Comments on EU Aviation ETS Directive and EU — China Aviation Emission Dispute

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Résumé

Cet article porte sur les conséquences de la Directive européenne visant à inclure l'aviation dans le système d'échange des quotas d'émission de carbone à compter de 2012. Il examine la conformité de cette directive avec les normes internationales sur les changements climatiques et, en particulier, avec le principe des responsabilités communes, mais différenciées.

Abstract

This article deals with the consequences of the European Union Directive which, starting 2012, will include aviation carbon dioxide into the emission trading scheme. It mainly studies the conformity of this Directive with international norms on climate changes, and especially, with the principle of common but differentiated responsibilities.

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Table of Contents

The mechanism of emissions trading has been developed as the major policy instrument to address the issue of climate change, which has been supported by programs and proposals in many countries and regions worldwide, including European Union, the United States, Australia, New Zealand, Japan, Norway and United Kingdom[1]. The Emission Trading System is a system that forces polluters to buy permits for each ton of carbon dioxide they emit above a certain cap. As far as the European Union (hereinafter is referred as EU) is concerned, the EU emissions trading scheme (hereinafter is referred as EU ETS) is the cornerstone mechanism of the region, which aims to reduce carbon dioxide emissions 20% by 2020 compared to 1990 levels.

In 2008, the EU issued the *Directive 2008/101/EC on including aviation into emissions trading scheme* (hereinafter is referred as *Aviation ETS Directive*)[2]. The EU has set January 1, 2012 as the starting date for all flights, arriving and departing from EU airports, regardless of the operator's nationality, to meet emissions limits or pay penalties for breaking the caps. It means carbon emissions from aviation – including those from non-EU airlines taking off or landing within the EU – will be included within the scope of the EU ETS.

Inclusion of intercontinental flights in the EU ETS unilaterally is strongly opposed and criticized by most governments and international airlines outside the EU, including United States[3], China, Canada[4], Russia

1 See International Examples of Emissions Trading, available at: <http://www.climatechange.govt.nz/emissions-trading-scheme/about/international-examples.html>.

2 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) OJ L 8, p. 3.

3 In 2007 and 2008, the executive branch of United States expressed the view that the imposition of the ETS was inconsistent with international law, specifically, the *Chicago Convention* and the *U.S.-EU Air Transport Agreement*. US administration states that although the United States acknowledges the need to reduce global aviation-related carbon dioxide emissions, the United States favors a global approach through ICAO in conformance with the *Chicago Convention* and the *Kyoto Protocol* together with advances in technology and improvement in flight management to better address the global problem of aviation-related carbon dioxide emissions. They view the EU Proposal as an ineffective regional attempt to control a problem that requires a global solution. See Report to Congressional Committees by United States Government Accountability Office, GAO-09-554 Aviation and Climate Change, p. 53.

4 Scott Deveau, "Canada's airlines fight EU carbon tax", Financial Post, July 4, 2011, available online at: <http://business.financialpost.com/2011/07/04/canadas-airlines-fight-eu-carbon-tax>.

and Japan[5]. The EU Aviation ETS Directive has also raised legitimacy questions. The Chicago Convention of 1944, under which global aviation is organized through bilateral agreements, specifically forbids unilateral moves that interfere with these mutually agreed rights. The principle of common but differentiated responsibility (hereinafter "CBDR") is a basic principle and requirement when dealing with the climate change issue which was clearly provided in the United Nations Framework Convention on Climate Change (hereinafter "UNFCCC" and the Kyoto Protocol. Does the EU Aviation ETS Directive conform to international aviation law and international climate change law?

This article will approach the question of legality and impact of EU Aviation ETS Directive from the perspective of the principle of CBDR. It is composed of five parts. The first part sets the general background of China-EU dispute on aviation carbon emissions. The second part presents the positions and arguments of both sides on the dispute. The third part introduces the EU ETS and analyzes the aviation emissions Directive. The fourth part focuses on whether the Directive is in conformity with the principle of CBDR after examining its content. The final part is conclusion and suggestions. The article points out that EU's decision of including international aviation into ETS unilaterally will do harm to the application and compliance of the CBDR principle, as well as the development of China's aviation industry.

