Relationship between International Trade and Environmental Protection

A relação entre o Comércio Internacional e a Proteção Ambiental

Jing Yidan[1]

ABSTRACT

The acceleration of the process of economic globalization has led to the rapid development of international trade, and the development of international trade has also brought about a crisis for the world environment. In recent years, environmental problems arising from international trade have become more and more frequent, aggravating international trade frictions and disputes. Based on this, the article explores the complex relationship between international trade and environmental protection, analyzes how to coordinate the two in order to promote sustainable development in the context of economic globalization, reveals the impact of environmental policies on enterprise costs and market access by studying the problem of externality, resource plundering and green trade barriers, and then puts forward China's future policy proposals to deal with green trade barriers and environmental protection.

Keywords: Green trade barriers; environmental protection; international trade; WTO

RESUMO

A aceleração do processo de globalização econômica levou ao rápido desenvolvimento do comércio internacional, e o desenvolvimento do comércio internacional também trouxe uma crise para o meio ambiente mundial. Nos últimos anos, há cada vez mais problemas ambientais decorrentes do comércio internacional, o que agrava os atritos e as disputas comerciais internacionais. Com base nisso, o artigo explora a complexa relação entre o comércio internacional e a proteção ambiental, analisa como coordenar os dois para promover o desenvolvimento sustentável no contexto da globalização econômica, revela o impacto das políticas ambientais sobre os custos das empresas e o acesso ao mercado, examinando o problema das externalidades, a pilhagem de recursos e as barreiras ao comércio verde e, em seguida, apresenta as futuras propostas de políticas da China para lidar com as barreiras ao comércio verde e a proteção ambiental.

Palavras-chave: Barreiras ao comércio verde; proteção ambiental; comércio internacional; OMC

[1] Juris Master in the School of Law - Lanzhou University (Lanzhou, China). E-mail: 1261289638@qq.com

SUMMARY: 1. IMPACT OF INTERNATIONAL TRADE ON ENVIRONMENTAL PROTECTION;1.1. INCREASED ENVIRONMENTAL POLLUTION;1.2. TRANSFER OF POLLUTING INDUSTRIES AND HAZARDOUS WASTE TO DEVELOPING COUNTRIES;1.3. INTERNATIONAL TRADE INDIRECTLY LEADS TO THE PLUNDERING OF RESOURCES BY DEVELOPED COUNTRIES FROM LESS DEVELOPED COUNTRIES AND REGIONS.;2. IMPACT OF ENVIRONMENTAL PROTECTION ON INTERNATIONAL TRADE;2.1. PROMOTING LOW-CARBON PRODUCTS;2.2. INCREASED INDIRECT PRODUCT COSTS;2.3. AFFECTING MARKET ACCESS FOR PRODUCTS;3. ENVIRONMENTAL PROTECTION IN THE FRAMEWORK OF ECONOMIC GLOBALIZATION AND WTO;3.1. LEGAL FRAMEWORK AND PRACTICE OF THE WTO ENVIRONMENTAL PROTECTION MECHANISM;3.2. PRACTICAL DILEMMAS AND CRITICAL REFLECTIONS ON ENVIRONMENTAL EXCEPTIONS;3.3. FUTURE PERSPECTIVES: RECONSTRUCTING THE TRADE AND ENVIRONMENT BALANCE;3.4. STRATEGIES FOR DEVELOPING COUNTRIES TO MAINTAIN ENVIRONMENTAL SOVEREIGNTY;4. CHINA'S ENVIRONMENTAL PROTECTION AND DEVELOPMENT STRATEGIES TO COPE WITH GREEN TRADE BARRIERS;4.1. UPGRADING TECHNOLOGY: DRIVING THE GREEN TRANSITION THROUGH INNOVATION;4.2. POLICIES AND REGULATIONS SUPPORT: BUILDING AN INSTITUTIONAL GUARANTEE SYSTEM;4.3. DEEPENING INTERNATIONAL COOPERATION: BUILDING A GREEN GOVERNANCE NETWORK;5. CONCLUDING REMARKS

