

JOINT IMPLEMENTATION: LOOKING BACK AND FORWARD

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INTRODUCTION

Article 6 of the Kyoto Protocol enables Annex 1 Parties to agree to jointly undertake emissions saving or sink enhancing activities, with credits arising from cross border investments transferred between them. Joint Implementation (JI) is effectively an alternative project-based mechanism for trading emissions between countries with a cap. Instead of directly purchasing emission rights, i.e. assigned amount units (AAUs), a country gains emitting permits through funding a part of a project activity which reduces greenhouse gas (GHG) emissions or enhances removals by sinks³.

These emissions savings are measured in tons of CO₂ equivalent, which are credited with emission reduction units (ERUs) after the actual emission reductions have been verified. An equivalent amount of tons is deducted from the cap (the Assigned Amount) of the host country, and added to the cap of the buyer country through the transfer of ERUs. The countries hosting JI are mainly economies in transition (EITs) – countries of the former Soviet block – which can provide cheaper emission reductions than the majority of the OECD countries as a result of the inefficiency of their economies. There are also several cases of OECD countries hosting JI projects, which are discussed in the study. While the value of ERUs generated will generally not cover the investment costs of a project, it does provide an added incentive to invest in certain project types and this in a competitive market can be a decisive factor in investment decisions.

Emission reductions are calculated by creating a baseline which is a forecast of the future emissions in the absence of the project, and a project scenario based on the measurement of the emissions after the project has been implemented.

INSTITUTIONAL BASIS AND GUIDELINES

Eligibility and Tracks

To be eligible under the Kyoto Protocol, a JI project must have the approval of all the Parties involved, i.e. the governments of the host country and of the buyer countries, and lead to emission reductions that would not have occurred without the project, i.e. be *additional*. Participating countries must have a cap under the Kyoto Protocol, i.e. a reduction or stabilisation obligation under the Annex B. The Marrakech Accords facilitate two tracks for JI depending on the ability of the host and buyer countries to comply with the UNFCCC GHG emission reporting requirements:

- **Track 1** is open to countries that can fully account for their GHG emissions and movements of units in their registry. It allows the host country government to decide which projects qualify and issue ERUs without third party interference.
- **Track 2** requires projects to be evaluated by the Joint Implementation Supervisory Committee (JISC) supported by the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat and allows implementing JI projects when Track 1 eligibility criteria are not met.

³ Even though in theory sinks enhancement projects are allowed under JI there are no sinks projects under JI so far. As a result, this paper refers to emission reductions only.

Which countries are eligible for Track 1 or Track 2 projects is decided by the Compliance Committee of the Kyoto Protocol based on the reports by the international expert teams, which check the fulfilment of the six eligibility criteria set out by the Marrakesh Accords. Since in both Track 1 and Track 2 JI the ERUs are transferred out of the national registry rather than from the UN-administered registry like in the Clean Development Mechanism (CDM), the first three basic eligibility requirements concern the ability of the country to transfer units out of its registry, and form the basis of Track 2 eligibility:

- The host country is a Party to the Kyoto Protocol;
- It has calculated its Assigned Amount⁴;
- It has in place a national greenhouse gas registry.

A country wishing to implement JI under its own rules, or to acquire Kyoto credits (ERUs, Certified Emission Reductions (CERs), or AAUs), or to sell AAUs has to demonstrate – in addition to the above - its ability to account for its emissions and has to report the movements to the units in its registry. Thus fulfilment of three additional criteria is required for Track 1 eligibility:

- The Party has in place a national system of greenhouse gas inventories;
- It has submitted the most recent required inventory, national inventory report and the common reporting format; and
- It has submitted supplementary information on Assigned Amount.

Specific guidelines and rules adopted by the Conference of parties (COP) and CMP decisions govern the application of the criteria on the basis of which the eligibility is established.

In addition to the eligibility requirements listed above, any Annex I country wishing to participate in a JI project (concerns both host and investor countries) must notify the UNFCCC secretariat about its Designated Focal Point (DFP) and submit its national JI approval guidelines and procedures in order to be eligible to utilize JI (both Track 1 and Track 2). Table 1 summarises the eligibility requirements under JI.

As of October 2008 only one JI country is not yet eligible for Track 1 JI and international emissions trading: Bulgaria. According to when its initial reports were submitted, the date when its eligibility is expected to 25 November 2008⁵. While there have been concerns about possible delay with the eligibility of Bulgaria, it is likely the country will obtain its eligibility on the scheduled date⁶. Russia – the country many feared would not be able to achieve eligibility – can in fact set an example for some of the EU countries: its initial report was approved by the UN and it was the fourth country in the world to connect to the International Transaction Log in April 2008⁷.

