EU Domestic Advisory Group under the EU-Korea FTA

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Discussion Paper

on

The European Union's Emissions Trading Scheme (ETS)
Contribution of the EU Domestic Advisory Group to the EU –Korea Civil Society Forum

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1. Introduction

1.1 Climate change is one of the most serious challenges facing humankind. The European Union (EU) is working to promote ambitious global action to limit climate change through the UN Framework Convention on Climate Change (UNFCCC), in other international fora and through its bilateral relations with third countries. Its immediate objective is to reach an agreement on a new legally binding instrument under the UNFCCC to be adopted in 2015, committing all major economies to comparable and measurable emissions reduction efforts and becoming applicable as of 2020. Joint efforts to keep the increase in global average temperature below 2°C compared to pre-industrial times[1] need more ambitious commitment globally. Already now and even under a 2°C scenario, many developing countries face key risks and lack adaptation capacities. Cooperation with partner countries should contribute to increased investment in clean technologies and to development of low-carbon and energy-efficient solutions for the future economy.

The EU has also been at the forefront of the fight against climate change on the domestic stage. So far this approach has not delivered a global level playing field for industry. The majority of EU leaders have subscribed to the goal of reducing emissions by developed countries of between 80 and 95% compared to the levels in 1990[2], by 2050. In this connection, the EU has adopted a series of targets and policy instruments, which the ETS is part of.

1.2 The EU pursues dialogue on climate change with a number of partner countries, including the Republic of Korea, Japan, India and China and also with regional forums, such as the Asia-Europe Meeting (ASEM) and the Association of South East Asian Nations (ASEAN)[3].

1.3 The EU Domestic Advisory Group (DAG) welcomes the growing involvement of the Republic of Korea in international dialogue on climate change and its efforts to reduce GHG emissions. This is reflected *inter alia* by the establishment of an Emissions Trading Scheme in Korea and the fact that Korea (Songdo, Incheon City) hosts[4] the Green Climate Fund[5], an operating entity within the UNFCCC financial mechanism helping to attain the objectives of the Convention by channelling financial means to developing countries to support their efforts in the area of climate change.

In 2009, the Republic of Korea announced its GHG reduction target of 30% below business-as-usual emissions by 2020. It adopted the "Low Carbon & Green Growth Basic Act" in 2009 and "Korean ETS Act" in 2012. In January 2014, the Korean government published Korea's GHG Reduction Roadmap up to 2020 and the ETS Basic Plan.

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1 More information about EU cooperation on climate change: http://ec.europa.eu/clima/policies/international/index_en.htm

2 See: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/119175.pdf

3 See: http://ec.europa.eu/clima/policies/international/cooperation/index_en.htm

4 See: http://www.gcfund.org/index.php?id=110

5 See: http://www.gcfund.org/about/mandate.html

The Korean ETS (KETS) is intended to cover almost 60% of the total GHG emissions of Korea, which will be approximately 425 MtCO2e in 2015. About 500 business entities from the power, industry, transport, buildings and waste sectors whose GHG emissions are more than 25 000 tCO2e will be involved in the ETS. The first phase will start on 1 January 2015 and will last until December 2017. The second phase will last from 2018 to 2020. From 2021, each phase will last for five years[6].

1.4 In the Trade and Sustainable Development Chapter of the EU-Korea Free Trade Agreement (FTA)[7], the EU and Korea commit to cooperate in the area of the environment, including on issues related to climate change. According to Article 13.5, "the Parties reaffirm their commitment to reaching the ultimate objective of the UN FCCC and its Kyoto Protocol. They commit to cooperating on the development of the future international climate change framework in accordance with the Bali Action Plan." In addition, in Annex 13 (paragraph 1, letter f), the Parties commit to "cooperation on trade-related aspects of the current and future international climate change regime, including issues relating to global carbon markets, ways to address adverse effects of trade on climate, as well as means to promote low-carbon technologies and energy efficiency".

1.5 Accordingly, the EU and Korea DAGs established under the Trade and Sustainable Development Chapter agreed to exchange information on features and experience in implementation of the EU and Korean Emissions Trading Schemes as elements of the climate change policy of both Parties.