1. IMPACT OF INTERNATIONAL TRADE ON ENVIRONMENTAL PROTECTION

1.1. INCREASED ENVIRONMENTAL POLLUTION

Production and consumption can lead to externality problems. The concept of externality was first introduced in 1920 by Picou, an economic departmentalist, who suggested in his research that because the costs of harmful externality goods are often not borne by individuals, the responsibility and consequences of autonomous behavior are outside of themselves, and therefore do not result in direct losses, and the problem of environmental pollution ensues.

The theory of "tragedy of the commons" can effectively explain the phenomenon of environmental pollution, especially in the context of international trade. For example, haze weather has become a major problem in China, and air pollution is a serious threat to human health. Although the environmental protection department has repeatedly taken production restriction measures to alleviate the pollution situation, some enterprises have resumed production and discharged pollutants privately in order to pursue profits, resulting in more and more serious environmental pollution problems. Such behavior highlights the common problem of some enterprises ignoring the big picture and focusing only on their own interests, which ultimately leads to the deterioration of the public

environment. In recent years, the American biologist Harding's theory of the "tragedy of the commons" has been introduced into the field of international law and relations, providing a powerful cognitive perspective for understanding the new problems of the international community, that is, how to strike a reasonable balance between the destruction of the environment and the depletion of resources in the process of productivity development and industrialization. All countries have the responsibility to bear and resolve these coexisting contradictions and should join hands to make progress. However, there are still some countries that insist on unilateralist thinking and, in a state of international anarchy, do not participate in or cooperate with global governance, thus falling into the dilemma of unilateral versus multilateral governance.

1.2. TRANSFER OF POLLUTING INDUSTRIES AND HAZARDOUS WASTE TO DEVELOPING COUNTRIES

At present, environmental regulations and management standards related to hazardous waste disposal in developed countries are very strict. The United States Environmental Protection Agency (EPA), for example, is required to follow high standards in waste treatment in order to ensure that environmental protection measures are in place. Due to strict regulations and standards, developed countries need to invest a lot of resources in the treatment of hazardous waste, resulting in relatively high pollution control costs. Compared with developed countries, the environmental protection laws and regulations in some developing countries are relatively unsound. These countries have lower environmental standards and are unable to respond effectively to the challenge of transferring polluting industries and hazardous waste from developed countries(Dai Fuqiang and Zhang Xia, 2021).

Based on the Copeland-Taylor model, Ma Xuejiao et al. analysed the moderating effect of environmental regulation on the environmental effects of FDI, and pointed out that developing countries may become ‘pollution havens’ due to the low intensity of environmental regulation (Ma Xuejiao, Liu Tong and Sun Xiaohua, 2023) .The study verifies that command-and-control environmental regulation will amplify the ‘pollution halo’ effect of FDI and the phenomenon of pollution transfer. Some transnational corporations (TNCs) choose to invest in countries with lower environmental regulatory standards globally, in order to reduce environmental costs through ‘Race to the Bottom’. For example, highly polluting industries (such as thermal power and chemicals) in

developed countries have been transferred to developing countries on a large scale since the 1970s, with Japan and the United States transferring 60 per cent and 40 per cent of their highly polluting industries, respectively[2].

1.3. INTERNATIONAL TRADE INDIRECTLY LEADS TO THE PLUNDERING OF RESOURCES BY DEVELOPED COUNTRIES FROM LESS DEVELOPED COUNTRIES AND REGIONS.