⁴ ERUs, even under Track 2, are issued by converting them from Assigned Amount Units (AAUs), therefore a calculated Assigned Amount, on the basis of which a country receives AAUs into its registry, are required for the country to be able to issue ERUs.

⁵http://unfccc.int/files/kyoto_protocol/compliance/enforcement_branch/application/pdf/eligibility_list_080511.pdf

⁶ JI Track 1/Track 2 eligibility in Eastern Europe, Point Carbon, 2007.

⁷ Russia connects to UN carbon credit market. Point Carbon, 1 April 2008, Available at: <http://www.pointcarbon.com/news/1.358841>, accessed May 20, 2008.

Table 1. Track 1 versus Track 2 requirements by stages.

Type of Eligibility	Key Requirements (Eligibility for previous levels is required at each level)	Stage at which eligibility is checked	When eligibility is established
Kyoto eligibility	Party to Kyoto Protocol, target under Annex B	Publication of the PDD	Submission of the PDD to the UNFCCC Secretariat
Eligibility to participate in the mechanisms	Designated Focal Point and JI procedures	Final determination by the JISC	Project's submission to the JISC
Eligibility for Track 2	Assigned Amount, registry	ERUs transfer out of the national registry	Every year starting 2008
Eligibility for Track 1	Inventory system, annual inventories, incl. most recent	ERUs transfer out of or to (procurement) the national registry	Every year starting 2008

Source: Adapted from JI Track 1/Track 2 eligibility in Eastern Europe, Point Carbon, 2007.

The JI Supervisory Committee was established by the Conference of Parties / Meeting of Parties (COP-MOP) 1 in Montreal in December 2005 to fulfil the requirement of the UN oversight over Track 2 approval. The JISC had its first meeting in 2006 and since then has convened twelve times in total. JISC has an Accreditation Panel for accrediting Independent Entities (IEs) operating as third-party verifiers under JI, but not a Methodology Panel like in the CDM. Inspection of the methodological approaches used in JI projects is the responsibility of IEs supervised by the JISC, which are expected to check both the methodology itself and the project as part of the determination of the Project Design Document (PDD).

Despite its late start, the JISC was able to operationalize Track 2 verification process in a relatively short period of time. In less than a year the JISC adopted the full package of documentation necessary to launch JI Track 2 verification process, including its rules of procedure, PDD template and accompanying documents and developed a PDD form for land-use, land-use change and forestry (LULUCF) and small-scale projects. The verification procedure under JI Track 2 was thus officially launched at JISC-5 26 October 2006. The accreditation process for the IEs started in November 2006. As of October 2008, there are 15 applicant independent entities 13 which were already approved as designated operational entities under the CDM. They are all acting provisionally before receiving formal accreditation⁸.

JI projects are allowed but not obliged to apply the baseline and monitoring methodologies approved by the CDM Executive Board. Applying parts of the CDM methodologies and completely new methodologies is possible, but an explanation of why the project was not able to use an approved CDM methodology has been required in practice by the AIEs, as well

⁸ With the view not to delay implementation of JI any longer, the COP-MOP-1 in Montreal, which has started the process of operationalising JI, decided to allow DOEs accredited under CDM to act provisionally as AIE under JI – until a final accreditation decision is taken. However, the determinations undertaken by AIE acting provisionally will only be valid after and if they are eventually accredited. (Decision 10/CMP.1, paragraph 3). JISC-07 (May 2007) issued further clarification that DOEs may only act provisionally as AIEs within the scopes for which they have been designated under CDM.

as step-by-step explanation in case only parts of CDM methodology are used even though these are not part of the established rules.

In the case of Track 1 the verification procedure under the JISC is not mandatory. The host country can follow its own national guidelines and procedures for the approval of JI projects, verification of the emission reductions, and transfer of ERUs. Thus the additionality of a JI project, quality of the information provided in the PDD⁹, and the methodology used for estimating emission reductions resulting from the project are evaluated by the host party. This means that a project owner is not obliged to pass the verification procedure under JISC and pay to the JISC for determination of PDD and reductions accrued by the project, nor does it have to abide by JISC's methodological guidance. Thus, in theory, the procedure under Track 1 can be faster, more flexible, and with lower transaction costs compared to Track 2. Currently few host countries have Track 1 procedures in place (see below on the current status of Track 1 in various host countries), and therefore the two JI tracks can be compared only in theory.