1.6 The present EU DAG Discussion Paper presents the main features of the EU Emissions Trading System at successive stages of its development, and on the basis of experience from its implementation provides views concerning elements of a well-designed ETS. Whenever feasible, the Discussion Paper indicates that the ETS is accompanied by other measures and initiatives in the area of climate change, environment or energy.

1.7 So far, taking into account the recent economic slow-down, the implementation of the environment, energy and climate change policy mix by the EU and its Member States has brought about the following results:

- Greenhouse gas emissions in 2012 decreased by 18% relative to emissions in 1990 and are expected to be reduced further to levels 24% and 32% lower than in 1990 by 2020 and 2030 respectively on the basis of current policies.
- The share of renewable energy increased to 13% in 2012 as a proportion of final energy consumed and is expected to rise further to 21% in 2020 and 24% in 2030.
- The energy intensity of the EU economy was reduced by 24% between 1995 and 2011 whilst the improvement by industry was about 30%.

6 Information provided by the European Commission, DG CLIMA.

7 Text of the EU-Korea Free Trade Agreement, Official Journal, OJ L 127 of 14 May 2011; http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2011:127:FULL&from=EN

- The carbon intensity of the EU economy fell by 28% between 1995 and 2010[8].

2. Main features of the EU Emissions Trading System as an element of the EU policy in the area of climate change

2.1. The European Union **Emissions Trading System** (EU ETS) launched in 2005, constitutes the world's first major carbon market as part of the EU's strategy to cut GHG emissions at the least cost[9].

2.1.1. The ETS works by putting at EU level a limit (cap) on overall emissions from more than 11 000 heavy energy-using installations across different industry sectors, such as power and heat generation, energy-intensive industry sectors including oil refineries, steel, iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids, bulk organic chemicals and the civil aviation sector.

2.1.2. Within the overall limit which is reduced every year, participating companies can buy and sell emission allowances as needed. The objective is to grant them flexibility and the possibility to cut their emissions in the most cost-effective way.

2.1.3. The ETS also allows the companies to buy credits from emission-saving projects implemented in other parts of the world, and thus acts as a driver of investment in clean technologies and low-carbon solutions, in particular in developing countries.

2.1.4. Participation in the EU ETS is mandatory for companies operating in the above-mentioned sectors, but in some cases only plants above a certain size are included. Member States can exclude certain small installations from the system if fiscal or other measures are in place that will cut their emissions by an equivalent amount.

2.1.5. Installations covered by the ETS must monitor and report their EU ETS emissions for each calendar year and have their emission reports checked by an accredited verifier.

2.1.6. Altogether the EU ETS operates in 28 EU Member States plus Iceland, Liechtenstein and Norway, covering around 45% of total GHG emissions in the EU. The rest, over half of the EU's CO2 emissions, are mainly covered by the "Burden Sharing Decision" applicable to EU Member States: emissions from transport, buildings, agriculture and waste. In these non-ETS sectors a lot of different instruments to reduce emissions are in place, such as carbon taxes, bio-fuel obligations, subsidies for energy efficiency investments, etc.

2.2. ETS development has been divided into **different trading periods**.

8 Commission Communication "A policy framework for climate and energy in the period 2020-2030", COM(2014) 15 final of 22.1.2014, page 2, see: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0015&from=EN

9 Information in this part of the Discussion Paper is based *inter alia* on the fact sheet on EU ETS available on the European Commission (DG CLIMA) website: http://ec.europa.eu/clima/publications/docs/factsheet_ets_en.pdf

2.2.1. The first period (2005 to 2007)[10] was used for 'learning by doing', i.e. establishing a mechanism which in the following years would enable the EU and its Member States to meet their Kyoto Protocol emission targets. In that period, the EU ETS covered only CO2 emissions from power generators and energy-intensive industrial sectors. Almost all allowances were given to businesses free of charge. The penalty for non-compliance (applied if an installation did not surrender enough allowances to cover its emissions) was EUR 40 per tonne. In this period, the estimated number of allowances needed turned out to be excessive. As a result, the price of the first-period allowances fell to zero in 2007. On the other hand, that "trial period" made it possible to set up the infrastructure for monitoring, reporting and verification of emissions.

