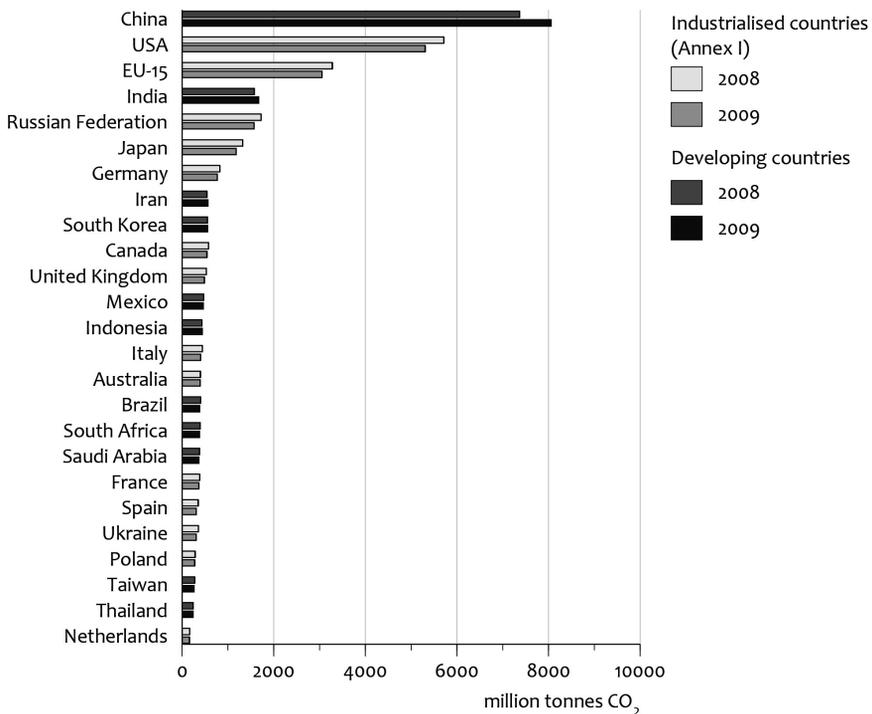


## The Role of the European Union and China in Global Climate Change Negotiations: A Critical Analysis

*Rafael LEAL-ARCAS*

Although climate change is a truly global issue, for the purposes of this article only two main players in the global climate change negotiations will be analyzed: the European Union (EU) and China. Each one of them is geographically and socially diverse, which is taken into account when analyzing them. As shown in the chart below, China and the EU are the world's first and third largest emitters of CO<sub>2</sub> respectively in absolute terms, and the EU has some of the strongest domestic support to address the climate change challenge. One should note that the chart shows the largest CO<sub>2</sub> emitters in a given year (2009).

### Top 25 of largest CO<sub>2</sub>-emitting countries in 2009



Source: Olivier and Peters, 2010.

www.pbl.nl

This means that the chart does not show cumulative amounts of CO<sub>2</sub> (taking into account also historic emissions). If the chart reflected cumulative emissions of pre-

vious years, it would have a different result in that many more developed countries would be at the top of the list. Moreover, the chart shows emissions in absolute terms, not per capita. If it were per capita GHG emissions, the outcome of the list would be very different in that China and India would be at the bottom of the list. In the bilateral relations between China and the EU, climate change is an important part of the agenda. Both parties are keen to improve the climate situation globally. The article first analyzes the Chinese position in climate negotiations. It then deals with the EU's position by analyzing the EU's greenhouse gas (GHG) emissions cuts and emissions trading scheme.