Additionality

Additionality is a requirement for JI projects, as the Kyoto Protocol states: 'Any such [JI] project provides a reduction in emissions by sources, or an enhancement of removals by sinks, that is additional to any that would otherwise occur'. When the ERUs are transferred to another country's account, the Kyoto cap of the seller country is reduced because for every ERU transferred one AAU is cancelled during conversion. But at the same time, an additional JI project generates emission reductions which would be reflected in the reduced national emissions. Thus, an equivalent amount of AAUs is freed up in the national account, and the amount of AAUs under the cap remains the same. If the project is not additional, no AAUs are freed on the national account to replace those transferred, and thus the amount of available permits under the cap is reduced. As most EITs have a surplus rather than a shortage under the national cap, any such loss can be offset by the available surplus, creating concerns that there is no incentive to ensure additionality. Some projects which are regarded as additional might have materialized in any case, but the sales of ERUs could have provided the incentive to implement the project *earlier* than business as usual.

In practice, additionality is a vague concept and difficult to apply in the case of a transition economy which is undergoing a period of rapid growth and change. Some project developers argue that a PDD consists of the 'science' of baseline and the 'art' of additionality. Many projects are superficially attractive according to the Western economic logic. For instance the lack of capital availability can distort the seemingly profitable modernisation activities. Indeed, it could be argued that the general Western market logic does not always apply.¹⁰ Additionality rules and tests would work better in an established market economy than in a transition economy where the rules of the game remain unclear and where personal relations or practices from the previous economic system can have a significant impact on decision-making.

⁹ Depending on the format required by the host country. Strictly speaking, under Track 1 a PDD is not mandatory.

¹⁰ Tangen, K., Korppoo, A., Berdin, V., Sugiyama, T., Egenhofer, C., Drexhage, J., Pluzhnikov, O., Grubb, M., Legge, T., Moe, A., Stern, J. and Yamaguchi, K. (2002). *A Russian Green Investment Scheme. Securing Environmental Benefits from International Emissions Trading*. Climate Strategies, p.19.

The CDM Executive Board has developed an additionality tool which establishes acceptable ways of claiming additionality. These include investment analysis, barriers analysis and common practice analysis.¹¹ The JISC has adopted its own additionality guidance, which apart from the use of the CDM additionality tool also allows project developers to use their own methods to prove that the project is not the baseline scenario. As with other methodological decisions of the JISC, a case law is established whereby if a certain approach for proving additionality was approved once, all other projects in similar situation will be able to use it.¹²

The additionality test has not been regarded as foolproof, since project partners can overstate the barriers or manipulate the figures to make a project look additional.¹³ Trexler and Broekhoff¹⁴ have argued that there is no technically ‘correct’ additionality test. They regard the definition of additionality as a task for the policy-makers based on their policy objectives as it influences the price of credits and the magnitude of the supply pool. Lazarus¹⁵ argues that additionality assessment is inherently subjective. Various analysts have called for more objective, transparent and rigorous standards for baseline setting and additionality definition¹⁶.

Full Track 1 compliance could solve most additionality problems as no external verification of project is required under full compliance, and consequently, buyer and host have more flexibility to decide between them on what constitutes additionality. Some project developers are also skeptical of the concept of additionality because of this. Should Track 1 become the track of choice for buyers and sellers, some have argued that JI might actually turn out to be more like international emissions trading under the Kyoto Protocol which allows trading AAUs without links to projects.

Rules for crediting

For crediting under JI the main requirements as defined by the Marrakech Accords include the following:

- additionality of the project,
- only emission reductions generated between 2008-2012 can be credited with ERUs,
- the project has not commenced prior to 2000 and
- the project involves no nuclear power.

Within this framework, the project participants can choose whether crediting should begin when the project starts generating emission reductions or after that.¹⁷ As a result, from

¹¹ EB39, Tool for the Demonstration and Assessment of Additionality, version 5.01. CDM Executive Board.

¹² Annex 1 of the Guidance on Criteria for Baseline Setting and Monitoring. JI Supervisory Committee.

¹³ Michaelowa, Axel (2005). Determination of baselines and additionality for the CDM, A crucial element of credibility of the climate regime, in: Yamin, Farhana (ed.): *Climate change and carbon markets. A handbook of emission reduction mechanisms*, Earthscan, London, 2005, pp. 289-304.

¹⁴ Trexler, Mark & Broekhoff, Derik (2006). A Statistically Driven Approach to Offset-Based GHG Additionality Determinations: What Can We Learn? *Sustainable Development Law & Policy* 6 (2006) 30-40.