I. EU – China Dispute on Aviation Emissions

The EU Aviation ETS Directive has been strongly opposed by non-EU states, airlines and shareholders. The dispute is not about the need to deal with aviations' greenhouse gas emissions since all contracting states of ICAO (International Civil Aviation Organization) agreed in 2004 that one of international aviation's three environmental goals should be "to limit or reduce the impact of greenhouse gas emissions on climate change"[6]. The dispute is whether the measure that EU plans to take is in conformity with

5 Letter from the Ambassadors of Australia, Canada, China, Japan, Korea and the United States to Ambassador Peter Witt of Germany, Apr. 6, 2007. See United States Government Accountability Office, *Report to Congressional Committees, Aviation and Climate Change,* GAO-09-554, 2009, p. 60.

6 See the Environmental Protection Home Page of ICAO (Environment Branch), online: <http://www.icao.int/env/>.

international law, especially international aviation law and international climate change law.

A. Positions and Arguments of China's Shareholders

The move of EU to extend its emissions trading scheme to the aviation industry has also met with oppositions in China. The Chinese airlines that operate flights between Europe and China have been required to abide by the Aviation ETS Directive. Both China's aviation regulator and Chinese airlines have expressed strong oppositions to the EU cap-and-trade approach to deal with the aviation industry's carbon emissions. In March of 2011, the China Air Transport Association (CATA) issued a statement on behalf of Chinese airlines opposing such a unilateral move of inclusion of their flights to Europe in the ETS. It said the Association may suggest that the Chinese government take harsher countermeasures against flights in and out of China operated by airlines from EU countries. During a session at the UN-led climate change negotiations in Bangkok in April, China and other developing countries said that EU should find ways to achieve its 2020 emissions targets by itself, arguing that emission reductions in international aviation were a matter for multilateral negotiations.

It is reported that EU Aviation ETS Directive is unilateral and may hurt China's aviation sector. It would dramatically increase the airlines' operation costs and hinder further development of China's burgeoning aviation industry. First, billions have to be paid for the emissions. According to the industry's calculation, China's airlines would have to pay nearly 800 million yuan ($114 million) in 2012 alone[7]. If the airlines added one flight between China and Europe each week, that would add 15 million yuan to the cost. The annual fee could reach more than 3 billion yuan by 2020. Secondly, it will hinder the development of China's aviation industry, because major Chinese airlines nowadays are aiming at stronger expansion in overseas routes, and European countries are among the top destinations for Chinese travelers.

Chinese airlines have insisted that the plan was poorly designed, costly and unfair for developing countries, and have strongly criticized the EU

[7] See Reuters, "EU parries China's jab on aviation emissions scheme", July 6, 2011, available at: <http://www.reuters.com/article/2011/07/06/uk-china-eu-aviation-idUSLNE76502Z20110706>.

emission program as a "unilateral and indirect" mechanism that violates widely accepted principles on fighting climate change. They have joined U.S. airlines in opposing their inclusion in the EU carbon emissions market from 2012. One of main arguments is that the EU program fails to reflect the differences in responsibilities for developing and developed countries in the fight against climate change. China is still a developing nation. It is the first time that China's companies have been assigned the same obligations to deal with carbon emissions as their competitors in industrialized nations. China's civil aviation industry urged EU not to hit developing nations with the carbon tax that it wants to impose on flights in and out of Europe starting in 2012.

B. Positions and Arguments of EU

EU insisted that including aviation would have a positive impact on the ETS and the environment in general. Due to its limited capacity to achieve emissions reduction, and the almost inevitable growth, aviation is likely to be the net buyer of EUAs (European Union Allowances), which would result in a significant influx of new funds into the ETS, providing investment for carbon savings in other sectors. So EU Commission held that the best way forward, from both economic and environmental perspective, lies in including the climate impact of the aviation sector in the EU ETS[8].