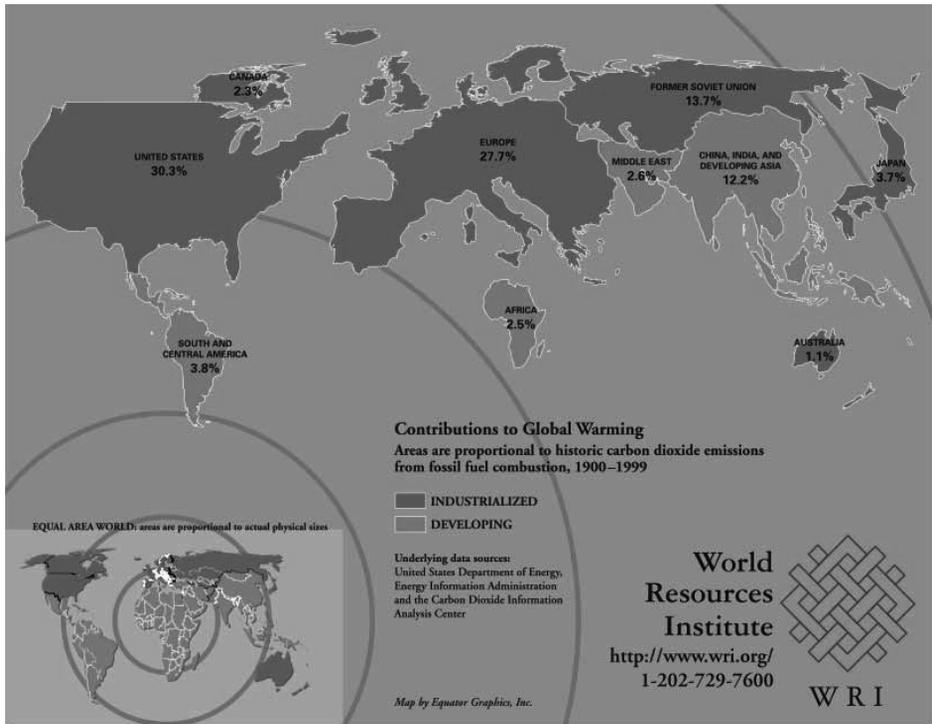
### Chinese Position

Climate change will have a significant impact on China. Conversely, China's impact on climate change is considerable. The size and rate of growth of China's economy, of its energy demand, of its energy imports, and of its atmospheric emissions of various types make this country an essential major partner in any regional or global discussions relating to climate change or the production and consumption of energy. For example, China's coal-powered economic engine is overwhelming. In 2005, China produced 35 per cent of the world's steel, compared to just 13 per cent in 1996. A business-as-usual situation is not conducive to sustainable development either at the national or international level. If China continues on its business-as-usual path, predictions are that by 2030 its emissions will grow twice as fast as emissions from all the 30-member OECD.<sup>1</sup> At the same time, as a Chinese Vice Minister of the State Environmental Protection Administration put it, China's economic "miracle will end soon because the environment can no longer keep pace".<sup>2</sup>

China, a natural leader among developing countries, puts forward its counter-argument to the US position, arguing that even if it is the largest producer of GHG emissions in cumulative terms since 2007,<sup>3</sup> its per capita GHG emissions were only about 25 per cent of US levels as of 2006.<sup>4</sup> Notwithstanding this, China is recently questioning statistics published by the International Energy Agency, which is especially shocking given the unreliability of many of the statistical indicators published by the Chinese government.<sup>5</sup>

1. K. HALLDING, M. OLSSON, *Balancing climate concerns and energy security: China searching for a new development pathway*, in: *Stockholm Environment Institute Policy Brief*, 2010; E. ECONOMY, *The Great Leap Backward?*, in: *Foreign Affairs*, 5(2007); C. BRAHIC, *China's Emissions May Surpass U.S. in 2007*, in: *NewScientist.com*, 25.04.2007.
2. S. BYRNES, *The Man Making China Green*, in: *New Statesman*, 18.12.2006.
3. China's becoming the world's largest GHG emitter has come true faster than initially predicted by experts. See C. BRAHIC, op.cit.
4. For an overview of carbon dioxide (i.e., the main GHG) emissions of the top-20 countries in the world in 2006, see [www.pbl.nl/images/Top20-CO2andGHG-countries-in-2006-2005\(GB\)\\_tcm61-36276.xls](http://www.pbl.nl/images/Top20-CO2andGHG-countries-in-2006-2005(GB)_tcm61-36276.xls), Netherlands Environment Agency.
5. [www.e360.yale.edu/content/digest.msp?id=2511](http://www.e360.yale.edu/content/digest.msp?id=2511).

China's position, therefore, is that global climate change must be addressed principally by wealthy industrial nations, which have not only the wealth and technology to provide solutions, but also the moral responsibility to do so because they have produced perhaps as much as 80 per cent of the GHG emissions to date, as shown in the chart below.<sup>6</sup> China's refusal to agree to an internationally binding emissions target is commonly cited in the US as an argument to justify the lack of US legislative action.



Source: World Resources Institute

If the Kyoto commitment is not enough to solve the problem, developed countries should do more about GHG emissions reductions before they ask developing nations for commitment. Large developing countries—such as China, India, and Brazil—will not commit internationally to material reductions in their emissions in the absence of some comparable commitment by, say, the US. Conversely, the US has not participated in the Kyoto Protocol, and will not agree to mandatory emissions reductions targets due to concerns about a loss of competitive advantage, relative to developing countries that are not subject to the same obligations.

6. For a comparison of carbon dioxide emissions of the top-20 countries in the world in 2006 and a ranking of their per capita emissions, see [www.pbl.nl/images/Top20-CO2andGHG-countries-in-2006-2005\(GB\)\\_tcm61-36276.xls](http://www.pbl.nl/images/Top20-CO2andGHG-countries-in-2006-2005(GB)_tcm61-36276.xls), Netherlands Environment Agency.

This is a circular argument, bringing to mind the age old question: what comes first, the chicken or the egg? The US is not willing to ratify an international multi-lateral environmental agreement on GHG emissions reduction unless and until developing countries (especially China) are on board. On the other hand, China will only agree to being on board if the US complies with the Kyoto Protocol first. At the same time, as observed earlier, the more vulnerable it is to climate change, the greater incentives there is for China to accept binding GHG emissions cuts. Indeed, a large part of the relevant legal literature suggests that the main polluting nations can be held responsible under international law for the harmful effects of their greenhouse-gas emissions. As a result, affected countries may have a substantive right to demand the cessation of a certain amount of emissions. In some cases, they also have the procedural means to pursue intergovernmental litigation in an international judicial forum such as the International Court of Justice. Developing countries are understandably reluctant to challenge any of the big donor nations in an international court.<sup>7</sup>

Regardless of what the US Congress does or does not legislate in climate change issues, with EU emissions probably having peaked and US emissions possibly having done so as well, at least for the foreseeable future, the fate of article 2 of the UNFCCC more and more resides with the actions of China, Brazil, India, and the other large developing country emitters. Conceivably, the US would eventually accept a Kyoto-like approach if means could be found to involve developing countries with specific obligations. However, the politics of negotiating subsequent steps and a long-term target for GHG emissions reduction are fraught with difficulty as was obvious at the 2009 COP-15 in Copenhagen, where the US and the EU accused China of forcefully obstructing progress in the negotiations.<sup>8</sup>

