

Rong Zhao²⁸³*Doctor of Law, teacher of Harbin Engineering University School of Humanities and Social Sciences*

The International Legislation and Practice of the Cooperative Control on the Atmospheric Emissions from Ships

Abstract: Cooperative control on the atmospheric emissions from ships is becoming more and more general, and this article introduce the international legal regulation of the cooperative control, U.S. considering GHG as air pollutnt to control cooperatively, the Legislation and practice of Cooperative Control to Ship Emissions in EU and the current status of legal regulation on the ship atmospheric emissions in China.

Keywords:ship emissions; atmaspheric pollutants; legal regulation

1 The international legal regulation of the cooperative control on the atmospheric emissions from ships

In the field of international legislation, MARPOL Convention drafted by IMO is the fundermental convention to regulate ship emissions. The 37th session of MEPC began to regulate the issue of ship air emissions in 1995, at which the supplementary articles VI of MARPOL “The rules of preventing air pollution from ships” was adopted. At first, the supplementary articles VI consist of three chapters and mainly regulate the issue of air pollutant emissions from ships such as ozone-depleting substance, NO_x, Sox,PM, and so on. Since the international society has been paying more and more attention to the issue of climate change, especially Art.2.2 of Kyoto Protokol empowered IMO to regulate international shipping emissions; IMO began to make it its own task to deal with ship GHG emission reduction. The 62nd session of MEPC adopted the fourth chapter of supplementaty articles VI in 2011 and expand the application scope from air pollutants from ships to GHGs from ships like CO₂. Art.2 of the first chapter of the supplementary articles VI describes the concept of “ship emission”, it refers to that ships release any substance controled by the supplementary articless to the air or to the sea. Because the supplementary articles VI only regulate atmospheric pollutant emissions originally, it only consisted of atmospheric pollutants. After the adoption and entering into force of chapter 4, the convention began to control GHG emission from ships and atmospheric pollutants cooperatively. MARPOL establishes the foundation of controlling ship air emission cooperatively with the form of international legislation and becomes the model from which each country can draft and improve relative national legislation on the cooperatice control to ship air emissions.

2 U.S. considers GHG as air pollutnt to control cooperatively

“Clean Air Act” in 1963 is the fundermantal legislation for regulating air pollution in U.S.. This Act has been revised ten more times so far and every revision is connected closely with some

²⁸³ Rong Zhao, Doctor of Law, teacher of Harbin Engineering University School of Humanities and Social Sciences. Address: 145 Nantong Street, Harbin City, Heilongjiang Province, China Harbin Engineering Uni-versity (150001).Email: zr_jlu@163.com.

This article is funded by the Heilongjiang Provincial Philosophy and Social Science Planning Project.(7FXB007, 16FXB01)

environmental pollution accidents or the increasing of certain air pollutants. It improves the air quality in U.S. and protects public health and atmospheric environment and establishes a set of federal legal regulation system of controlling air pollution gradually. The Act divides the air pollutants into normal air pollutant and harmful air pollutant and it specializes the management on the moving air pollutant emission sources in which ships are managed as a kind of moving source equipments. The 1970 amendment of the Act stipulated six kinds of normal air pollutants: CO, NO₂, SO₂, TSP, HC and O₃. The 1990 amendment of the Act added Pb in stead of HC. The Act established the regional coordination system of air pollution prevention in U.S. and emphasized the importance of the cooperation of preventing air pollution between the federal and states, between states and between federal departments. The Act also stipulates administrative management, civil action and criminal action and provides various safeguard measures like financial and technical support to insure the effective implementation of the coordination system. Since 1990, America's environmental quality has been improved largely. The harmful substances which are emitted into the atmosphere have been reduced to 17 million and the sum of the six kinds of normal pollutants has been reduced to 41% of the former content.²⁸⁴