Jose Manuel Barroso, European Commission President, supported the aviation industry into the EU carbon emissions trading system, and pointed out that this had become a European Union law in Europe. Connie Hedegaard, EU Commissioner for Climate Action, in October 2010 said: "We will definitely keep fighting for the inclusion of aviation in the Emissions Trading Scheme. The bottom line is that we are including aviation in the ETS from 2012, and it is our interpretation of the ICAO meeting that we can continue to do so."[9]

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[8] Commission of the European Communities, *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. Reducing the Climate Change Impact of Aviation*, COM (2005) 459.

[9] European Commission's Spokesman, Isaac Valero-Ladron said: "This is already adopted legislation and we are not backing down. We knew what we were doing in 2008 when we adopted this and we are not changing our legislation…. We can't impose

II. EU ETS and Aviation Emission Reduction

A. EU ETS

The EU ETS is the key policy introduced by the EU to help reduce greenhouse gas emissions and meet its Kyoto Protocol commitments. Recitals (1) and (2) and Article 1 of Directive 2003/87/EC have expressed and emphasized the importance of ETS. Article 1 of the Directive states:

> "This Directive establishes a scheme for greenhouse gas emission allowance trading within the Community (hereinafter referred to as the Community scheme) in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner."[10]

The EU ETS is the largest multi-country, multi-sector greenhouse gas emissions trading scheme in the world. The EU ETS is dynamic and divided into several phases[11]. It came into force in 2005 to cap CO2 emission from energy-intensive industries (such as steel, power stations), aiming to secure emission reductions at the lowest possible cost. The key feature of EU ETS is the allocation process, which determines the reduction target ('cap') within each Member State and the way allowances are distributed among the covered operators. Each allowance is worth one ton of carbon dioxide emission. Companies can sell their allowances surplus or buy the shortage. Each company subject to the ETS must surrender exact allowances equal to the amount of emissions released.

B. Aviation and ETS

1. Background

Aviation contributes to the environmental problem of global warming. Aircraft emissions are estimated to be responsible for 2 to 4 percent of global warming caused by human activity, which is a much lower share of

a burden only to European airlines and not include others. It would be distortion of competition." See Saqib Rahim, "U.S.-E.U. Showdown Over Airline Emissions Begins Today", *The New York Times*, July 5, 2011.

10 Directive 2003/87/EC, OJ L 275, 25.10.2003, p. 32–46.

11 The first phase is from 2005-2007. The second phase runs from 2008 to 2012. The third phase is from 2013 to 2020.

greenhouse-gas emissions globally than road transport (18%) and power stations (26%). Even marine transport generates more CO2 than commercial aircraft[12]. But Aviation's share of total emissions is rising rapidly due to the expansion of air transportation. Greenhouse-gas emissions from international flights from 41 wealthy countries rose 52 percent between 1990 and 2004[13]. As far as EU is concerned, aviation is responsible for 3 percent of EU carbon emissions, but emissions from the sector had increased rapidly and had doubled since 1990.

A solution is needed to control and reduce aviation-related emissions to stabilize the earth's climate. The United Nations Framework Convention on Climate Change (UNFCCC) includes restrictions on emissions from air travel. However, since international aviation involves so many countries, the categorization of emissions has been difficult and so far discussions have remained at the technical level. The Kyoto Protocol of UNFCCC is the first legal binding document enumerating promises by 40 industrialized countries plus the EU to limit emissions to specified levels[14]. The Kyoto Protocol does not limit international aviation emissions of Annex 1 industrialized nations either[15]. The Kyoto Protocol provides only that signatories will pursue "limitation or reduction of emissions of greenhouse gases" from aviation through the International Civil Aviation Organization (ICAO)[16].

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12 Intergovernmental Panel on Climate Change, *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007, p. 44.

13 United Nations Framework Convention on Climate Change, *Compilation and Synthesis of Fourth National Communications*, FCCC/SBI/2007/INF.6/Add.1, November 23, 2007, p. 9.

