures to prevent such ‘carbon leakage’ require developing countries to switch production methods at a high cost. This is typical vested interest thinking.

China has always actively supported global carbon reduction and emission control and has always been in a leading position concerning global climate governance. It has also established an institutional framework for carbon trading at home. China has made great efforts in environmental and climate governance. Achieving the long-term goal of ‘carbon neutrality’ implies continuing to abandon high-energy-consuming industries that have generated huge economic benefits since the reform and opening-up of the economy starting in the late 1970s. This clearly reflects China’s determination to contribute to climate governance. However, China opposes the establishment of trade barriers against developing countries under the guise of climate governance, because this is a unilateral measure to safeguard the interests of developed countries, at the expense of developing countries. Developed countries often have the highest per capita energy consumption in the world. Many final consumer goods are manufactured using energy consumed in developing countries and then exported to developed countries. The actual energy consumption occurs in developed countries. Therefore, a ‘carbon border tax’ is an unreasonable type of trade barrier. Developing countries such as China should not pay for global carbon emissions, but the developed countries in the EU should bear the main cost of carbon emissions.

China, India, and other developing countries are opposed to carbon tariffs, because the collection of carbon tariffs may seriously affect the import and export trade of developing countries. The export manufacturing industries of developing countries are mostly at the middle and low end of the international industrial chain, which consume a lot of energy and emit high carbon emissions. The implementation of carbon tariffs may put a lot of pressure on many export companies in developing countries.

Thus, generally speaking, the major developed economies are supportive of carbon tariffs, while the developing economies are more opposed. From the perspective of developing countries, the global warming problem is caused more by the original accumulation process of developed countries. In the past century of uncontrolled emissions, about 80% of greenhouse gases have been produced by developed countries' national emissions. Nowadays, the economic development of developing countries is going through the heavy industrialisation stage that developed countries have gone through, which will inevitably increase carbon emissions. Therefore, the implementation of carbon tariffs is obviously unfair to developing countries.

In general, Chinese experts, environmental policy researchers, or government officials have not had much discussion on the subject of a CBAM. The Chinese government has not yet formally discussed this issue with the EU. Some scholars, e.g., Zhang and Gong (2020), have pointed out that the EU Green Agreement, the introduction of ETS in China, and how the EU's Nationally Determined Contributions (NDCs) will be adjusted, and other more pressing and broader climate action issues that require discussion by representatives of China and the EU. The main reason why the EU CBAM has not become a topic of discussion is that other matters have taken precedence in bilateral discussions and that the EU has not yet announced the specific details of how the mechanism will be implemented.

From an economic point of view, most stakeholders in China regard EU CBAM as a tax on exported goods, which will always be considered negative. If the EU CBAM only applies to selected products, this view may even be strengthened, because the EU seems to be choosing industries that are less competitive. From a legal point of view, there are few precedents related to a CBAM. If China opposes the EU's CBAM measure, not only because of its potential impact on exports, but also because if the EU does not fully and actively negotiate with other stakeholders, the measure will be a unilateral measure.

The CBAM aims to protect European industries from imports of cheap carbon-intensive goods from abroad. Its main goal is to restore fair competition conditions with EU manufacturers and prevent 'carbon leakage' in EU industries. This has resulted in factories being moved to countries that do not incur carbon costs for production. China has recently stated that more discussions are needed before implementing the mechanism. Moreover, according to a survey from Asian policymakers, Asian countries – including China – regard the EU carbon border tax as a form of protectionism.

China's steel production accounts for half of the world's total output, so it is easily affected by CBAM, and CBAM may include this commodity in the initial range. As early as 2019, the Chinese government expressed concern about the carbon border tax, saying it would undermine the global fight against climate change. However, according to the China Dialogue,⁷ people's reactions at home are more complicated, because some companies produce very small carbon footprints. These companies can use CBAM as an opportunity to engage in business opportunities in Europe. However, other measures must be adapted quickly and can be helped by the government's implementation of emissions trading for commodities covered by CBAM.