One wonders why China is so vehemently opposed to legally binding commitments under a strong multilateral climate regime and to international checks to verify that it is on track to slow down GHG emissions. Not only are developing countries such as China unlikely to assume binding obligations until industrialized countries have actually met some initial targets, but their potential assumption of obligations would raise the difficult question of equity.<sup>9</sup> With per capita CO<sub>2</sub> emissions from fossil fuels in the US about 4 times those of China and 20 times those of India, questions of equity loom large when long-term limits are considered. That said, article 3.1 of the UNFCCC expressly states that:

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7. For a possible legal argument for such a lawsuit and some observations on the potential impacts of bringing a case before an international court, see C. SCHWARTE, R. BYRNE, *International Climate Change Litigation and the Negotiation Process*, in: *Oil, Gas & Energy*, November 2010.
  8. D. HELM, C. HEPBURN, *The Economics and Politics of Climate Change*, Oxford University Press, Oxford, 2009.
  9. For a proposal of differentiated obligations among the UNFCCC parties regarding mitigation, adaptation, and financial commitments, see H. OTT, et al., *South-North Dialogue on Equity in the Greenhouse: A Proposal for an Adequate and Equitable Global Climate Agreement*, Deutsche Gesellschaft für Technische Zusammenarbeit, Eschborn, 2004.

“The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their *common* but differentiated responsibilities and respective capabilities. Accordingly, the *developed country Parties should take the lead* in combating climate change and the adverse effects thereof”.<sup>10</sup>

This clearly means that all countries share responsibilities, although at different levels. Nevertheless, limited progress on this issue has occurred. Starting with the COP-13 in Bali in 2007 and culminating at the 2010 COP-16 in Cancún, developing countries enthusiastically embraced a plan for voluntary accession to limits and reduction crediting in the forest sector (dubbed Reducing Emissions from Deforestation and forest Degradation [REDD] program), predicated, however, on financial support from developed countries. On the financial aspect, the UNFCCC reminds us that “[p]olicies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost”.<sup>11</sup>

At the same time, developing countries are watching this environmental negotiation process to ensure that it helps them cope with climate change without threatening their hopes of economic growth, which is a right that every country has, albeit the hope is green economic growth. If a given climate policy means the reduction of economic growth, that policy will most likely have no future. Officials are beginning to consider the possibility that a world climate change agreement might not be merely a crude attempt to cut off their economic growth, but rather a possible source of help in dealing with the air pollution that is emerging as a major threat to public health.<sup>12</sup> For instance, the health costs of air and water pollution in China account for an estimated 4.3 per cent of the nation’s GDP. Moreover, 16 of the world’s 20 most polluted cities are in China. Pollution in Beijing is six times higher than in New York City.<sup>13</sup> The ideal situation would be to have both developing nations on board and the US Senate ratify the Kyoto Protocol. This is currently unrealistic. We need to find a compromise.

Rich countries generally favour the creation of a new climate pact to succeed the Kyoto Protocol, placing more responsibility on key developing country emitters such as China and India, whereas developing countries continue to favour an approach that would implement a second phase of the Kyoto Protocol, which allows them to opt out of emissions reductions if these pose a threat to development. In fact, Chinese authorities have emphasized that the key to success in climate negotiations lies in commitments by rich countries to slash emissions and boost funding to developing

10. Emphasis added.

11. Article 3.3 of the UNFCCC.

12. J.W. ANDERSON, *Climate Change Diplomacy: The Next Step*, in: *Resources*, 142(2001), pp.11-13, here p.11. See also the views of R. BALME, *China’s Climate Change Policy: Governing at the Core of Globalization*, in: *Carbon & Climate Law Review*, 1(2011), pp.44-56.

13. *Cost of Pollution in China: Economics Estimates of Physical Damages*, available at [siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/China\\_Cost\\_of\\_Pollution.pdf](http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/China_Cost_of_Pollution.pdf), World Bank and State Environmental Protection Administration of the People’s Republic of China, February 2007; OECD, *Cities and Climate Change*, 2010.

countries in the form of aid and the promotion of clean technology. China has concerns over emissions commitments because it expects GHG emissions levels to continue rising for some time. In fact, over the past decade, China's GHG emissions have more than doubled.<sup>14</sup> This means that the EU's proposal to raise the bloc's target for cutting CO<sub>2</sub> emissions would have a limited impact on global warming, given that any benefit would be easily offset by China's rise in GHG emissions.

However, since the 2010 COP-16 in Cancún, China's attitude to combating climate change has been remarkable, and it has taken increasingly strong action to improve its energy efficiency, at both the national and sub-national level. For example, China has set a 2020 carbon intensity target as part of its national policy and is taking aggressive steps to implement it. Moreover, China has prepared a five-year plan (2011-2015) that is the clearest indication of its determination to become a clean-energy powerhouse. This five-year plan puts emphasis on economic and industrial restructuring towards a greener, more efficient, and lower carbon economy.<sup>15</sup> As part of this five-year plan, China is developing regional domestic carbon trading programs and is also experimenting with emissions taxes.

There are both environmental and economic advantages and disadvantages to energy efficiency. Regarding the advantages, energy efficiency not only implies no GHGs, it saves money, it cannot be exported off-shore, and it has more potential than any other alternative. However, the disadvantages are that one must pay upfront as an investment, the oil industry wants more consumers to spend more energy, and there are tax incentives for energy use.