14 Under the *Kyoto Protocol*, signatories are divided into two groups with different responsibilities – Annex I signatories and non-Annex I signatories. Annex I signatories consists of industrialized countries that are legally bound to reduce greenhouse-gas emissions (GHGs) between 2008 and 2012. Non-Annex I signatories consists of developing countries that are responsible for monitoring and reporting their emissions but are not required to legally reduce emissions.

15 Emissions from domestic flights must be counted as total emissions of those countries with quantitative limits on GHGs. However, emissions from international flights are not counted in the emissions estimates prepared by national governments.

16 ICAO has set general goals for emissions reductions. At the 37th session of the ICAO, in October 2010, all members committed to a framework for emission targets: a 2% global annual average fuel-efficiency improvement to 2020 and an inspirational target of a 2% annual improvement from 2020 to 2050; achieving carbon neutrality for the

In order to address the growing climate change impact attributable to aviation and to meet its international commitments under Kyoto Protocol, EU commission proposed to include aviation into the ETS in December 2006[17]. After years of fruitless debate within the United Nations about how to curb emissions from aviation, EU took its unilateral step to include aviation in the ETS. In 2008, EU approved the proposal to include the aviation industry in its ETS, and the Directive 2008/101/EC came into effect in 2009[18].

2. Scope and Content of Aviation Directive

According to Directive 2008/101/EC, the aviation sector is to be brought within the EU ETS from 2012 in Phase III. Aviation activities of aircraft operators that operate flights arriving at and departing from Community airport are included, except Military and other public State aircraft as well as airlines with very few operations in Europe[19]. For example, those annual carbon emissions are below 10,000 tons[20;] that roughly equals the carbon footprint of 22 single trips between Shanghai and Brussels with a Boeing 777 aircraft. Foreign airlines will be administered by EU member states. There are 33 of airlines from China's mainland, Hong Kong and Macao listed by EU and referred to different EU member states as administering Member States.

Emissions will be capped according to historical level which is the average level for the years 2004-2006. Emissions will be calculated for the entire flight. For example, a flight from Beijing to London will have to surrender allowances for its travel in China's airspace, international airspace, and U.K. airspace.

aviation industry by 2020; and producing international standards for airplane engine emissions by 2013.

17 Proposal for a Directive of the EP and of Council amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community, COM (2006) 818.

18 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), OJ L 8, 13.1.2009, p. 3.

19 See 2008/101/EC, *id.*, Annex 1.

20 On February 11, 2009, the Commission issued a consultation on a Preliminary list of aircraft operators and their administering Member States.

Airlines will be given certain emission quotas (allowances), which are 97 percent of the historical emissions level for the year of 2012 and are set to decrease year-on-year. It means foreign airlines landing in Europe will be forced to buy carbon credits to cover each ton of carbon emission in excess of the cap from 2012. Consequently, the airline that wishes to add flights to European airports may need to purchase emissions allowances in the open market.

C. Impacts of the Aviation Emission Directive

The Aviation ETS Directive will have great impacts on addressing the issue of aviation emissions reduction, and its impacts will go beyond the aviation sector itself, even on the issue of climate change in general.

It is analyzed that the aviation sector is a "delicate choice" by EU[21]. First, it helps to extend its carbon-pricing system to the rest of the world. It also helps to promote the development of carbon-trading systems in other nations, and to link these with the ETS. Article 17 of the Directive provides that other governments can adopt "equivalent measures" which can also interact with Europe's trading scheme. Secondly, it helps to show world leadership of EU on climate change negotiation. The Directive makes it clear that Europe wants to maintain communication and negotiation on the issue with non-EU nations. EU has long sought to engage other major economies, such as the US, Japan and China, in carrying out similar efforts to reduce carbon emissions.

However, we can not expect inclusion of flights in the EU ETS to slow the growth of greenhouse gas emissions from aviation sector for years, if not decades. This is a reflection of both the realities of climate change and the fundamentals of air travel. Reducing emissions, or even the growth of emissions, from aviation will require many other countries to undertake regulatory moves, especially to take measures to cut down emission directly.