2.2.2. In the second trading period (2008-2012), the number of allowances was reduced by 6.5%. The proportion of general allowances allocated for free fell slightly to at least 90%. The penalty for non-compliance was increased to EUR 100 per tonne. Companies were allowed to buy emission credits under the Kyoto Protocol's project mechanisms, the Clean Development Mechanism (CDM) and Joint Implementation (JI), issued for investment in clean technologies and emission reducing projects in developing countries. During that period, the economic recession cut emissions and demand for allowances in the EU by more than the above-mentioned 6.5% leading to a surplus of unused allowances and credits with an impact on the carbon price. The carbon price decreased from about EUR 30 per tonne in 2008 to about EUR 6 per tonne in 2012[11]. In that period, aviation was included in the system and the range of GHG covered by ETS was widened through the inclusion of nitrous oxide emissions from the production of nitric acid.

2.2.3. The third trading period (2013-2020)[12], is now introducing a number of reforms with the introduction of an EU-wide cap on emissions (instead of previous national caps established through National Allocation Plans - NAPs) that will be reduced by 1.74% each year and a progressive shift towards auctioning of allowances instead of free allocation (it was planned that at the beginning of that period, in 2013, some 40% of all allowances would be auctioned). In addition to CO2, the system covers emissions of other gases, such as nitrous oxide (N2O) from production of nitric, adipic, glyoxal and glyoxlic acids and perfluorocarbons (PFCs) from aluminium production. It covers the following sectors: power and heat generation; energy-intensive industry sectors including oil refineries, steel works and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals, as well as civil aviation.

2.2.4. As of the third trading period, power generators must buy all their allowances. In sectors other than power generation, the transition to auctioning takes place progressively.

2.2.5. The manufacturing industry received 80% of its allowances free of charge in 2013, with an annual decrease leading to a total of 30% in 2020. Installations deemed to be exposed to a

10 More information about the first and the second phase at: http://ec.europa.eu/clima/policies/ets/pre2013/index_en.htm

11 http://www.pointcarbon.com

12 See: http://ec.europa.eu/clima/policies/ets/index_en.htm

significant risk of carbon leakage (i.e. risk that due to carbon costs and their participation in ETS, production/economic activity exercised by these installations will be moved to countries with lower requirements and costs of emission reduction) receive special treatment to support their competitiveness. Those installations reaching a benchmark of emissions performance in principle receive all the allowances they need for free, based on their historic emissions. Installations falling short of the performance benchmark receive a proportionately lower allocation of allowances than those who reach it. In the aviation sector, only 15% of allowances will be auctioned over the whole 2013-2020 period.

2.2.6. Auctioning of allowances generates revenues which can be used to fund innovative low-carbon energy demonstration projects. Whereas most of the revenues are delivered to Member States, 300 million allowances were made available to support demonstration projects, on a commercial scale, for Carbon Capture and Storage (CCS) technology as well as for renewables in the EU (so-called NER300 Fund).

2.2.7. In addition, the surplus of unused allowances (largely due to a greater than anticipated emissions reduction since 2008 caused by the economic crisis, imports of international credits and a higher increase in renewable energy generation) led to a decision on "back-loading", i.e. postponing auctions of 900 million allowances from the beginning of the trading period (2014-2016) to the end of it (2019-2020)[13]. Since the start of the third period the carbon price has been about EUR 6 per tonne.

2.2.8. In January 2014, the European Commission presented proposals for the fourth trading period (2021-2030)[14]. In order to achieve the overall objective of reducing greenhouse gas emissions by 40% by 2030 compared to 1990 levels, it has been proposed that the EU cap be lowered by 2.2% per year from 2021, compared with 1.74% currently. The Commission has also put forward a legal proposal to establish a Market Stability Reserve as an element of ETS reform. It would allow for adjustment in supply of auctioned allowances depending on changing needs on the market and would be based on a pre-defined set of rules. Thus, it should help to maintain the carbon price at a reasonable level (by preventing too many allowances from being auctioned on the market) and - on the other hand - would mitigate the risk of sudden price increases (which could potentially result in carbon leakage) in case there is a temporary increase in demand for allowances. The above-mentioned European Commission proposals will be discussed with the EU Member States, the European Parliament and relevant stakeholders in the coming months in order to assess whether this is the most cost-effective approach or whether some adjustments would be required.