Climate change is one of the key drivers for China's fundamental shift. Investment in clean energy in China rose 30 per cent in 2010, to US\$ 51.1 billion-by far the largest figure for a single country-and represented more than 20 per cent of the total global investment of US\$ 243 billion, according to Bloomberg New Energy Finance.<sup>16</sup> China's climate policy is largely motivated by factors other than concern about global warming, including energy security, the need to reduce local and regional atmospheric pollution from coal combustion that has caused serious health problems, and inter-

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14. ICTSD, *China Stands on Unconditional Climate Funding ahead of Cancún Talks*, in: *Bridges Trade*, 1(2010).
  15. See J. WATSON, et al., *UK-China Collaborative Study on Low Carbon Technology Transfer*, available at [goo.gl/A4zKR](http://goo.gl/A4zKR). Final Report, University of Sussex, April 2011; M. FULTON, *12th Five Year Plan – Chinese Leadership Towards a Low Carbon Economy*, Deutsche Bank Group, 04.04.2011; S. WEI, N. MABEY, *Chinese Challenge or Low Carbon Opportunity? The Implications of China's 12th Five-Year-Plan for Europe*, available at [tinyurl.com/6psxzba](http://tinyurl.com/6psxzba) in E3G Briefing, January 2011; F. GANG, et al. (eds.), *The Economics of Climate Change in China: Towards a Low-Carbon Economy*, Earthscan, London, Washington, DC, 2011; D. ZILLMAN, C. REDWELL, Y. OMOROGBE, L. BARRERA-HERNÁNDEZ, *Beyond the Carbon Economy: Energy Law in Transition*, Oxford University Press, 2008; D. SELIGSOHN, A. HSU, *How Does China's 12th Five-Year Plan Address Energy and the Environment?*, World Resources Institute, 07.03.2011.
  16. J. KANTER, *China, Once Suspect on Emissions, Is Rapidly Becoming a Clean-Energy Power*, available at [goo.gl/5scT2](http://goo.gl/5scT2), in *The New York Times*, 26.01.2011.

national competitiveness.<sup>17</sup> It has pushed development of renewable energy technology to become the market leader in production of wind and solar technology, and adopted aggressive fuel economy standards for motor vehicles.

However, China has been, and would like to continue as, the de facto leader of the G-77 group of developing countries, which is the UNFCCC/Kyoto Protocol negotiating bloc for most developing countries. Accordingly, it would prefer not to take steps that would alienate other developing countries and jeopardize its role, unless there are very large compensating economic or other gains to be had. At the same time, China is also a member of the BRICS group (Brazil, Russia, India, China, and South Africa) to coordinate climate and energy policies. Furthermore, China's interests, like those of Brazil and a few other developing countries, no longer align with the G-77 very well since some of these major developing countries are among the largest GHG polluters in the world today. Moreover, China is not only the largest GHG emitter, but the leading producer of wind turbines and solar panels. How will this aggressive move into renewable energy markets affect its climate positioning versus other countries?

### European Union Position

The European Union has long held a leadership position on climate change and has some of the strongest domestic support to address climate change. Moreover, the EU has been a firm supporter of the Kyoto Agreement, and it has been among the foreign voices to react to former President George W. Bush's decision to abandon the treaty. Its objective (and that of its then 15 Member States) was to ratify Kyoto and have it in force by 2002 at the latest, something that only happened in 2005.<sup>18</sup> In an encounter between officials of the EU and the US in Washington in early April 2001, European officials clearly said they were going to continue with the Kyoto process, even if the US was absent. In fact, some Europeans saw the COP-6 at The Hague as an opportunity for European governments to show leadership and initiative. Among Europeans, there is a profound mistrust of the market mechanisms that the Americans propose in order to reduce the cost and impact of GHG reductions.<sup>19</sup> On the other hand, the American view is that the European intransigence of asking parties to the Kyoto Protocol to accept Kyoto's commitments as they stand has killed the Kyoto Protocol because the current situation is unacceptable to the US. Europeans want a legally binding climate agreement with the US on board.

17. On air pollution, see P. BIRNIE, A. BOYLE, C. REDGWELL, *International Law and the Environment*, Oxford University Press, Oxford, 2009, Chapter 6.

18. See Interview given to Margot Wallström, former European Environment Commissioner, in: *Europe, The Green Issue*, published by the Delegation of the European Commission to the US, February 2001, pp.14-15, here p.15.

19. J.W. ANDERSON, op.cit., pp. 11 and 13.

In response to former President Bush's decision to avoid his responsibility vis-à-vis the environment, former European Commission President Romano Prodi said to *La Repubblica* newspaper that "if one wants to be a world leader, one must know how to look after the entire Earth and not only American industry".<sup>20</sup>

Furthermore, Margot Wallström, former European Commissioner for the environment, reacting to a statement from the US administration on their rejection of the Kyoto Protocol, said:

"The US position is extremely worrying. The US must understand that this is not a marginal issue for the EU. It has implications for external relations including trade and economic affairs, and it cannot be played down".<sup>21</sup>

Kjell Larsson, Sweden's former Environment Minister, said in a statement following meetings with US administration officials on Kyoto:

"Climate change is happening now and is a serious threat to the future of mankind. We are prepared if necessary to go forward without the US. We cannot allow one country to declare as dead the process for addressing this major global issue. However, we still hope to have the United States involved in the protocol as soon as possible".<sup>22</sup>

Also Gerhard Schröder, former Chancellor of Germany, reacting to the US administration's decision to reject Kyoto, said: "Nobody should be relieved from his responsibility for climate control".<sup>23</sup>

## 1. EU Emissions Cuts

Some people argue that in the EU there is much talk but little action concerning Kyoto. Even from a more technical viewpoint, European Finance and Trade Ministers are unlikely to let Environmental Ministers impose costly limits on emissions unless the US is also on board.