The unequal exchange mechanisms in the international trading system often make the less developed countries and regions victims of resource plundering. By virtue of their capital and technological advantages, developed countries systematically seized the natural resources of the countries of the southern hemisphere through transnational corporations and international trade chains: The Democratic Republic of the Congo is the world's largest producer of cobalt, accounting for more than 70 per cent of global supply, and mining rights are largely controlled by multinationals such as Glencore and CMOC. However, local artisanal mining rights are extremely cheap to acquire, with miners earning around $50 per week (less than $2 per day) for working in hazardous conditions, and multinationals further depressing the cost of the rights by acquiring ore at low prices through middlemen. The Congo Basin is the second largest tropical rainforest in the world, but cobalt mining and agricultural expansion have led to ecological damage in the mining areas, with ecological problems such as soil contamination and depletion of water sources[3].

Even more insidious are the neocolonial trade provisions of the European Union's 'Green Deal', which requires raw material sources to implement stringent environmental standards but refuses to pay a premium for them, essentially shifting the cost of ecological protection to resource-exporting countries. The EU transfers environmental costs to developing countries through imports of agricultural products (e.g. Brazilian soya beans, Indonesian palm oil). For example, the EU relies on imports for 20 per cent of the agricultural products it consumes and 60 per cent of its meat, the production of which often leads to deforestation in the exporting countries (e.g. 75 per cent of deforestation in Brazil and Indonesia is linked to EU demand). The European Union does not set the same stringent environmental standards for imported products as it does for domestic ones, and its

[2] In https://finance.sina.com.cn/review/hgds/20130805/064716342870.shtml Last access: April 26, 2025.
[3] In https://inabr.com/news/11740 Last access: April 26, 2025.

carbon accounting is based only on the 'production side', ignoring the responsibility of the consumption side, resulting in the ecological costs being borne by resource-exporting countries.[4]

2. IMPACT OF ENVIRONMENTAL PROTECTION ON INTERNATIONAL TRADE

Since China's accession to the World Trade Organization (WTO) in 2001, foreign direct investment (FDI) has risen year by year, boosting China's economic development, promoting industrialization and urbanization, and improving employment rates and people's living standards. Rapid economic development and industrialization have led to the consumption of large amounts of natural resources. Some scholars believe that free trade between countries will lead to the continuous transfer of highly polluting industries from developed countries to developing countries, making developing countries become "pollution shelters" for foreign investment from developed countries. As Huang Xiaoyong et al. found, strict environmental regulations will be conducive to the improvement of China's green technological innovation level(Huang Xiaoyong and Liu Bin Bin, 2020). Therefore, "green, development and innovation" has become the future direction of China's sustainable economic development.

2.1. PROMOTING LOW-CARBON PRODUCTS

The Porter Hypothesis suggests that strict environmental standards can force firms to innovate and upgrade their technologies. For example, Europe and the United States on China's photovoltaic industry frequently launched a 'double reverse' investigation, such as the European Union in 2024 to start the Foreign Subsidies Act to investigate the Romanian solar energy project in China consortium, the United States plans to impose anti-dumping/countervailing duties. These measures forced Chinese PV enterprises to accelerate technology iteration, such as from polycrystalline silicon to monocrystalline silicon technology transition, eliminating backward production capacity. Enterprises such as Ainengju have been forced to shut down production due to outdated technology (e.g. BSF cells), while headline companies have achieved breakout through high-efficiency cell technologies such as HJT and TOPCon.[5] Data show that the price of PV modules

[4] In https://www.xianjichina.com/news/details_224634.html Last access: April 26, 2025.
[5] In https://www.21jingji.com/article/20240409/32b19f7210b330d4f020d347ef639dc2.html Last access: April 26, 2025.

in China fell from US$2.5/W to US$0.15/W in 2010-2023, a drop of 94 per cent. Polysilicon as the core raw material, its cost decline is consistent with this trend. Technological advances (such as electronic grade polysilicon purity up to '11 9') and production process optimisation is the core driving force for cost reduction.[6] Another example is the EU's Carbon Border Adjustment Mechanism (CBAM), which requires imports to pay a carbon price differential, forcing exporting countries to develop low-carbon technologies. If China's steel exports to the EU do not use low-carbon processes (e.g. hydrogen steelmaking, carbon capture technology), its carbon costs will increase by about 6% (RMB 378/tonne), directly undermining the price advantage. Similar pressures are driving Chinese steel companies to accelerate the layout of green technology research and development[7].