On Dec 7, 2009, being a reaction to the judgement of *Massachusetts v. EPA* made by the Supreme Court, U.S. Environmental Protection Bureau announced a decision in accordance with Art. 202(a) of "Clean Air Act" that considered six kinds of GHGs as "the pollutants threatening the public" including CO₂, CH₄, N₂O, SF₆, HFCs and PFCs. As such GHGs threatened the health and happiness of American public, their emission should be controlled.²⁸⁵ Actually, it had close relationship with the change of American government's environmental policy and demonstrated that American government had been paying more attention to climate change and energy crisis issue. The practice of considering GHG as air pollutant in U.S. broke through traditional identification standard and it put "whether or not do harm to the public health" as the judgement standard instead of traditional judgement standard which only paid attention to the environmental harm of climate change resulted from greenhouse effect produced by GHGs. Thus, some scholars insisted that China should use America's practice for reference that considered GHGs as air pollutants. And it should be the most convenient response way to mitigate climate change by "The Atmospheric Pollution Prevention Law".²⁸⁶

Based on "Clean Air Act", America has stipulated series of strict ship air emission standards to regulate ship emission. American Environmental Protection Agency enacted such a tax policy about the reduction of ship atmospheric pollution that NO_x emission tax should be levied since 2001 and the income tax can be used as a kind of subsidy of the increased fees for taking pollution reduction measures. America initiated a unilateral legislation about ship gas emission in Oct 2007 in order to replace relative international convention about ship emission adopted by IMO. And it aimed to control ship sulfur emission in advance before IMO adopted more rigorous conventions to regulate ship emissions.²⁸⁷ On Mar 30, 2009, U.S. Environmental Protection Agency suggested that more stringent pollution emission standards should be implemented to the U.S. coastal ships and pollution emission control areas should be set up within the scope of the coastline of 370

²⁸⁴ Li Jiahui. The innovation mechanism of "Clean Air Act" in U.S. [EB/OL].(2014-10-23)[2014-12-03]
http://news.xinhuanet.com/energy/2014-10/23/c_1112949348.htm.

²⁸⁵ Ren Haijun. U.S. Environmental Protection Agency: GHGs threaten health and their emission need to be managed[N].Xinhua Daily Telegraph,2009-12-09(8).

²⁸⁶ Tang Shuang'e. Dispute of whether GHGs are air pollutants under Clean Air Act in America and the implication for China[J]. Chinese Journal of Environmental Management Cadre Institute,2011,(4):1-5.

²⁸⁷ U.S. initiated unilateral legislation on ship gas emission[EB/OL]. (2007-10-31)[2014-12-14]
http://www.simic.net.cn/news_show.php?id=10905&lan=cn&page=1.

kilometers. It required that more stringent sulfur emission standards should be carried out to ships since 2015 and all new ships must be installed with advanced equipments to control polluted gas emission by 2016.²⁸⁸ Comparing with current standards, the new standard will reduce NO_x emissions from large ships about 80% and reduce PM about 85%. The new standard is an important measure to reduce polluted gas emissions from ships and it can reduce the damages to health, environment and economy from polluted gas.²⁸⁹

3The Legislation and practice of Cooperative Control to Ship Emissions in EU

EU has been focusing on global climate change, pollutants and GHGs emission reduction through legislation for many years. EU follows comprehensive pollution control principles including precautionary principle, the principle of the source and the principle of public participation, etc. Through these principles, EU combines the end control with the source control on environmental pollution. In 1987, “The EC Fourth Environmental Action Plan” pointed out that the most appropriate method to control pollution could be based on emission restriction or environmental quality standards for a single media when the environmental problems were caused by emitting pollutants of many sources into a single environmental media.²⁹⁰ EU divides the environment into several parts to manage pollutant emissions including air, water and land, etc. It has been found that taking a certain pollution standard which can restrict a single media can produce synergy effect of pollution control to other media. So EU has been taking cooperative control methods to deal with different emission media through comprehensive environmental pollution control methods. On Sep24, 1996, EU enacted “Integrated Directive of Pollution Prevention and Control” to regulate pollutant emissions in the industrial fields. Affix I of the Directive stipulated the emission sources and the pollutant scope including CO₂ and other GHGs in “Kyoto Protocol”. In accordance with the Directive, EU could regulate industrial pollutant emissions and GHG emissions through cooperative control and EU could take advantage of the Directive on GHG emissions for terminal control like the traditional air pollutants.²⁹¹ The Directive was replaced by “Industrial pollutants Discharge Directive” in 2010.