¹⁵ Lazarus, Michael (2003). Assessing Additionality. WBCSD side event, 10 December 2003. Comments by Michael Lazarus.

¹⁶ IETA (2005). IETA Position on Additionality. International Emissions Trading Association; Michaelowa, Axel (2005). Determination of baselines and additionality for the CDM, A crucial element of credibility of the climate regime, in: Yamin, Farhana (ed.): *Climate change and carbon markets. A handbook of emission reduction mechanisms*, Earthscan, London, 2005, pp. 289-304.

¹⁷ In comparison, currently in the CDM projects can be only credited with emission reductions generated after the registration date (for non-forestry projects). Exceptions were allowed previously to allow ‘prompt start’ of

approval point of view retroactive crediting is possible i.e. a project which started generating reductions in 2008 can still receive final approval by the JISC in 2009 for the whole commitment period. In June 2008 JISC 11 issued a specific clarification on this issue, reminding also that such retroactive crediting can only be possible if the pre-approval emission reductions have been monitored and verified in accordance with the monitoring plan in the approved PDD.¹⁸

There are some institutional problems with crediting LULUCF projects under JI. Only Removal Units (RMUs) but not AAUs can be converted into ERUs for JI LULUCF. As a result, if a country has not met its Kyoto Article 3.3 or 3.4 reporting obligations, or its accounting under Article 3.3 and 3.4 does not generate RMUs, the country will be barred from hosting JI LULUCF projects.¹⁹ In addition, the use of the mechanisms must in theory be supplemental to domestic action so that domestic action constitutes a significant element of the overall effort to meet the commitment. However, this rule is vague as 'significant' has not been further defined, and therefore, cannot be measured.²⁰

There were originally talks about 'early' JI activities based on international emissions trading starting prior to the beginning of the first commitment period in 2008, however, in practice these activities were limited because of a slow build-up of JI volumes prior to 2008. Crediting activities prior to 2008 is in practice a nationally defined issue as early pre-2008 JI reductions can only be credited as AAUs but not ERUs. Some of host countries, especially those with small AAU surpluses took a clear stance to disallow pre-2008 crediting, namely Hungary and Slovakia. Pre-2008 crediting is also not allowed under Russian JI legislation because of the legal difficulties with hand-over of state-owned AAUs. 'Early AAUs' are however allowed by Ukraine, Bulgaria, Romania, and Czech Republic.

The short crediting period for JI projects, set for 5 years only or less, should a project start generating emissions some time after 2008, has been a concern to many project developers and JI host countries. Responding to this concern, JISC-3 in May 2006 has included a provision to allow more flexibility with the crediting period into the Guidelines for Users of the JI PDD Form, stating that "The crediting period shall not extend beyond the operational lifetime of the project. The end of the crediting period can be after 2012 subject to the approval by the host Party." In reality the crediting period cannot be set by a unilateral decision of the host party, but rather by COP/MOP, which has only allowed crediting until 2012. What the JISC's decision means is that it will consider and may approve projects with a longer crediting period, but whether and which of the post-2012 reductions will be recognised and credited will ultimately depend on the COP/MOP decisions.

the CDM, but have now expired. For details see: CDM Rulebook, Baker & McKenzie, <http://www.cdmrulebook.org/PageId/1625>

¹⁸ Report of the Eleventh Meeting of the JI Supervisory Committee, Paragraph 35: "The JISC noted that, in principle, under the JI Track 2 procedure, a determination referred to in paragraph 37 of the JI guidelines may relate to emission reductions by sources or enhancements of removals by sinks achieved during a monitoring period starting before the date a positive determination regarding a PDD was final in accordance with paragraph 35 of the JI guidelines. In this context, the AIE shall also assess whether the emission reductions by sources or enhancements of removals by sinks were monitored and calculated in accordance with the determination regarding the PDD."

¹⁹ Schlamadinger & O'Sullivan, Viewpoint: LULUCF projects under JI, Will they be impossible? CDM & JI Monitor, 24 January 2007. Point Carbon.

²⁰ Marrakech Accords, FCCC/CP/2001/13/Add.2

Comparison with the CDM

Like JI, the Clean Development Mechanism enables offsetting emissions of Annex I countries emissions by reductions or sink enhancement activities but unlike JI in developing countries (Non-Annex I). The CDM generates CERs and is governed by the CDM Executive Board (EB).

