

# The Kyoto Protocol and its Joint Implementation Mechanism

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On February 16, 2005, the Kyoto Protocol entered into force. This must be considered a real landmark in international environmental law. Even more importantly, the Kyoto Protocol and its Joint Implementation Mechanism provides for significant investment opportunities for both the Russian Federation and European entities. This article provides an overview of the commitments of the Kyoto-Protocol and the process of Joint Implementation and the existing link to the EU-emission trading scheme.

## Kyoto Commitments

The Kyoto Protocol<sup>1</sup> to the United Nations Framework Convention on Climate Change (UNFCCC)<sup>2</sup> is one of the most ambitious treaties ever adopted in international environmental law.<sup>3</sup> It contains the joint commitment of industrialized countries (Annex I parties<sup>4</sup>) to reduce their aggregate greenhouse gas (GHG)<sup>5</sup> emissions by at least 5% below 1990 levels (base year<sup>6</sup>) in the commitment period of 2008–2012.<sup>7</sup> The Kyoto-Protocol sets country specific quantified emission limitation and reduction commitments especially taking into account their domestic interests.<sup>8</sup>

Although, some industrialized countries have only agreed to stabilize their emissions, the majority of the industrialized world has assumed reduction obligations. The difference in party's individual targets is the outcome of contentious negotiations. Several parties, notably EC member states, and the United States called for an uniform target for all industrialized country parties. Other parties led strongly by Australia, and including Japan, Norway and Iceland argued that differentiated targets, rather than an uniform target, were appropriate, taking into account the vast differences in country's national circumstances, particularly national resources and energy production consumption patterns.<sup>9</sup>

## Flexible Approach of the Kyoto Protocol

Fearing that ambitious emission targets could harm industrial development of industrialized countries, the Kyoto Protocol provides for a flexible approach by introducing three flexible instruments: Emission Trading (Art. 17 KP) and the project based mechanism Joint Implementation (JI — Art. 6 KP) and Clean Development Mechanism (CDM — Art. 12 KP). Those instruments allow industrialized countries to meet part of their emission targets by acquiring carbon credits from other industrialized countries or by conducting GHG mitigation projects in other countries. The principle behind the three flexible Kyoto Mechanisms is that the impact of GHG emissions on climate change is the same whichever country they have been emitted from, and therefore reductions are equally helpful regardless of the country achieving them.

In meeting its national target, a country may find it more cost effective to undertake projects and to achieve some of its emissions reductions in other countries, if the costs of reducing emissions are lower.

<sup>1</sup> Kyoto Protocol (KP) to the United Nations Framework Convention on Climate Change of December 10, 1997, 37 ILM 22 (1998).

<sup>2</sup> United Nations Framework Convention on Climate Change (UNFCCC) of May 9, 2001, 31 ILM 849 (1992).

<sup>3</sup> See Oberthur/Ott, *The Kyoto Protocol, International Climate Policy for the 21st Century*, 1991, p. 95.

<sup>4</sup> States which are listed in Annex I to the UNFCCC (supra 1): Annex I parties include the industrialized countries that were members of the OECD (Organisation for the Economic Co-Operation and Development) in 1992, plus countries with economies in transition, including the Russian Federation, the Baltic States, and several central and Eastern European states.

<sup>5</sup> See Annex A KP (supra note 1): Carbon dioxide – CO<sub>2</sub>; methane – CH<sub>4</sub>; nitrous oxide – N<sub>2</sub>O; hydrofluorocarbons – PFCs; perfluorocarbons – PFC<sub>s</sub>; sulphurhexafluoride – SF<sub>6</sub>.

<sup>6</sup> However, countries with economies in transition (CEIT) were granted the flexibility of selecting a base year different from 1990: Poland 1988; Romania 1989; Russian Federation 1990; Slovakia 1990; Slovenia 1986; Ukraine 1990.

<sup>7</sup> See Art. 3 KP (supra note 1). Contrary to the Kyoto Protocol the ultimate objective of the UNFCCC is to achieve a stabilisation of atmospheric concentrations of greenhouse gases at levels that would prevent dangerous anthropogenic interference with the climate system.

<sup>8</sup> See Art. 3.7 KP and Annex B KP (supra note 1).

<sup>9</sup> Breidenich/Margraw/Rowley/Rubin, *American Journal of International Law*, 1998, p. 320.