2.2. INCREASED INDIRECT PRODUCT COSTS

Environmental costs refer to the costs incurred by various measures taken by enterprises to minimize the negative impact on the environment, including expenditures on pollution control, resource conservation and environmental protection. The increase in environmental costs will directly affect the production costs of products, which in turn affects product prices. At present, the impact of environmental costs on product prices is mainly reflected in the following aspects: First, the increase in production costs. Enterprises to reduce pollution emissions, the acquisition of environmental protection facilities, environmental management and other costs required will directly increase the production costs of products, these additional environmental costs will be transferred to the product price, resulting in an increase in the selling price of the product. Second, the increase in resource costs. Environmental protection requires saving resources, reducing energy consumption, etc., which makes enterprises increase the cost of purchasing raw materials, energy, etc., thus affecting product prices. Third, taxes and fines. Some countries and regions impose high taxes or fines on environmental pollution, enterprises to avoid environmental violations and have to pay these costs, but also increase the production cost of the product, and ultimately reflected in the product price. Fourth, brand value enhancement. Some enterprises take the initiative to take environmental responsibility in order to reduce environmental pollution and enhance the image of environmental

[6] In https://mp.ofweek.com/power/a756714892547 Last access: April 26, 2025.
[7] In https://finance.sina.com.cn/stock/hkstock/ggscyd/2024-07-03/doc-incavyqf6731950.shtml Last access: April 26, 2025.

protection, and this environmentally friendly image can enhance the brand value of the product, thus supporting the increase in product prices(Chen Lin and Chen Meilian, 2021). Therefore, managers need to fully consider the impact of environmental costs when setting product prices, and can reduce environmental costs by improving production efficiency, increasing technological innovation, optimizing the supply chain, etc., so as to reduce the impact on product prices.

This is also true. For example, Chinese steel companies need to bear high costs to implement ultra-low emission retrofits, and as of April 2025, the environmental operating costs of tonnes of steel for those that have completed the retrofits were about $218.43, leading to a significant increase in steel production costs. For example, rebar prices rose 12.99 per cent in 30 days under the dual-control policy on energy consumption. The CISA release pointed out that the difference in environmental protection costs has exacerbated unfair competition in the industry, and some enterprises are facing greater market pressure due to lagging transformation[8].

2.3. AFFECTING MARKET ACCESS FOR PRODUCTS

Environmental regulations and standards set by Governments and international organizations play an important role in market access for products. These environmental regulations and standards are increasingly becoming the "invisible threshold" of international trade, reshaping global market access rules. For example, The EU's New Batteries Act requires power and industrial batteries to declare their full lifecycle carbon footprints from July 2024, and by 2027 they will be required to meet carbon footprint limits. If Chinese companies are unable to provide complete carbon data, there is a risk that they will not be able to export to the EU after 2026.1 For example, Chinese power battery companies need to track carbon emissions from mining to recycling, but at present, they can only trace production batches and supplier information, which makes it difficult to meet the EU's requirements. The carbon emissions covered by the EU's battery bill account for more than 60 per cent of an electric vehicle's entire life cycle, directly affecting the competitiveness of China's exports to Europe[9].

[8] In https://www.newsyuelu.com/post/214295.html Last access: April 26, 2025.
[9] In https://news.sina.com.cn/o/2024-01-17/doc-inacuwnn3124169.shtml Last access: April 26, 2025.