With the intensification of global climate change, the international community began to focus on GHG emission issues. In 2000, EU Commission published “The Green Paper of Establishing GHG Emission Trading within EU” and required the member states set up the carbon emission trading system to reduce GHG emissions aiming to complete the goal of GHG emission reduction 8% based on 1990 according to the commitment of “Kyoto Protocol”. On Oct13, 2003, EU adopted “The Directive of Establishing GHG Emission Trading Scheme within EU”(EU Directive No.87) and set up a unified carbon emission trading system within EU gradually. With the adoption of Directive No.87, EU began to consider how to coordinate the relationship between the two directives and how to control atmospheric pollutants and GHGs more cooperatively. Art. 8 of Directive No. 87 provided that the member states should take appropriate measures to ensure coordination of the condition and procedure of issuing GHG emission licence and pollutant discharge licence.

²⁸⁸ U.S.EPA put forwards suggestion to restrict polluted gas emission from coastal ships (2009-04-01) [2014-12-14] http://news.xinhuanet.com/environment/2009-04/01/content_11111637.htm.

²⁸⁹ U.S.EPA stipulated a new standard of ship polluted gas emission (2009-12-25) [2014-12-14] http://news.xinhuanet.com/tech/2009-12/25/content_12701769.htm.

²⁹⁰ Cai Shouqiu. On the comprehensive pollution control in EU environmental policy and legislation[J].Europe,2000,(1):81-88.

²⁹¹ Li Yanfang, Zhang Zhongli. The legal regulation and characteristics of EU GHG emissions [J]. Journal of China University of Geosciences(Social Sciences Edition),2014(9):54-61.

On Nov19,2008, during the revision of Directive No.87, EU took into account to incorporate civil aviation into EU ETS.²⁹² After aviation carbon tax was imposed, the plan was rejected by most countries in the world and stranded. However, EU adopted a legislative amendment in May 2012 and would implement more stringent sulphur emission standards on ships sailing in EU areas to protect the environment. The amendment provided that by 2020, all the ships sailing in the 12 miles territorial sea of EU member states or berthing at ports should execute the 0.5% sulphur emission standard provided by IMO in 2008; while 0.1% sulphur emission standard should be executed by 2015 in EU ECAs including Baltic, the North Sea and the English Channel.²⁹³ In order to response to the proposal of establishing a global data collection system of ship fuel consumption adopted by the 66th session of MEPC in March 2014, EU passed formally the MRV Act which aim is to reduce international shipping carbon emissions on Nov 26,2014. MRV is EU regulation for monitoring, reporting and verification system in shipping carbon emission fields. With the application to ships over 5000GT by Jan 1, 2018, the MRV must improve the development of EU and global shipping emission reduction.²⁹⁴

4 the current status of legal regulation on the ship atmospheric emissions in China

Because the amount of ship emissions in all national emissions is small and the proportion of ship emissions in moving source transportation emissions is smaller than vehicle emissions, China didn't incorporate ship pollutant emissions into pollutant emissions. In "The Action Plan for the Prevention of Air Pollution" published by the State Council in 2013, part I concerned promoting moving source pollution prevention and proposed the principle requirement of carrying out controlling the pollution from non-road moving machinery and ship. But the matched project has not still being produced. However, because the main fuels of ships are heavy oil or diesel oil and the ship emission range during loading and unloading when berthing at ports is some concentrated, the ship emissions have serious effect on environmental pollution and human health at the ports and nearer areas. With the improvement of future atmospheric pollution prevention and GHG emission reduction in China, controlling ship emissions will become a big challenge to China especially to coastal cities and port cities.²⁹⁵ Consequently, it is necessary to regulate ship atmospheric emissions.