Meanwhile, the unilateral action of EU will do harm to the friendly development of international aviation industry. Since the proposal to

[21] The aviation sector accounts for about 3.5 percent of the world's total greenhouse gas emissions and it is responsible only for 3 percent of EU carbon emissions. Designing the rules in aviation sector is relatively easy, and calculating emissions is less complicated than in other industrial sectors.

include aviation into EU ETS was published, it has been opposed and protested by many governments and airlines. The head of the US Federal Aviation Agency termed the European approach "unworkable, not to mention illegal". The 23 countries forming the Latin American Civil Aviation Commission have objected to their airlines' inclusion in ETS, pointing out that their countries have no obligations under the Kyoto Protocol to reduce greenhouse gas emissions. The International Air Transport Association, representing more than 240 airlines, has characterized the EU plan as "counterproductive". It is reported that US and China have expressed to use trade dispute settlement mechanisms or countermeasures if their carriers are forced to participate in the EU ETS. US Airlines have filed a lawsuit in UK against the aviation carbon tax. China's top three airlines – Air China, China Southern and China Eastern – plan to jointly lodge a legal case with the China Air Transport Association.

Furthermore, the unilateral move of EU to include aviation into ETS has also raised many legal questions. One is whether it is contrary to international aviation law, in particular the Chicago Convention. It is one main argument in the US-EU dispute[22]. In the late 2009, the Air Transport Association of America, together with Continental Airlines, American Airlines and United Airlines, have filed lawsuit to challenge the EU aviation emissions plan at the High Court in London, taking the British government to court over its inclusion in the emissions trading scheme[23]. The British court referred the case in 2010 to the European Court of Justice in Luxembourg for a preliminary ruling. The US airlines are still waiting for a hearing date[24]. Another legal question is whether it is in conformity with the international climate change law, especially the principle of Common But Differentiated Responsibility (CBDR). In the China-EU dispute and nego-

[22] Both US government and its Aviation industry strongly criticized EU including aviation into ETS. It is analyzed that Airlines' entry to the EU carbon market will add 1-1.4 billion euros ($1.4-$2 billion) to their costs in the first year and ultimately lead to higher air fares and carbon prices. See EurActiv with Reuters, "Airline CO2 trade to lift costs, fares, CO2 price: Analysis", available at: <http://www.euractiv.com/en/transport/airline-co2-trade-lift-costs-fares-co2-price-analysis-news-502995>.

[23] The airlines involved were being administered in the United Kingdom under the EU ETS, hence the location of the hearing is at London.

[24] See the case of *The Air Transport Association of America, American Airlines, Inc., Continental Airlines, Inc., United Airlines, Inc.* v. *The Secretary of State for Energy and Climate Change*, OJ C 260, 25.9.2010, p. 9 et 10.

tiations, Chinese aviation sector has strongly argued that the EU Aviation ETS Directive is contradictory with the CBDR principle.

III. EU Aviation ETS Directive: a Challenge to the Principle of CBDR

The CBDR Principle is increasingly incorporated into international environmental agreements. Though the necessity and benefit of the principle itself in general international law is the subject of much debate, it has been an important legal binding principle in international climate change law, and it should shall be respected in the interpretation and elaboration of the commitments of countries in climate change regime.

A. Background and Legal Status of CBDR Principle

A close analysis of CBDR principle itself and its evolution is essential to understand the role and status of this principle in international climate change law.

1. Background

As an emerging principle in international environmental law, the CBDR principle embodies the notion that countries have special needs and may require differing treatment in order to secure their participation. The principle was developed out of the notions of "common responsibility" and "common heritage of mankind"[25]. There are two different but interrelated parts of the CBDR principle. One part is the common responsibility notion which is based on notions of equity in international law. It recognizes that states share common responsibility for protecting the global environment. The other part is the "differentiated" aspect which accounts for the unique situations of each state. This aspect recognizes that countries are uniquely situated and thus should have their responsibility adjusted accordingly. In particular, countries differ with regard to their past contributions to the current problem and their future capability

[25] Center for International Sustainable Development Law (CISDL), "The Principle of Common But Differentiated Responsibilities: Origin and Scope", August 26, 2002, available at: <http://66.147.244.83/~cisdlorg/public/docs/news/brief_common.pdf>.

to improve the situation and to prevent future harm[26]. The practical rationale of the principle is to encourage the universal participation in international environmental cooperation and international environmental agreements.