However, according to the UNFCCC, big EU economies such as the UK and Germany spewed smaller amounts of GHG into the atmosphere in 2008 than they did in 1990. Some of the biggest reductions of GHG emissions over the period between 1990 and 2008 took place in former Soviet countries such as Ukraine, partly because their industries were very polluting before 1990. Moreover, a new report by the European Environment Agency (EEA) based on GHG emission data for 2008-2009 shows that large drop in emissions during 2008 and 2009 gives the EU-15 a head start to reach and even go beyond its 8 per cent reduction target under the Kyoto Protocol.

20. BBC News, *Europe Backs Kyoto Accord*, 31.03.2001, available at [news.bbc.co.uk/1/hi/world/europe/1252556.stm](http://news.bbc.co.uk/1/hi/world/europe/1252556.stm).

21. See press release, *Commission Reacts to US Statements on the Kyoto Protocol*, available at [goo.gl/jYEH](http://goo.gl/jYEH), 29.03.2001.

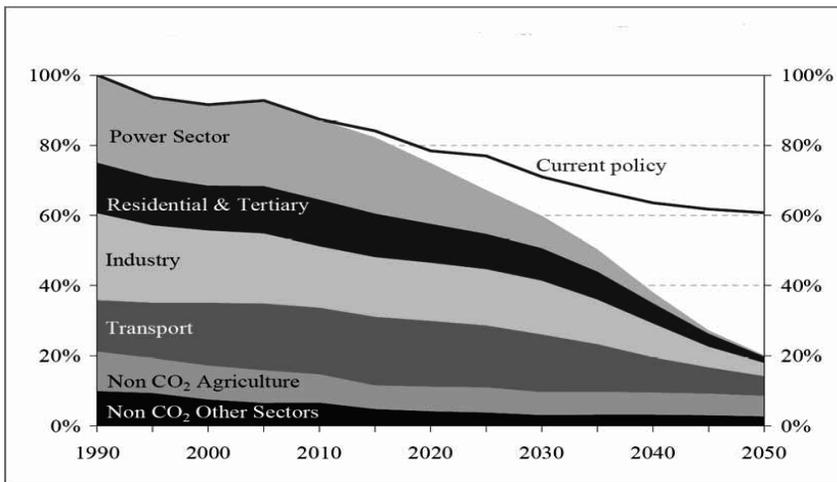
22. See *Europe*, Europe Update, 4(2001).

23. Ibid.

The EEA report also shows that the EU-27 is well on track towards achieving its 20 per cent reduction target by 2020. Furthermore, a report from the European Commission to the European Parliament and the EU Council shows the actual progress and determination in the EU to reduce emissions towards meeting the Kyoto target.<sup>24</sup>

More recently, the EU has been arguing that emissions reduction is good for European business, thereby moving away from traditional reasons for deeper cuts in GHG emissions such as moral responsibility and the survival of humankind.<sup>25</sup> Furthermore, a 2011 analysis by the European Commission shows “that domestic emission reductions of the order of 40% and 60% below 1990 levels would be the cost-effective pathway by 2030 and 2040, respectively. In this context, it also shows reductions of 25% in 2020. This is illustrated in [the chart below]. Such a pathway would result in annual reductions compared to 1990 of roughly 1% in the first decade until 2020, 1.5% in the second decade from 2020 until 2030, and 2% in the last two decades until 2050. The effort would become greater over time as a wider set of cost-effective technologies becomes available”.<sup>26</sup> This means that GHG emissions would be reduced by a further 5 per cent.

EU GHG emissions towards an 80 per cent domestic reduction (100%=1990)



Source: European Commission

24. European Environment Agency, *Tracking Progress Towards Kyoto and 2020 Targets in Europe*, EEA Report, No. 7/2010, pp.30-32; European Commission, *Progress Towards Achieving the Kyoto Objectives*, COM(2010) 569 final, 12.10.2010.
25. See J. CHAFFIN, *EU Warms to Business of Climate Change*, in: *Financial Times*, 30.11.2010.
26. Communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *A Roadmap for Moving to a Low Carbon Economy in 2050*, COM(2011) 112 final, 08.03.2011, p.4.

However, the only sector in which the EU's GHG emissions continue to rise is in the transport sector. This may complicate the EU's target of reducing its GHG emissions between 80 per cent and 95 per cent by 2050 compared to the 1990 levels, since transport is one of the largest energy-consuming sectors in the EU, accounting for one-third of EU energy consumption.<sup>27</sup>

## 2. EU Emissions Trading Scheme

The setup of transnational mitigation regimes is a challenging undertaking as is illustrated by the European Union's Emission Trading Scheme (EU ETS).<sup>28</sup> The EU ETS is the world's most important GHG emissions trading scheme, with an estimated value of EUR 63 billion of the overall EUR 86 billion value of the global carbon market in 2008. It is also the world's first mandatory cap-and-trade program for CO<sub>2</sub> emissions, albeit the GHG emission caps remain too high. Operational since 2005, the ETS's goal is to cut emissions by one-fifth from 1990 levels by 2020. It is the flagship policy covering half of the EU's carbon emissions, but, as is explained later, could turn intended restrictions on pollution into a trap that commits the EU to increasing carbon emissions for much of the next decade, unless changes are swiftly introduced.<sup>29</sup>

A growing number of countries are integrating cap-and-trade schemes into their national climate policies, such as the United States, New Zealand, Australia, Canada, and Japan. The EU ETS is the frontrunner in this development. The main features of the EU ETS are: 1) it is a classic cap-and-trade system with a highly decentralized implementation mechanism; 2) it is set up in sequential multi-year periods with a declining cap: phase 1 is 2005-2007, phase 2 is 2008-2012, and phase 3 is 2013-2020; 3) offset is allowed up to 13% of GHG emissions; and 4) there is a system of free allocation of emissions evolving to full auctioning.<sup>30</sup>

27. See a study by C. EGENHOFER, *The EU should not shy away from setting CO<sub>2</sub>-related targets for transport*, in: *Policy Brief*, 229(January 2011).