2.3. The EU ETS is also a fundamental pillar of the **wider EU climate and energy package**.

2.3.1. The first EU climate and energy package was launched in 2009. It introduced the 20-20-20 targets through a series of policy instruments to incentivize market players to meet the

13 For details about "back-loading" of allowances, see: http://ec.europa.eu/clima/policies/ets/reform/index_en.htm

14 For details on the EU policy framework on climate change up to 2030, see: http://ec.europa.eu/clima/policies/2030/index_en.htm; for related documents, please see: http://ec.europa.eu/clima/policies/2030/documentation_en.htm

following targets by 2020: 20% GHG emissions reductions, 20% share of renewable energy in the primary energy supply and 20% energy efficiency improvement[15].

2.3.2. In January 2014, the European Commission presented proposals for a new policy framework in the area of climate change and energy for the years 2020-2030 with proposals supporting achievement of the following objectives: 40% reduction of GHG emissions compared to 1990 levels; at least 27 % share of renewable energy in the primary energy supply and an increased level of energy savings – a target of 30% in 2030 was proposed by the Commission in July 2014. The above-mentioned European Commission proposal is currently being discussed with the EU Member States, the European Parliament and relevant EU stakeholders in order to assess whether this is the most cost-effective approach or whether any adjustments would be necessary (in particular regarding the option of continuing the three-target approach or moving to a single GHG target approach).

3. Views on elements of a well-functioning ETS

3.1. The EU Domestic Advisory Group (DAG) takes note that the ETS is a key element of climate and energy policy in the EU and that the Republic of Korea will launch its Emissions Trading System in 2015. A variety of views have been expressed on the existence and functioning of ETS, both doubtful and supporting ones. The European Economic and Social Committee in its opinion on the EU ETS "considers the European Union's Emissions Trading System (EU ETS) to be a key instrument in EU climate and energy policy for reducing the EU's industrial emissions, and, therefore, calls for its genuine reform aimed at achieving both the EU's climate objectives for 2020 and 2030 while safeguarding our industrial competitiveness and avoiding investment leakage"[16]

3.2. As an element of climate change policy, an ETS is developed and implemented in parallel with a number of other measures and initiatives having an impact on the operation of enterprises. There is a need to achieve better coherence between policy and legislative initiatives, as well as targets in areas such as climate change, energy, environment and industrial policy in order to generate positive synergies, to encourage investment in new technologies, improve air quality, support an increase in energy efficiency, and to avoid excessive costs or other burdens for enterprises. The measures should also include raising the awareness of consumers, e.g. with regard to energy-efficient products and low-carbon goods and services.

3.3. For the EU, Korea or any partner country with an ETS and overall emission reduction targets, achieving further improvements in emission reduction in non-ETS sectors can be crucial to reaching long-term objectives in the most cost-efficient way. In the EU, these sectors constitute more than half of the current CO_2 emissions. Agriculture (being one of the non-ETS sectors) in particular could mitigate GHG emissions and could become part of the

15 For details related to the EU 2020 climate and energy package, see: http://ec.europa.eu/clima/policies/package/index_en.htm; for related documents, please see: http://ec.europa.eu/clima/policies/package/documentation_en.htm

16 EESC opinion NAT/637 on the EU ETS of 4 June 2014: http://www.eesc.europa.eu/?i=portal.en.nat-opinions.31005

solution rather that part of the problem. Buildings and construction is a sector where a large share of potential for improving energy efficiency and reducing GHG remains untapped. This sector has considerable potential for cost-effective savings, growth and job creation.

3.4. To be effective, to limit transition costs and to provide a predictable investment framework, it is crucial for an ETS to have a stable long-term reduction cap.