WTO rules and carbon trading tools

To analyse the compliance of carbon trading tools with WTO rules, it is first necessary to determine the nature of carbon trading tools. The EU has claimed that the design of the CBAM mechanism will be compatible with the WTO. Whether it is compatible or not will depend on the final design of the CBAM mechanism, as this will determine whether it is a tariff, a domestic tax or charge, or another type of measure. From the perspective of the form and content of the proposed CBAM, it appears it does not have the relevant form and connotation of a tariff, and is more appropriately characterised as a domestic tax or domestic charge.

The nature of the mechanism will determine the applicable provisions under the WTO legal framework. If it is defined as a tariff, then Article 1 of the GATT (MFN) shall apply, and if it is defined as a domestic tax or fee, Article 3 of the GATT (national treatment) shall apply. The WTO national treatment rule requires all members to treat domestic and imported products equally. According to this principle, an EU carbon tax on imported products cannot exceed the domestic carbon tax paid by its domestic enterprises for carbon emissions. However, due to the large differences between the EU and other members in carbon emission accounting systems, and significant differences in the carbon pricing mechanism and price level across WTO members, the operation of a CBAM in practice may violate the national treatment principle. Discrimination may also arise if the EU completely or partially exempts trading partners that have the same or similar taxes in their carbon trading system. Whether a country imposes a carbon border tax on imported goods or a compulsory carbon emissions trading requirement (a proportional purchase of carbon allowances), the specific mechanism and criteria used to determine its application can easily give rise to discrimination in practice and become a tool for implementing trade protection on the grounds of climate change.

The EU proposal to impose a CBAM has caused widespread controversy. One aspect of the dispute is the legitimacy of the CBAM under WTO rules – whether the mechanism violates the principle of non-discrimination under the WTO framework. The EU claims

⁷ <https://chinadialogue.net/en/>.

that if some countries that trade with the EU cannot comply with carbon emission regulations, the EU will impose carbon tariffs on imports from these countries. Many countries believe that the EU is using this climate agenda to set up new trade barriers. Many developing countries are in the initial stage of industrial development. Industrial production consumes high energy and emits high emissions. In the future, when importing and exporting with the EU, it will inevitably be affected by the EU's CBAM, this EU move may trigger a new round of trade wars.

Whether CBAM complies with the exception provisions in the WTO – GATT Article XX(b) and (g) – has aroused extensive discussion. Article XX(b) requires measures to meet the two requirements of 'protecting the life or health of humans, animals, and plants' and 'necessary'. There is no doubt that the control of climate change and carbon emissions is in the common interest of protecting the life and health of all mankind. GATT Article XX(g) requires that measures should protect available natural resources and be implemented together with equivalent restrictions on domestic production. If CBAM measures can ensure that carbon taxes inside and outside the EU are implemented in accordance with EU law, it is still very likely to be deemed as compliant with the Article XX(g) exception principle. Those who deny this claim believe that, according to WTO dispute settlement cases and practices, the 'necessary' in Article XX(b) should be interpreted as having the smallest trade restriction effect under the corresponding circumstances. However, CBAM does not meet this requirement. The trade restriction effect of carbon tariffs is significant. Compared with the EU's current measures to encourage emission reduction, tariffs obviously do not meet the minimum trade restriction effect.⁸

4. China's contribution to climate trade policy at the WTO

In 2014, 14 WTO member states announced in Geneva the launch of the 'Environmental Products Agreement (EGA)' negotiation based on the APEC environmental product list. The purpose is to achieve free trade and investment in environmental products by eliminating tariff barriers on environmental products to create trade Convenience, environmental benefit and development benefit the 'win-win situation of the three'. The 2016 G20 Leaders' Summit was held in Hangzhou, China. Article 27 of the Summit Communiqué clearly stated that 'Participants in the negotiations of the G20 Environmental Products Agreement welcome the "landing zone" negotiated in the WTO Environmental Products Agreement.' In December of the same year, the WTO Ministerial Meeting of the 'Environmental Products Agreement' was held in Geneva, and ultimately failed to reach consensus on issues such as the list of products covered by the agreement. During the negotiation process, China made great efforts to break the deadlock, including submitting a list of products that showed flexibility and tried to address the core concerns of all parties.