3. ENVIRONMENTAL PROTECTION IN THE FRAMEWORK OF ECONOMIC GLOBALIZATION AND WTO

In the wave of globalisation, the cross-border expansion of economic activities is reshaping the world's economic landscape at an unprecedented rate, while posing serious challenges to the environment. The World Trade Organisation (WTO), as the central setter of global trade rules, has made the environmental protection mechanism under its framework a key link in coordinating the relationship between international trade and sustainable development.The WTO is committed to promoting free trade while recognising the importance of environmental protection. However, some developed countries tend to set higher environmental protection standards, which may pose an obstacle to developing countries' exports. Sun Xiujuan pointed out that the different economic development conditions of individual countries have led to the non-adoption of internationally harmonised production standards, which in turn has led to the formation of ‘green barriers’(Sun Xiujuan,2023). In recent years, the United States has put forward increasingly demanding environmental standards, which has led to a steady strengthening of international environmental trade barriers. China needs to comply with the strict environmental standards of exporting countries if it wants to stabilise trade transactions in the international market.

Against this background, the conflict between trade rules under the WTO framework and environmental protection has become increasingly prominent. On the one hand, the principle of free trade, which emphasizes market openness and non-discriminatory treatment, may weaken the ability of countries to implement strict environmental standards; on the other hand, the urgency of environmental protection requires countries to take more active trade restrictive measures to curb ecological damage. This inherent tension is particularly evident in the application of the environmental exception to article XX of GATT.

3.1. LEGAL FRAMEWORK AND PRACTICE OF THE WTO ENVIRONMENTAL PROTECTION MECHANISM

The WTO system's response to environmental protection is centered on the exception clause in Article XX of the GATT. This provision allows members to deviate from the general obligations of the WTO in order to protect the environment under specific conditions, including: measures to

protect the life and health of human beings, animals and plants (paragraph b): this provision has been frequently invoked in the areas of food safety and public health. For example, in the United States Sea Shrimp/Turtle case[10], the United States imposed an import ban on the basis of protecting sea turtles, and the Appellate Body, while recognizing the value of sea turtles as an "exhaustible natural resource", pointed out that the United States' failure to seek international cooperation constituted unreasonable discrimination. This case revealed the challenge of balancing the principles of "necessity" and "non-discrimination" in the application of environmental exceptions; Measures to Protect Exhaustible Natural Resources (paragraph g): Such measures need to be synergized with domestic policies to restrict production and consumption. In the Canadian asbestos case, where France banned the import of asbestos on the basis of health risks, the panel found that the measure met the requirement of "necessity", as there was no alternative that would effectively reduce the health threat. The decision emphasized the central role of scientific evidence in environmental policymaking; other relevant agreements: the Agreement on Technical Barriers to Trade (TBT) requires technical standards to be applied in a non-discriminatory manner to avoid constituting barriers to trade; and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) permits members to set quarantine standards for the protection of the health of human beings, animal and plant life, provided that they are based on international standards or scientific evidence.

3.2. PRACTICAL DILEMMAS AND CRITICAL REFLECTIONS ON ENVIRONMENTAL EXCEPTIONS

Although the WTO framework provides some legal space for environmental protection, its application is still subject to significant controversy: ambiguity in legal interpretation. The definition of "least trade-restrictive measure" is subjective, and the "necessity" test lacks clear criteria. For example, in the Thai Cigarettes case[11], where Thailand banned the importation of foreign cigarettes on the grounds of tobacco control, the panel found that the measure was not "necessary" because of the existence of alternative regulatory options (e.g. taxes, health warnings). Extraterritoriality disputes are controversial, e.g., can environmental exceptions be applied to protect other countries or the global environment? In the Mexican tuna case, the panel explicitly rejected the legitimacy of the

[10] In https://www.faxin.cn/lib/Flwx/FlqkContent.aspx?gid=F92638 Last access: April 26, 2025.
[11] In https://law.cufe.edu.cn/info/1217/44075.html Last access: April 26, 2025.

United States trade restrictions on the grounds of protecting dolphins extraterritorially; challenges for developing countries. Developing countries may lack the technical capacity to meet the environmental standards of developed countries, resulting in trade disadvantages. Existing mechanisms do not adequately take into account the development needs of developing countries, and "one-size-fits-all" environmental standards may exacerbate inequalities. Environmental exceptions may be misused as a tool for trade protection. For example, some countries have set discriminatory technical standards in the name of environmental protection, in essence protecting domestic industries.