### Joint Implementation (JI)

JI allows Annex I countries, i.e. countries with a Kyoto Protocol emission reduction obligation, to carry out a project to reduce GHG emissions in another country.<sup>10</sup> Emission Reduction Units (ERUs) generated by such a projects can then be used by the investing countries to meet their emissions targets. To prevent the amount of ERUs generated by such projects from being inflated by “paper emissions” but result in real GHG reductions, any ERUs transferred under JI will be subtracted from the transferring party’s allowed emissions.<sup>11</sup> Thus JI leaves the total emission allowance of industrialized countries

investor company may benefit from an additional source of revenue provided by selling the credits that are assigned to the project.

During the first Kyoto Commitment Period (2008–2012), credits are accumulated for reduced GHG emissions, equivalent to the amount of emissions reductions compared to a “business as usual” scenario (known as the “baseline”). These credits can be used by an investing company to set against its own emissions target, or can be sold to allow another company or country to meet its own target.

### Project Cycle

A JI arrangement is subject to:

- ! The project having the approval of the countries involved — Art. 6.1 (a) KP
- ! The project resulting in emission reductions that would not have otherwise occurred in its absence (additionality) — Art. 6.1 (b)
- ! States being in compliance with their reporting duties — Art. 6.1 (c) KP
- ! The Project being supplemental to domestic action — Art. 6.1 (d) KP

However, under the international climate change regime this standard has been developed further. It provides for two sets of JI procedures, commonly referred to as the “Two Track” approach. The Two Tracks refer to alternative procedures and projects cycles for JI projects depending on the status of the host country with regard to meeting relevant eligibility requirements.

**Track 1** procedures apply when the host country meets all the eligibility requirements related to the transfer and acquisition of ERUs. In this situation, Annex I host countries are allowed to apply their own procedures for assessing JI project emissions additionality. The relevant eligibility requirements for countries to undertake Track 1 projects include having in place a national system for emissions estimation, having submitted an annual inventory of these emissions and having established the nation’s assigned amount of Kyoto emission allowance units. The host country is then able to issue and transfer ERUs to the investing party without recourse to any international body for approval. The process for Track 1 will depend on the host country’s own procedures. Until now however, no country has actually developed any formal procedures for JI Track 1. Therefore Track Two currently provides the only way to generate ERUs.

**Table 1. Differentiated Quantitative Obligations of Annex I parties**

Target (percentage reduction from base year or period)	Party
-8%	Austria, Belgium, Bulgaria*, Czech Republic*, Denmark, Estonia*, European Community, Finland, France, Germany, Ireland, Italy, Latvia*, Liechtenstein, Lithuania*, Luxembourg, Monaco, Netherlands, Portugal, Romania*, Slovakia*, Slovenia*, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland
-7%	United States of America
-6%	Canada, Hungary*, Japan, Poland*
-5%	Croatia*
stabilisation	New Zealand, Russian Federation*, Ukraine*
+1%	Norway
+8%	Australia
+10%	Iceland

\* Countries that are undergoing the process of transition to a market economy

Source: Annex of 1/CP.1 in FCCC/CP/1997/7/Add.1.

unchanged (zero-game). Given that the free market will be more efficient in identifying and implementing cost effective emission reduction potential, JI projects are not intended to be conducted by governments but by private actors.<sup>12</sup>

JI projects provide mutual benefits for the investing as well as the host country: The benefit to the host country and local partner is that investment funds are provided for sustainable economic growth that might not otherwise be available. The

benefit to the investor country or company is that emission reductions are met at lower costs than would be possible by taking mitigation matters at home. Furthermore, an

<sup>10</sup> It has to be noted that the Kyoto-Protocol does not use the term Joint Implementation. However it has become common understanding to refer to projects conducted under Art. 6 KP (supra note 1) as JI-projects.

<sup>11</sup> See Art. 3.10 and Art. 3.11 KP.

<sup>12</sup> See Art. 6.3. KP.