⁸ Emerson and Moritsch (2021) discuss how to make carbon border taxes WTO compliant.

In the current mutual supportive negotiations on open trade with the environment, WTO members are working hard to eliminate trade barriers in goods and services that are conducive to the environment. Promoting the convenient circulation of environmentally friendly products and services on a global scale can help improve energy efficiency, reduce greenhouse gas emissions, and have a positive impact on air quality, water, soil, and natural resource protection. The successful outcome of negotiations on environmental goods and services will bring three wins to WTO members: a win-win situation for the environment, a win-win situation for trade, and a win-win situation for development.

The list of environmental products has always been the core issue in the negotiation of the 'Environmental Products Agreement'. It is difficult for countries to reach a consensus on the list due to significant differences in interests. As one of the initiators of the negotiation of the Environmental Products Agreement, China has always participated in various consultations in a positive and constructive manner, is one of the active advocates of the negotiations, and has made important contributions to the progress of the negotiations. Annex C of the APEC Leaders' Declaration adopted at the 20th APEC meeting in September 2012 published a list of 54 environmental products with low energy consumption, low carbon, and green products. 54% of the products in the list were proposed by China. The list of environmental products proposed by China not only considers its own development stage, but also considers the interests of developing countries, how environmental products can be used by developing countries, and the prevention of green barriers. In June 2014, based on actual conditions and international experience, and fully considering the interests of members of developing countries and least developed countries, China put forward the 'common list' and 'development list' at the special meeting of the WTO Trade and Environment Committee. The 'Layer List' and 'Development List' give developing countries and least developed countries (LDCs) the opportunity to enjoy special and differential treatment tariffs (Zhang 2014), in order to bridge the differences between developed and developing countries as much as possible, and to seek space for win-win cooperation .

CONCLUSION

We end with three suggestions:

1. The WTO should encourage member countries to build carbon markets.

Emissions trading systems (ETSs) are one of the main tools for pricing greenhouse gas emissions. For the emissions trading mechanism, governments of various countries have set a cap on total emissions. This cap will continue to tighten over time. Allocators must submit emission caps for each ton of greenhouse gases and allow participants to communicate with each other. Exchange these emission units. In theory, ETS should promote cost-effective emission reductions, because the emission unit is a scarce

commodity and has an opportunity cost. Therefore, entities with relatively low emission reduction costs will reduce emissions to a greater extent and contribute to reducing emissions. Entities with relatively high costs sell residual subsidies.

As countries seek cost-effective emission reduction solutions, the carbon market is expected to continue to play a key role in emission reduction efforts. In the past few years, 40 countries and more than 20 sub-national jurisdictions have issued carbon pricing plans, covering 13% of global greenhouse gas emissions. When considering the current plan, this proportion has risen to 25%. Emerging and developing economies are increasingly participating in this development, especially through bilateral cooperation or initiatives, such as the World Bank's Partnership for Market Readiness,⁹ which helps countries pilot projects. So far, 56 jurisdictions have used ETS to price carbon. These 56 jurisdictions account for 40% of global GDP and cover 9% of global greenhouse gas emissions. With the formulation, planning or consideration of several new plans, the share of emissions covered by ETSs alone will rise to 13%, and the share of GDP will rise to 49% (ICAP 2016). Most notably, China is preparing to launch a national carbon emissions trading mechanism in 2017, which will surpass the EU carbon emissions trading mechanism and become the world's largest carbon market, which will have an important impact on the development of the global carbon market.

2) The climate problem resolution tool must not conflict with WTO principles.