3.5. An ETS must provide an incentive to reduce emissions in a cost-effective manner for all sectors covered. Emissions reduction can be achieved through investments in low-carbon technology, renewable energy sources, energy efficiency or by other means. Among other factors, an ETS market-based price signal will play a role in incentivizing investments to reduce emissions.

3.6. Given the up-to-date experience, with changing demand and supply of allowances reflected in changes in price levels on the carbon market, the EU DAG believes that a well-designed ETS should include mechanisms to reduce carbon price volatility while ensuring a stable, predictable, market-based scheme. While detailed features of such mechanisms can be adjusted to the respective market, some characteristics should be common, e.g. each such mechanism should strike the right balance between flexibility and predictability and require a thorough impact assessment in cooperation with all stakeholders and especially with the actors that have to comply with a given ETS. Such a mechanism, which would enable some adjustment in supply of allowances on the carbon market, should be based on a set of clear rules defined in detail in advance to avoid ad-hoc interventions. Clearly defined rules, including on the responsibilities of public authorities, could increase predictability for market participants.

3.7. Any mechanism to reduce price volatility should be volume-based (i.e. activated on the basis of the relationship between demand and supply) rather than price-based to allow price establishment by the market.

3.8. ETS auctioning revenues should be used to support enterprises in the transition towards a low-carbon economy by promoting R&D&I aimed at enhancing low-carbon manufacturing or energy producing activities in the EU and by preventing carbon leakage (direct and indirect costs). A specific fund should be developed to continue financing after the present NER300 fund has ended.

3.9. The ETS should provide a common regulatory framework for the power sector and other sectors covered by the scheme. However, to address the risk of carbon leakage or the loss of competitiveness of energy-intensive industries participating in ETS, there should also be different allocation rules on emissions allowances for the power sector and industry, i.e. the ratio of freely allocated allowances to auctioned allowances should be different for the power sector and other industries.

3.10. For sectors exposed to a risk of carbon leakage, e.g. full compensation through free allocation of allowances based on efficiency benchmarks should allow the most efficient companies to be globally competitive without being penalised by direct carbon costs (i.e. by the need to pay for emission allowances due to their participation in ETS). In this context, real/recent production levels – combined with realistic benchmarks – should be considered as an option for the allocation of free allowances in order to avoid problems deriving from over or under-allocation.

3.11. Among other factors, ETS plays a role in increasing electricity prices if it covers the power sector. Electricity producers burning coal, gas or oil products and setting the price in a given electricity market pass on carbon costs in the wholesale market price to some extent. Evidence shows that this is largely independent of whether certificates are allocated for free or have to be purchased on the market.

There is a need for a stronger convergence of compensation levels developed by different countries to address / mitigate the negative effects of indirect carbon costs (e.g. higher electricity prices) on energy-intensive industries which participate in the ETS and compete internationally. The use of auctioning revenues could be considered for this purpose.

3.12. It is recommended that an ETS not be developed in isolation, but that it be linked to other existing or emerging schemes provided that these schemes meet the following conditions: 1) they are mandatory, 2) they have a similar level of mitigation commitment, and 3) they have a robust system to measure, report and verify GHG emissions. This would contribute to increased cost-efficiency of emission reduction and mitigation efforts and promote the creation of a global carbon market.

3.13. New market mechanisms could be developed and be available for voluntary use by the government of Korea depending on its national requirements. Should sectorial mechanisms be developed, they must be designed to avoid, as far as possible, the distortion of competition between regions for globally traded goods.

Korea's success in its domestic ETS is very important given that other countries, such as the People's Republic of China, Taiwan, Thailand, Chile and Mexico are carefully watching what will happen in Korea in 2015. If Korea starts its ETS successfully and reduces its GHG emissions without serious side-effects, its success could trigger an expansion of the idea of ETS as the most cost-effective way to other emerging economies and developing countries and support their efforts to reduce emissions. Therefore, the EU can provide its expertise and technical assistance to support the success of the Korean ETS, which will have an impact both nationally and internationally.