**Track 2** procedures apply when the host country does not meet the eligibility requirements for Track 1. Under Track 2, projects are assessed according to procedures administered by an international regulatory body called the “JI Supervisory Committee”. After projects are approved under this process, the host countries will be able to issue and transfer ERUs to the investing party. The following steps have to be taken before ERUs can be issued:

**Step 1. Project Identification.** A project developer identifies a project that is located in an Annex I country. The project developer approaches the relevant JI Focal Point and/or promotion agency from both the investor and host countries to confirm eligibility to take part in JI and to request support for the project. At this point it is recommended that such a request is made to the host government for a Letter of Endorsement (LoE) for the project. Although this is not a requirement, buyers often require an LoE from the host country authorities before they will consider entering into contractual negotiations.

**Step 2. Project Formulation.** Full project documentation needs to be prepared, including a Project Design Document (PDD). The PDD contains a description of the project; the basis for determining the emissions that would occur without the project (the baseline), hence identifying the additional case; and plans for monitoring the reductions. JI Track 2 projects may follow the same process as CDM projects with regards to methodologies to assess the additionality and baseline.

**Step 3. National Approval.** Approval is confirmed through the host country issuing a Letter of Approval (LoA). This confirms the country’s approval for the transfer of carbon credits (Emission Reduction Units — ERUs). An LoA will need to be issued by the investor nation government to authorize the project as a JI project.

**Step 4. Validation.** The PDD, in particular the approach to baseline setting and the calculations, needs to be submitted to a third party, termed an Independent Entity (IE), for validation and the IE must already have been accredited by the JI Supervisory Committee (JI SC). The IE will not be able to register until the first CoP/MoP<sup>13</sup> following the entry into force of the Kyoto Protocol. Since the JI SC is not operational yet, buyers are currently adopting their own validation procedures.

Table 2. Distance to Kyoto targets in countries with economies in transition (CEITs)

	GHG emissions in million tons in the base year	Base year	Kyoto target	GHG emissions in million tons in 2001	Distance to target: Kyoto target to GHG emissions 2001
Bulgaria	157.7	1988	145.1	77.7	+67.4
Czech Rep.	192.1	1990	176.7	148.0	+28.7
Estonia	43.5	1990	40.0	29.4	+10.6
Hungary	102.6	average value 1985-1987	96.4	84.3	+12.1
Latvia	29.0	1990	26.7	11.4	+15.3
Lithuania	51.5	1990	26.7	11.4	+15.3
Poland	565.3	1988	531.4	382.8	+178.6
Romania	264.8	1989	243.6	148.3	+95.3
Slovakia	72.2	1990	66.4	50.1	+16.3
Slovenia	19.9	1986	18.3	20.2	-1.9

Source: EUA, 2003.

**Step 5. Implementation.** The project is implemented in the host country according to the specifications outlined in the PDD.

**Step 6. Monitoring.** The project developer monitors the project to identify the emission reductions. Monitoring reports are issued to the IE.

**Step 7. Verification.** The IE verifies the monitored emission reductions.

**Step 8. Issuance of ERUs.** Verification reports are submitted to the host country and the investor country’s JI Focal Point. The host country then issues the ERUs for each year of the 5-year period 2008–2012. However the assigned ERUs cannot be awarded until the first Kyoto commitment period, 2008–2012. Of course it is possible to make arrangements in advance for transfer of the JI rights to a third party, in return for upfront capital, or payment on delivery of the ERUs. Even though the approval processes for JI projects have still to be established, some early trades of ERUs are already occurring. Major ERUs buyers to date have been the World Bank’s Prototype Carbon Fund (PCF) and the Netherlands ERUPT program. Countries that have entered into specific JI project agreements to date include Latvia,

<sup>13</sup> CoP: Conference of the Parties to the Framework Convention on Climate Change MoP: Meeting of the Parties once the Kyoto Protocol has entered into force, which will take place in November 2005 in Montreal.

Poland, Bulgaria, Romania, Estonia, Slovakia, Czech Republic and New Zealand.

### JI Host Countries

Since ERUs generated by a JI project will be subtracted from the transferring party's allowed emissions, hosting a JI project only will be attractive to Annex I countries which are within their Kyoto targets. This mainly applies to the CEITs. The significant economic decline that affected most CEITs in the post 1990 period provides a surplus of carbon credits to the market.