Up to now, international environmental law and trade law have not conflicted, but there may be conflicts between multilateral environmental agreements and WTO regulations, such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. Except from the transfer of emissions between governments, no further measures are authorised to achieve the goal of reducing greenhouse gas emissions. However, for the 'United Nations Framework Convention on Climate Change' to fulfil their commitments, it is clear that a series of measures must be taken at the national level. In the case of adopting these climate measures, there may be conflicts with WTO laws.

No matter what form it takes, the EU CBAM must comply with WTO rules. Russia has complained that the EU's border adjustment tax violates WTO rules, and that the EU is using the climate agenda to create new trade barriers. Whether CBAM complies with WTO principles will depend on its specific provisions. For example, imposing tariffs will be difficult to pass the WTO because it will cover importers who have no relationship with the EU itself. If a CBAM must be introduced to solve the climate problem facing the EU, it must meet WTO principles. At the same time, some countries have used controversial industrial policies to create short-term investment returns in the field of low-carbon energy. If these policies conflict with WTO regulations, they may cause adverse long-term

⁹ <https://www.thepmr.org/>.

sectoral impacts. If climate problem resolution tools conflict with WTO principles, this may affect the normal operations of the WTO in the future and impact on the climate in the future.

Regarding the unfair treatment of developed and developing countries in protecting the environment and mitigating climate change, it is expected that the WTO will hold discussions on the ability to support weak and poor countries to benefit from the rapidly developing green economy. The weaker and poorer the country is, the smaller the impact on climate change will be, but the environmental costs it bears are disproportionate. Therefore, the WTO should launch environmental-related trade remedies related issues to help developing countries reduce the pressure to participate in the protection of the global environment and delay climate change. This should also encompass environmental-related intellectual property rights. The Doha Declaration instructed the WTO Trade and Environment Committee to conduct research on environmental and intellectual property issues, but there was no progress in negotiations. The WTO Agreement on Trade-Related Intellectual Property Rights has too many general provisions on technology transfer and lacks substantive restrictions on technology transfer. Therefore, how to revise existing agreements to make them more applicable to climate issues should be the focus of future WTO negotiations.

3) The use of low-carbon technology transfer mechanisms is a more constructive approach.

Technology development and transfer are not only the core conditions for mitigating and resisting climate change, but also the core conditions for broader sustainable development and green growth. Academia and policy circles generally believe that if low-carbon and climate-resilient technologies are prioritised on a global scale, and technology development and transfer policies are carefully selected, developing countries will be more capable of realising their economies, and social development goals, in a more climate-responsive manner. The experience of a series of developing countries and newly industrialised countries also shows that their own technological capabilities, such as institutional capabilities and the knowledge to innovate on transferred technologies, play an important role in promoting technological change and supporting development. Due to the gap between developing countries and developed countries in terms of carbon emission reduction technologies, if developed countries can transfer low-carbon technologies to developing countries, it will be conducive to adapting to and mitigating global climate change.

Contrary to what might be expected, the absorption of low-carbon technologies in developing countries is less constrained by cost and more constrained by the domestic environment (Lewis 2015). The role of policy in inducing technological change – the case of climate change and the electricity sector. Evidence from China shows that domestic policies play the most critical role in promoting the implementation of climate technology in any country. From an enterprise perspective, low-carbon technological innovation

has high sunk costs, high R&D risks, and strong spillovers. Enterprises have insufficient motivation and ability to carry out low-carbon technological innovation and application and are often inefficient or even unsustainable.

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ABOUT THE AUTHORS

ZHANG Jianping is Director General, Center for Regional Economic Cooperation and Director General, Institute of West Asia and Africa at the Chinese Academy of International Trade and Economic Cooperation, MOFCOM.

XIE Zhiyu is an Undergraduate Student majoring in International Studies and International Public Policy at Peking University. He has expertise in international economics and international trade, as well as experience in international institutions.