28. See [ec.europa.eu/clima/policies/ets/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/index_en.htm); see also A.D. ELLERMAN, *The EU Emission Trading Scheme: A Prototype Global System?*, Discussion Paper 2, Harvard Project on International Climate Agreements, Cambridge, Mass, 2008.

29. Directive 2003/87/EC, in force since 25.10.2003; see also K. CAPOOR, P. AMBROSI, *State and Trends of the Carbon Market 2009*, The World Bank, Washington, DC, May 2009, pp.1-2; P. NUSSBAUMER, *Working of Carbon Market*, in: *Economic and Political Weekly*, 28.07.2007, p. 3081; C. EGENHOFER, et al., *The EU Emissions Trading System and Climate Policy towards 2050: Real Incentives to Reduce Emissions and Drive Innovation?*, Centre for European Policy Studies, 2011.

30. See F. JOTZO, R. BETZ, *Linking the Australian Emissions Trading Scheme*, in: *Climate Strategies*, March 2009, available at [www.joanneum.at/climate/linking/CSLinkingAUS.pdf](http://www.joanneum.at/climate/linking/CSLinkingAUS.pdf); S. WEISHAAR, *The European Emissions Trading System: Auctions and their Challenges*, in: M. FAURE, M. PEETERS (eds.), *Climate Change and European Emissions Trading: Lessons for Theory and Practice*, Edward Elgar, Cheltenham, 2008.

In the context of emissions trading, free allocation of emissions credits to energy-intensive industries has been considered a means to prevent “carbon leakage” to less regulated markets. Free allocation of emissions allowances may potentially have trade-related ramifications, with respect to the World Trade Organization (WTO) and the Agreement on Subsidies and Countervailing Measures (SCM Agreement). New market mechanisms are set in place to allow developing countries to foster products with a low carbon footprint. The issuance of emission credits to host governments may be interpreted as unlawful subsidies under the SCM Agreement.

Among the achievements of the EU ETS are: first, a price of carbon over 10 per cent of global GHG emissions. There have been modest reductions so far, but there seems to be a pervasive signal for investment and innovation; second, there is a mechanism in place for effecting further GHG emissions reductions as desired.

The European Commission sees the EU ETS as a blueprint for emerging schemes around the world and the nucleus for creating a global carbon market. It aims to establish full bilateral links to other ETS on the condition that these schemes are mandatory, are based on absolute caps, and do not contain price ceilings for GHG emission allowances.<sup>31</sup> This vision includes achieving an OECD-wide carbon market by 2015 as well as the establishment and integration of trading systems in major emerging economies by 2020. The principal regulatory techniques to reduce carbon emissions are regulating technology, regulating the quantity of GHG emissions, regulating the price for GHG emissions, and regulating information.<sup>32</sup>

Both the Fourth Assessment Report by the IPCC and the Stern Review on the Economics of Climate Change make clear the point that establishing a price for GHG emissions is one of the most effective ways to mitigate climate change.<sup>33</sup> The ETS is on course to require savings of, at best, a miniscule quantity of 32 million tons of emissions between 2008 and 2012, despite covering 12,000 installations and 1.9 billion tons of emissions annually. Regulating a single power station over the same period could have had a greater impact. An already weak cap for this period became a severe over-allocation of pollution permits when the 2008 economic recession caused a sharp drop in production and therefore carbon emissions. These lower emissions, far from helping the EU towards a low carbon future, may actually trap it into continued high carbon economy because the ETS allows the huge volume of unused

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31. See the analysis of J. BAZELMANS, *Linking the EU ETS to Other Emissions Trading Schemes* and J. DE CENDRA DE LARRAGÁN, *Too Much Harmonization?: An Analysis of the Commission's Proposal to Amend the EU ETS from the Perspective of Legal Principles*, both in: M. FAURE, M. PEETERS (eds.), op.cit.
  32. A.D. ELLERMAN, et al., *Pricing Carbon: The European Union Emissions Trading Scheme*, Cambridge University Press, New York, 2010; C. CHENEVIÈRE, P. NIHOUL, *Les règles européennes visant à lutter contre le réchauffement climatique*, in: *Journal de Droit Européen*, 17(2009), pp. 125-131.
  33. See *Summary for Policymakers*, in: R.K. PACHAURI, A. REISINGER (eds.), *Climate Change 2007: Synthesis Report*, Cambridge University Press, Cambridge, 2007, p.18; N. STERN, *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, 2007, p. 349.

permits to be carried over into the next phase of the scheme that runs from 2013 to 2020.<sup>34</sup> These permits would then be available for companies as the economy picks up again from the 2008 economic recession, removing a key driver for investment in low carbon options. The ETS in its current form, although a very powerful and effective policy in principle, is in danger of actually hindering a low carbon economy for years to come.