Russia's emissions of carbon dioxide in 1997 were some 30% below its 1990 level. Those of the Ukraine were even lower, and in both cases emissions are not expected to rise back to 1990 level until the end of the commitment period (i.e. 2012).<sup>14</sup> According to the 1997 in-depth review of the Russian national communication projections, its carbon dioxide emissions are likely to be some 15% below 1990 levels in 2010. Given that Russia and the Ukraine under the Kyoto protocol are only obliged to stabilize emissions at the 1990 level in the first commitment period, it becomes clear that

both countries have the potential to become dominant sellers of carbon credits. A similar position is held by other CEITs.

### Linking JI to the EU Emission Trading Scheme

JI has become particularly appealing to Russia and Ukraine since the EU Linking Directive provides for using of credits from climate change projects for compliance in the EU Emission Trading Scheme (EU ETS).<sup>15</sup>

In January 2005 the European Union (EU) Greenhouse Gas Emission Trading Scheme (EU ETS) started

operation as the first multi-country, multi-sector greenhouse gas trading scheme world-wide.<sup>16</sup> The European Emission Trading Scheme primarily covers energy-intensive industries such as electricity, heat or steam production; mineral oil refineries; production and processing of ferrous metals; building materials, including the production of cement, lime, glass, brick and ceramics; and the pulp and paper sector.<sup>17</sup> It is estimated that more than 10,000 installations are covered by the Trading Scheme across the enlarged EU.

Beginning January 1st, 2005 all installations that fall within the gambit of the directive require, a permit to emit greenhouse gases.<sup>18</sup> In addition, plant operators are only permitted to emit greenhouse gases according to the quotas that were allocated to them by the individual member states.<sup>19</sup> Thus companies can only exceed their emission limit through trading, i.e. if they buy the balance from another company that is emitting less than its permitted limit. In addition plant operators that are unable to present sufficient emission allowances for their actual carbon dioxide emissions will be liable for the payment of penalties amounting to 40 Euros per ton of carbon dioxide as of 2005 and 100 Euros per ton of carbon dioxide as of 2008.<sup>20</sup>

Under the EU ETS, plants have to reduce emissions considerably.<sup>21</sup> In Germany, for example, most plants have to curb their emissions of carbon dioxide up to 7%. Due to the shortage of allowances, almost 50% of the plant operators filed complaints with the German Emissions Trading Agency to get an additional allocation of allowances.<sup>22</sup> This clearly illustrates that there is a strong demand for additional allowances in the EU ETS. In this regard particularly JI projects in CEITs generating carbon credits at lower costs are potentially appealing to the European plant operators.

### Conclusion

After the Kyoto Protocol enter into force Joint Implementation provided a suitable instrument to attract investments to Russia and CEITs. However, the absence of an institutional and administrative framework for JI in the Russian Federation currently is a major barrier to investments. The recently proposed Action Plan provides that the Russian Federation become a JI Track 1 country and set up a JI trading system before 2006.<sup>23</sup> This certainly is a vital step implementing the Kyoto Protocol and to prevent further investments flowing to other countries than the Russian Federation. □

<sup>14</sup> FCCC/IDR.1/RUS of 21 February 1997

<sup>15</sup> See Directive 2004/101/EC of the European Parliament and of the council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the community, in respect of the Kyoto Protocol's project mechanisms, OJ L 388 of 13 November 2004, at p. 18.

<sup>16</sup> See Directive 2003/87/EG of the European Parliament and of the council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the community and amending Council Directive 96/61/EC, OJ L275 of 25 October 2003, at p. 32

<sup>17</sup> See Annex I to the EU Emission Trading Directive, supra note 16, providing detailed thresholds for many of these industrial sectors, so as to cover only the largest emitters.

<sup>18</sup> Initially, the permit requirement only relates to the greenhouse gas carbon dioxide. As of 2008 the member states are at liberty to extend the system to other greenhouse gases of the Kyoto Protocol.

<sup>19</sup> See Art. 4 EU Emission Trading Directive, supra note 16.

<sup>20</sup> See Art. 16.3 EU Emission Trading Directive supra note 16. However, payment of the penalty will not release the operator of an installation from the obligation to present the emission allowances lacking, i. e. those allowances will have to be purchased subsequently on the market.

<sup>21</sup> See for an overview: Gilbert/Bode/Phylipsen, Analysis of the National Allocation Plans for the EU Emission Trading Scheme, 2004.

<sup>22</sup> Out of 1800 German plant operators 800 filed complaints.

<sup>23</sup> See, Point Carbon Monitor, March 10, 2005