In China, the current legislation about atmospheric pollution prevention is "Atmospheric Pollution Prevention Law" adopted in 1987, and it has been revised twice and now it is being revised the third time. In order to meet the need to combat and mitigate climate change, China began to draft "Climate Change Response Law" to control and reduce GHG emissions and promote sustainable development since early 2010. Now the draft legal framework has been completed, but it did not announced the formal version to the public. On Mar 18, 2012, the institute of law in Chinese Academy of Social Sciences published "The Exposure Draft of Climate Change Response Law"(hereinafter "Exposure Draft").

²⁹² Directive 2008/101/EC Of The European Parliament And Of The Council Of 19 November 2008 Amending Directive 2003/87/EC So As To Include Aviation Activities In The Scheme For Greenhouse Gas Emission Allowance Trading Within The Community (Text with EEA relevance), COD(2006)0304, November 19, 2008.

²⁹³ EU will control sulphur emission from ships strictly [EB/OL]. (2012-06-04) [2014-12-20] http://www.simic.net.cn/news_show.php?id=103539.

²⁹⁴ EU adopted a shipping carbon emission reduction legislation, maybe shipping carbon tax will be restarted [N]. China Water Transport, 2014-12-01(10).

²⁹⁵ Peng Chuansheng, Qiao Bing. The policy measures and practice of controlling ship atmospheric pollution emissions [J]. Shipping Management, 2014,(2):1-5.

Comparing with U.S. and EU, China's legislation and practice of atmospheric pollution and GHG emission from ships are relatively hysteretic. In legislation, Chapter 4 of the current "Atmospheric Pollution Prevention Law" is about prevention and control on emission pollution from motor vehicles and ships and restricts motor vehicles and ships to emit atmospheric pollutants beyond standards principle. And the current law describes atmospheric pollutant emissions from ships together with the pollutant emissions from motor vehicles, and more contents are regulations about atmospheric pollutant emissions from motor vehicles while less are regulations about ship atmospheric pollutant emissions, and even no contents about GHG emissions from ships. "The Draft Amendment of Atmospheric Pollution Prevention Law" (hereinafter called "the Draft Amendment") describes the atmospheric pollutant emissions from motor vehicles, non-road moving machineries and ships in Section 3 of Chapter 4. The title of the chapter is "The atmospheric pollution prevention of motor vehicles and ships". Although the legislative form is still the same with the current law; "the draft amendment" has made more revisions and supplements to the current law in the aspect of prevention pollutant emissions from ships. The typical revisions and supplements are such as the country encourages dumping ships ahead of time; describing the detection standards and execution agents of the exhausting pollution for new-built ships and in-use ships; setting up supervision and management agents for ship pollution prevention; describing the requirement for the building, importation, sales and quality of ship fuels, etc. "The Draft Amendment" is based on the new revised "Environmental Protection Law" and carries out every system and measure issued by "The Action Plan of Atmospheric Pollution Prevention and Control" comprehensively. It is particularly notable is that the Article 2 of "The Draft Amendment" puts forward the principle of cooperative control on GHGs and atmospheric pollutants, and it's making efforts to achieve the transformation from single pollutant control to multiple pollutants cooperative control, and to achieve the transformation of the atmospheric pollution control methods from territorial management to zone defence. Although the Amendment regulates the cooperative control principle and doesn't regulate the definition of atmospheric pollutant and GHG and even no any regulation about GHG emissions, but at least, it establishes the legal foundation for the cooperative control on atmospheric pollution prevention and GHG emission reduction in China. And it shows that the supervision and management of atmospheric pollution prevention and GHG emission reduction in China is transiting from controlling separately to cooperatively.