3.3. FUTURE PERSPECTIVES: RECONSTRUCTING THE TRADE AND ENVIRONMENT BALANCE

In order to cope with the above challenges, the WTO needs to promote reform in the following directions: strengthening international cooperation - establishing a coordination mechanism between multilateral environmental agreements (MEAs) and WTO rules to avoid disputes arising from unilateral trade measures; and promoting the international harmonization of environmental standards, such as reducing disputes over SPS measures through the adoption of "international standards" and the recognition of "international standards". Promote international harmonization of environmental standards, such as through "international standards" to reduce disputes over SPS measures. Improve the legal interpretation framework - clarify the objective criteria of the "necessity" test, and introduce cost-benefit analysis or evaluation of alternatives; enhance the ability of developing countries to participate in rule-making, and ensure that their interests are reflected in environmental protection negotiations; promote sustainable development. Objectives: Incorporate environmental protection into the core mission of the WTO and explore the "trade-environment-development" win-win-win path; support developing countries in upgrading their environmental protection technological capacity and realizing green transformation through technical assistance and financial support.

3.4. STRATEGIES FOR DEVELOPING COUNTRIES TO MAINTAIN ENVIRONMENTAL SOVEREIGNTY

Developing countries facing the challenge of balancing environmental standards and trade interests under the WTO framework can adopt the following strategies: utilize special and differential treatment (S&D) provisions: in market access negotiations, developing countries can ask for more flexible commitments (e.g., non-reciprocity principle, transition period arrangements). For example, China, as a developing country, negotiated for special treatment upon its accession to the WTO, gradually opening up its market while protecting key industries; and strengthening international cooperation: Promote harmonization of MEAs with WTO rules, e.g., incorporating the Paris Agreement into trade policy considerations and avoiding unilateral green barriers. For example, through the "Belt and Road" green project, China has helped developing countries to enhance their environmental protection capacity and realize common development; Enhancement of technological capacity: accepting technical assistance and financial support, such as participating in the WTO Technology Transfer Program, to enhance the absorptive capacity of environmental protection technology. For example, Ethiopia and Sri Lanka have developed renewable energy and reduced carbon emissions through China's technical cooperation. Participation in rule-making: strive for the right to speak in CTED and other forums, and promote the establishment of environmental standards that take into account the interests of developing countries.

4. CHINA'S ENVIRONMENTAL PROTECTION AND DEVELOPMENT STRATEGIES TO COPE WITH GREEN TRADE BARRIERS

4.1. UPGRADING TECHNOLOGY: DRIVING THE GREEN TRANSITION THROUGH INNOVATION

The Technological Gap Theory emphasizes the need for developing countries to narrow the gap through international technology transfer (Xu Jianzhong and Wang Manman, 2018). For example, Tesla's Shanghai Superfactory has had a parts localisation rate of more than 95% since it

started production in 2019, and has driven more than 400 local Tier 1 suppliers into its global supply chain system[12].

Due to the relatively short development time of green technology in China, as well as the lack of cutting-edge technology and financial support, there is an urgent need to utilize an all-encompassing, multi-disciplinary open-door cooperation and exchange model. For example, for high-carbon industries such as iron and steel, we can promote leading enterprises to join colleges and research institutes to form a "low-carbon metallurgy innovation consortium", and set up a special fund to support cutting-edge technologies such as hydrometallurgy and hydrogen-rich blowing.