There are a few ways to resolve these issues and avoid the carbon trap posed by the ETS.<sup>35</sup> These involve compensating for the fact that too many permits have been put into the system, and include the following points:

1. increasing the EU carbon reduction target from 20 per cent to 30 per cent by 2020. The EU has already achieved half of the existing target and a higher target would protect momentum towards a low carbon future;
2. setting caps for the next trading phase (2013-2020) based upon actual emissions and not on the permits allocated, which were too many.<sup>36</sup> This would require holding back 1.4 billion tons of permits from the scheme from the start, whilst a political decision is reached to cancel the permits permanently. This decision must be reached as quickly as possible;
3. amending the rules of the ETS (through a change in the Directive)<sup>37</sup> to allow flexibility to respond to large drops in demand such as those caused by the 2008 economic recession, in order to prevent an inundation of permits undermining carbon savings.

These measures face some stiff resistance. While too many permits have been handed out overall, this was not done evenly across those companies covered by the scheme. Some companies received a cap lower than their emissions, but others higher. A few of the latter received an enormous over-allocation of permits, making millions from their sale. These are the ‘carbon fat cats’, led by steel producer ArcelorMittal, and a number of them are lobbying hard to keep the ETS broken. If the international community manages to lower GHG emissions coming from the steel sector, climate change would largely be under control.

Millions of EU citizens are working hard to reduce their carbon emissions, saving a ton here, half a ton there. The ETS covers 1.9 billion tons annually, including those

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34. O. KUIK, F. OOSTERHUIS, *Economic Impacts of the EU ETS: Preliminary Evidence*, in M. FAURE, M. PEETERS (eds.), op.cit.
  35. See D. ELLERMAN, P. JOSKOW, *The European Union's Emission Trading System in Perspective*, Pew Center on Global Climate Change, 2008.
  36. O. REYES, *EU Emissions Trading System: Failing at the Third Attempt*, Carbon Trade Watch, April 2011.
  37. Directive 2003/87/EC of the European Parliament and of the Council of 13.10.2003 establishing a scheme for GHG emission allowance trading within the Community and amending Council Directive 96/61/EU, OJ L275, 25.10.2003; this Directive has been amended most recently by Directive 2009/29/EC, so as to improve and extend the GHG emission allowance trading scheme of the EU, OJ L140/63, 05.06.2009.

from electricity production.<sup>38</sup> To allow the ETS to fail, providing miniscule carbon savings and allowing some ‘carbon fat cats’ to make huge profits through over-allocated permits, would be a travesty.

Moreover, since the international negotiations for the creation of a global climate change agreement did not reach a conclusion in Copenhagen in 2009, the provisions of the Emissions Trading Directive on bilateral agreements have become more relevant than ever. International credits from projects or other emission-reducing activities in a third country are eligible for use in the EU ETS only if an agreement has been concluded between the EU and the respective third country. Furthermore, the Emissions Trading Directive also stipulates that once an international agreement on climate change has been reached, from 2013 onwards, international credits are disqualified from use within the EU ETS if these credits are generated from projects from third countries that have not ratified the said agreement.<sup>39</sup>

The Directive mentioned above establishing the EU ETS explicitly empowers the European Commission to negotiate linking agreements with Annex B countries that have ratified the Kyoto Protocol.<sup>40</sup> For the period beyond 2012, an amendment is foreseen which allows linking agreements to provide for the recognition of emission allowances between the EU ETS and mandatory GHGs trading systems with absolute emissions caps of any other country or regional entity.

EU law does not indicate whether the adoption of linking agreements should be accompanied by the establishment of new institutions entrusted with the regulation and supervision of linked carbon markets. Once the linking arrangement enters into force, disputes and irregularities may indeed arise across the link between participants in each emissions trading scheme, thereby necessitating adequate dispute settlement mechanisms, but also raising the question of accountability by both participants and any institution or officials supervising the link’s operation. As the implementation of the Kyoto Protocol’s Clean Development Mechanism shows, these problems, if addressed insufficiently, raise important legitimacy concerns.

The carbon market is still largely unregulated, presenting opportunities for unscrupulous traders to trick customers. As the first phase of the EU ETS demonstrated, even where a supranational body acts in a supervisory function, widespread manipulation of the system can take place.<sup>41</sup> While the carbon market is seeing explosive growth, particularly in the EU, such growth will not be boundless, particularly if the market is perceived as ineffective in reducing actual emissions. In order for the carbon market to achieve long-term, sustainable success, it must be regulated, and where the

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38. European Commission, *Investment Needs for Future Adaptation Measures in EU Nuclear Power Plants and Other Electricity Generation Technologies Due to Effects of Climate Change*, March 2011, available at [ec.europa.eu/energy/nuclear/studies/doc/2011\\_03\\_eur24769-en.pdf](http://ec.europa.eu/energy/nuclear/studies/doc/2011_03_eur24769-en.pdf).

39. Directive 2009/29/EC of 23.4.2009, amending Directive 2003/87/EC, article 11a (5) and (7).

40. Directive 2003/87/EC, § 17.

41. Regulation No. 2216/2004 for a standardized and secured system of registries pursuant to Directive 2003/87/EC was amended in July 2007 by Regulation No. 916/2007 to address problems regarding the registration of emissions under the EU ETS.

right to increase emissions is being traded across international borders, the potential for affecting trade is heightened.