The notion of CBDR is a major focus of the Rio Declaration; the CBDR Principle was first articulated in the Rio Declaration (1992)[27]. Principle 7 of Rio Declaration addresses the reality that different states have varying levels of responsibility for harm caused to the environment and varying abilities to respond to this harm[28]. Principle 7 also legitimizes Principle 11 of the Rio Declaration which authorizes developing countries to adjust their environmental standards as required by their economic and social situations[29].

2. A Legal Binding Principle of International Climate Change Law

Though the initial statement of the CBDR Principle in the Rio Declaration is soft law, a non-binding norm, and some scholars argue that the principle is not customary international law because it does not possess the requisite *opinio juris*; different countries have deeply contested the core content of the principle and the nature of the obligation it entails[30]. However, since the CBDR principle was codified in the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol, it turns into international law. The CBDR Principle is explicitly

26 *Id.*

27 *Rio Declaration on Environment and Development*, U.N. Conference on Environment and Development, U.N. Doc. A/Conf.151/Rev.1 (vol. l). Principle 7 of the *Rio Declaration* states: States shall cooperate in a spirit of global partnership to conserve, protect, and restore health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures societies place on the global environment and of the technologies and financial resources they command."

28 Anita Margrethe Halvorssen, *Equality Among Unequals in International Environmental Law. Differential Treatment for Developing Countries*, Westview Press, 1999.

29 *Id.*

30 From the combat and evolution history of Principle 7 of *Rio declaration* from the draft version into final version, we can imagine how sharply different the opinions between developed countries and developing countries are. The developed countries try hard to avoid the recognition of its legal binding status.

mentioned in Article 3(1) of UNFCCC, which has the function of guiding principle in dealing with climate change issue. UNFCCC basically translates Principle 7 of the Rio Declaration "into specific obligations to reduce greenhouse gas emissions for developed countries only and reporting requirements that are differentiated for developed, developing, and least developed countries"[31]. UNFCCC, guided by the CBDR principle, requires developed countries and economic transition countries to take a first step in emission reduction. As such, it suggests that developed countries should make substantial emissions reductions before developing countries are required to make any reductions.

The Kyoto Protocol also explicitly incorporates the CBDR Principle, especially in Article 10 of the Protocol[32]. As the most recent and most comprehensive document applying the CBDR Principle, the Kyoto Protocol is an example of actual application of the CBDR Principle. It was said to be "the clearest attempt to transform CBDR from a legal concept into a policy instrument".[33]

Bali Action Plan also affirms the importance of the principles of the UNFCCC, including the CBDR principle.

In a word, the CBDR principle is a legal binding principle of international climate change law and shall be the overarching principle guiding the future negotiation and development of the climate change law.

B. EU Aviation ETS Directive Contradicts the CBDR Principle

The CBDR principle forms the basis for the interpretation of the existing obligations and the elaboration of future international legal obligations with the climate change regime. The real importance of the CBDR Principle lies in its application, but the EU Aviation ETS Directive does not respect the principle properly. In particular, the approach to allocate allowance in EU Aviation ETS Directive is clearly away from the CBDR principle which recognizes the existing differences between countries and

31 A. M. Halvorssen, *supra*, note 28, p.74.

32 U.N. Doc. FCCC/CP/1997/7/Add.l (1997).

33 Christopher C. Joyner, "Common But Differentiated Responsibility", (2002) 96 *Am. Soc'y Int'l L. Proc*. 358.

attempts to provide an equitable way of apportioning past responsibilities and future obligations.