4.2. POLICIES AND REGULATIONS SUPPORT: BUILDING AN INSTITUTIONAL GUARANTEE SYSTEM

Domestic policies are synergistically optimized. This requires finding a balance between the economy, energy and the environment, promoting and developing each other, and evolving from resource-value orientation to ecological and technological value orientation. The carbon cost internalization mechanism suggests dynamically adjusting the pollutant equivalent charge to more than 80% of the marginal cost of governance, and linking the pilot carbon tax with the carbon trading market. For example, after the implementation of the environmental protection tax law in 2024, the export value of non-compliant regions dropped by 9.2%, but the authorized volume of green patents increased by 37%, verifying the innovation compensation effect of environmental regulation; the implementation of differentiated incentive policies, export tax rebate additions for enterprises certified through EPD (Environmental Product Declaration), and the provision of special financial support for low-carbon projects such as hydrogen metallurgy. Sichuan Province has piloted the " Green and Low Carbon Enterprise Certificate", which provides enterprises with green telecom applications endorsement.

[12] In https://www.eda365.com/article-238958-1.html Last access: April 26, 2025.

4.3. DEEPENING INTERNATIONAL COOPERATION: BUILDING A GREEN GOVERNANCE NETWORK

Strengthening trade cooperation with countries that are building the Belt and Road Initiative and exploring the potential of emerging and developing markets (Jin Fang and Qi Zhihao, 2021). At the same time, we will actively participate in the formulation and implementation of international environmental protection treaties and seek common interests and consensus. Promote the reform of the WTO's environmental exception clause, advocate the addition of a provision on the reduction of the burden of proof for developing countries in Article 20 of the GATT, refer to the experience of the Brazilian retreaded tires case (DS332)[13], and set up a rapid response mechanism for scientific risk assessment ; and build multilateral mechanisms. Promote mutual recognition of international standards, build a cross-border carbon market with ASEAN, and realize cross-border trading of hydropower and other clean energy carbon credits. For example, under the framework of the China-ASEAN Clean Energy Partnership, pilot cumulative rules of origin for photovoltaic modules to promote regional green supply chain integration; regional cooperation and capacity synergy. The "Belt and Road" green production capacity export, wind power, photovoltaic and other advantageous industries, the establishment of "integrated environment and trade pilot zones", pilot low-carbon technology rapid transformation channel.

5. CONCLUSION

In the context of deepening globalization, the relationship between international trade and environmental protection has become increasingly close and complex, but it has also given rise to serious environmental problems. The article reveals the impact of international trade on the environment through the study of externality problems, resource plundering and green trade barriers, and puts forward strategic suggestions to balance the relationship between the two. In the future, China will take technological innovation as the spear, policies and regulations as the shield, and international cooperation as the wings to open up a new path of synergistic development of ecology and trade in the seam of green trade barriers. Through breakthroughs in cutting-edge technologies,

[13] In http://chinawto.mofcom.gov.cn/article/zdjj/202209/20220903345324.shtml Last access: April 26, 2025.

optimization of institutional safeguards, and deepening of global collaboration, it aims to address short-term challenges, but also to reshape the green undertones of global trade rules.

6. REFERENCES

Dai Fuqiang and Zhang Xia (2021), Bibliometric analysis of China's trade-environment relationship based on CNKI and Cite Space. Journal of Chongqing Technology and Business University, 38(2):47-56.

Ma Xuejiao, Liu Tong and Sun Xiaohua (2023), Does heterogeneous regulation affect the environmental effects of FDI. Journal of Dalian University of Technology (Social Sciences), 44(01):37-49.

Chen Lin and Chen Meilian (2021), Domestic and foreign trade development and environmental pollution in the context of dual circulation: theoretical mechanisms and empirical evidence. Journal of Environmental Economics, 6(2):120-140.

Huang Xiaoyong and Liu Bin Bin (2020), FDI method choice and its impact on China's green technology innovation: an empirical analysis based on extractive industry data. Macroeconomic Research,(7):114-123,175.]

Sun Xiujuan (2023), Discussion on Green Trade Barriers in International Trade. Journal of Finance and Literature,(8):13-15.

Xu Jianzhong and Wang Manman (2018), The impact of FDI inflow on green technology innovation. Scientific and Technological Progress and Countermeasures. (22).

Jin Fang and Qi Zhihao (2021), Big Data, Financial Agglomeration and Green Technology Innovation. Economics and Management Review.,(4).