It is vital to assess what kind of institutions would be needed to supervise linked carbon markets and facilitate a smooth transition to a globally integrated carbon market. When exploring options for the improved governance of an integrated carbon market, the question of what could be learned from the trade field comes up. The international trading system, which started with bilateral free-trade agreements, evolved into a comprehensive multilateral regime (i.e., the GATT) and finally resulted in the creation of a powerful new organization, the WTO.<sup>42</sup>

### 3. *Inclusion of Aviation in the EU ETS*

Given the limited progress in the UN climate change negotiations, as of 1 January 2012, the EU included aviation in its ETS, which means that airlines using EU airports will have to pay carbon charges for any flights that land or take off in the EU.<sup>43</sup> This new policy applies to EU and non-EU airlines (subject to a potential exemption), to passenger and cargo flights, to flights between EU airports, and between EU and non-EU airports. Not surprisingly, this step has raised vehement objections, particularly from the US, India, and China (which has outright refused to comply with the scheme). A paper backed by many Member States of the International Civil Aviation Organization stated that the inclusion of aviation in the EU ETS is a violation of the “cardinal principle of state sovereignty” as delineated by the Chicago Convention.<sup>44</sup>

In response to a legal challenge put forth by Air Transport Association of America and Others, the Court of Justice of the EU’s Advocate General Juliane Kokott released an opinion in October 2011, stating that the inclusion of aviation in the EU ETS is legal and compatible with all the provisions and principles of international law. While the Advocate General’s opinion is not binding, the Court of Justice of the EU was expected to follow it. Indeed, in December 2011, the Court ruled that including aviation in the EU ETS is legal and does not violate international law or the Open Skies Agreement between the US and the European Community and its Member States.<sup>45</sup>

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42. See notably R. LEAL-ARCAS, *International Trade and Investment Law: Multilateral, Regional and Bilateral Governance*, Elgar, Cheltenham, 2010, Part 1; R. LEAL-ARCAS, *Proliferation of Regional Trade Agreements: Complementing or Supplanting Multilateralism?*, in: *Chicago Journal of International Law*, 2(2011), pp.597-629; R. LEAL-ARCAS, *The Fragmentation of International Trade Law: Is Now the Time for Variable Geometry?*, in: *The Journal of World Investment and Trade*, 2(2011), pp.145-195.
43. Directive 2008/101/EC of the European Parliament and of the Council of 19.11.2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for GHG emission allowance trading within the EU (OJ 2009 L 8, p. 3).
44. A. LEUNG, H. SUHARTONO, *China Airlines Won't Pay EU Carbon Tax*, Reuters, 06.01.2012; ICTSD, *Aviation Body Pushes for Exemptions under EU Emissions Scheme*, 14.11.2011; Convention on International Civil Aviation, available at [www.mcgill.ca/files/iasl/chicago1944a.pdf](http://www.mcgill.ca/files/iasl/chicago1944a.pdf).
45. Opinion C-366/10, delivered on 06.10.2011 (not yet published); Case C-366/10 (not yet published).

For its part, the EU has insisted that including only EU airlines will not be effective, as the resulting GHG emissions reduction may well be offset by a growth in emissions by non-EU airlines. Benoît Mayer, in support of the move, points out that there is no economic incentive for the EU in adopting this measure, and that one

“should take its environmental motivation duly into account; and mitigating climate change is certainly a legitimate purpose recognized in international law, therefore allowing certain forms of legislation with an extraterritorial effect”.<sup>46</sup>

Joanne Scott and Lavanya Rajamani, however, while in agreement that the EU’s motives are to be sympathized with, argue that the “aviation decision may not sufficiently reflect or give adequate weight to the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDRRC)”, which calls for developed countries to take the lead in efforts to mitigate climate change.<sup>47</sup>

With China refusing to comply and with the US waiting on a US Senate decision that may end up making compliance with the EU ETS illegal for US airlines, there is much that hangs in the balance. The inclusion of aviation in the EU ETS may lead to an all-out trade war.<sup>48</sup> In fact, a group of over 20 countries (including China, the US, India, and Russia) has argued that the inclusion of international civil aviation in the EU ETS may lead to serious market distortions and unfair competition. Among the options agreed upon by this group of over 20 countries are barring airlines from participating in the Brussels plan; imposing levies or charges on EU airlines as a countermeasure; filing a formal complaint at the International Civil Aviation Organization (ICAO); assessing whether the EU ETS is consistent with the WTO Agreements and taking appropriate action; and stopping talks with EU carriers on new routes.<sup>49</sup>

46. B. MAYER, *A Defense of the EU Emission Trading Scheme in Aviation Activities*, p.2, available at [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1955817](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1955817).

47. J. SCOTT, *EU Climate Change Unilateralism: International Aviation in the European Emissions Trading Scheme*, 01.11.2011, pp.1, available at [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1952554](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1952554).

48. ICTSD, *The Inclusion of Aviation in the EU ETS: Economic and Environmental Consequences*, Vol. 5, No. 4, November 2011; see also J. MELTZER, *Climate Change and Trade-The EU Aviation Directive and the WTO*, in: *Journal of International Economic Law*, 1-46, first published online: 02.02.2012. Regarding the impact of the EU ETS on US aviation, see the views of R. MALINA, et al., *The Impact of the European Union Emissions Trading Scheme on US Aviation*, in: *Journal of Air Transport Management*, 19(2012), pp.36-41.

49. See Joint declaration of the Moscow meeting on inclusion of international civil aviation in the EU ETS, available at [www.ruaviation.com/docs/1/2012/2/22/50](http://www.ruaviation.com/docs/1/2012/2/22/50).