As far as China is concerned, the Aviation ETS Directive does not pay much attention to the reality of China and its aviation industry. China is a developing country. It is true that China's carbon emission is huge, but the per capita carbon emission of China is low. The accumulated per capita carbon emission is also low[34]. Meanwhile, China has been taking active measures to combat the issue of global warming. In November 2009, Chinese State Council published China's carbon reduction target: by 2020, to reduce carbon emissions for each unit of economic growth by 40 to 45 percent from 2005 levels[35]. As part of that move, China's aviation regulator also asked all airline carriers to cut energy and carbon intensity. In mid-April of 2011, the General Administration of Civil Aviation of China (CAAC) of China issued new environmental guidelines for the domestic civil aviation sector, including an emission-intensity reduction target of 22 percent by 2020. But EU Aviation ETS Directive does not confer different treatment to China's airlines arriving or departing EU. Not to say that EU has no right to unilaterally regulate the issue of international aviation emissions when most of the emissions have been released in high sea or air space outside its jurisdiction.

According to EU Aviation ETS Directive, the average annual emission of 2004-2006 is the benchmark (historical emission level). Permits or quotas are allocated according to the historical emissions of each airline. It means that airlines with no growth or slow growth in flights will pay less for carbon emissions than those that are quickly expanding their European flights. The rules are not fair for airlines from developing countries. After years of operation, airlines from developed countries have built a mature network with many flights linking to Europe and are not likely to add many flights to Europe in the future. Compared to those developed countries, airlines from developing nations have much fewer flights now, but they will expand fast in the future with the economic development[36].

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34 See Jian-Kun He, Bin Liu and Wen-Ying Chen, *Analysis On The Equity Of Global Climate Change Issues*, China Population, Resources and Environment, Vol.14, 2006(6), p.14.

35 See <http://news.xinhuanet.com/politics/2009-11/26/content_12545939.htm>.

36 According to CAAC (China Air Transport Association) statistics, despite the global aviation slowdown, China's civil aviation industry has maintained a double-digit growth in the past two years. From January to April 2011, the sector saw a 30.6-percent increase.

According to the EU aviation ETS Directive, these airlines from developing countries with potential expansion of international flights will have to pay much more than the mature airlines. It is unfair for airlines from developing nations like China, because they are paying bills not only for emissions made by others in the past, but also for future emissions.

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The issue of climate change is a pressing environmental problem in need of global participation and cooperation. EU is legitimate to regulate emissions of aviation industries to meet its commitments under Kyoto Protocol, to lead the way in implementing aviation emissions reduction. However, it is not proper for EU to regulate unilaterally international aviations which may not only infringe international aviation law but also deviate from the CBDR principle. The CBDR principle shall be cherished as the cornerstone of future international cooperation in climate change field.

Despite imperfections such as its time-consuming aspect, the multilateral approach is still the only and best way forward in the field. Just like the famous saying has it: "Don't throw the baby out with the bathwater." Only through meaningful, constructive engagement between States, will constructive and globally acceptable solutions be found to address the challenge of aviation emissions impacts.

However, the move of EU in aviation reduction is an alert and a serious pressure to China's industries including aviation sector, and also to China as a whole. First, as far as the aviation sector is concerned, intergovernmental negotiations and court cases around the EU ETS are ongoing, and it is not yet clear whether or not there will be amendments to the policy. But one thing is certain: the aviation industry must learn to exist in a carbon-constrained world. Secondly, as the whole country is concerned, it is time for China to face the climate challenge issue seriously and work out practical strategies. Otherwise, different industries are bound to face more strains on carbon emissions in future global competition. If the unilateral program of EU is operated successfully, given the facts that China has large emissions and its economy continues to grow, it will become the target of similar unilateral programs in different fields, despite its efforts to bring down carbon intensity domestically. China

should better prepare itself for similar cases and work out practical tactics in international and domestic level.

In a word, the move of EU is an alert to China's industries and it may be the opportunity for the country to deal with international pressure on climate change, if tackled properly and seriously.