Even though the CDM is also a project-based mechanism, it differs from JI for the following reasons. *First*, developing countries which have chosen to host CDM projects have no commitments under the Kyoto Protocol, and the only requirement is that the country has ratified the Protocol and has designated a national authority for the CDM. As a result, no institutional or other eligibility issues need to be reviewed in order to host CDM projects. *Second*, the CDM projects increase the Kyoto cap since they can offset emissions under the Kyoto cap by emission cuts outside the cap. Therefore, additionality under the CDM has been regarded as more significant than under JI. Should a CDM project not be additional, then total emissions to the global atmosphere would increase, as the emission under the Kyoto cap would not be genuinely offset. From this perspective, additionality under JI may seem less relevant as the described 'leakage' would not be possible: the JISC is monitoring the additionality of Track 2 projects which can be hosted without full eligibility, and Track 1 require countries to be compliant with their Kyoto caps. *Third*, the CDM has had an early start in order to promote emission reduction activities and development in developing countries. The guaranteed 10-year crediting period (or three sets of 7-year crediting periods) differ radically from the current maximum of 5 years crediting for JI. *Fourth*, the potential sources of CDM projects are more numerous than those of JI. Hence, the institutional problems with project approval in couple of the potential host countries are less relevant to the success of the mechanism than in the case of JI. *Fifth*, JI permits LULUCF project activities that are not eligible under the CDM, except afforestation and reforestation. Beyond the latter, JI allows any other LULUCF projects, such as promoting improved forest management, increased fire and pest controls and preservation of old growth forests.²¹ Table 2 outlines the differences between JI and the CDM.

A difference in institutions is also noticeable. The JISC's caseload has been minimal in comparison with the CDM EB, and it has been plagued by less controversies. In general it has strived to provide flexibility as well as meet the needs of project hosts and developers to the degree possible given its watchdog mandate. For example, their earlier decision to demand investor country approval as a precondition to submitting PDD for verification by JISC was quickly reversed to postpone investor approval requirement to the stage when the first monitoring verification report is submitted to the JISC.²² There was, however, an observed tendency at the JISC to look at the CDM and the CDM EB as a benchmark. In practice, decisions have been easier to approve if a similar CDM precedent was available.

As a fairly similar project-based mechanism, the CDM is a good comparison to evaluate the success of JI. 1,184 projects have been registered at the time of writing. The existing projects have already generated some 200 Mt of CERs and are projected to generate 2,700 Mt CERs during the first commitment period.²³

²¹ Schlamadinger & O'Sullivan, Viewpoint: LULUCF projects under JI, Will they be impossible? CDM & JI Monitor, 24 January 2007. Point Carbon.

²² Report of the Sixth Meeting of the JI Supervisory Committee, Paragraph 21.

²³ <http://cdm.unfccc.int/Statistics/index.html>. Accessed 17 October 2008.

JI projects are not possible to evaluate ex post at the time of writing as only five JI projects have received final determination in October 2008 totalling some 9.6 Mt of ERUs over the first commitment period. Compared to the CDM, JI had a late start: First, the CDM was given an early start by allowing project crediting from 2000 compared to 2008 for JI in order to support project activities in the developing countries. Second, it took longer than expected to establish the institutional system for the approval of Track 2 projects. Under the Marrakesh Accords, the JISC was to be established at the first COP-MOP, after Kyoto's entry into force, which at that time was expected within 1-2 years. Because of the delay with Kyoto Protocol's entry into force, JISC only became operational in the beginning of 2006. Third, the development of JI institutions has been slow in the countries expected to be the main suppliers of ERUs, namely Russia and Ukraine. Fourth, in countries that started JI early, mainly in Central and Eastern Europe, the opportunities for projects were significantly limited by introduction of the European Union Emissions Trading Scheme (EU ETS).

The late start of JI in combination with short crediting period resulted in the mechanism virtually running out of time: 1-2 year lead times make it close to impossible for projects to receive credits up to 2012 sufficient to justify investor's interest. In the last 1-2 years this has forced majority of project developers to focus mainly on large scale high-revenue projects, such as gas leakage, coal-mine methane and industrial gases. This is a significant difference between JI and the CDM, and clearly visible when comparing the sizes of the project portfolios.

Table 2. Comparison between JI and the CDM.

	Clean Development Mechanism (CDM)	Joint Implementation (JI) Track 1
Applicable to host parties in	Non-Annex I	Annex I (subject to eligibility)
Reduction unit	Certified Emission Reduction (CER)	Emission Reduction Unit (ERU)
Governing body	CDM Executive Board (CDM EB), est. at COP-7 (Marrakesh), 2001	JI Supervisory Committee (JISC), est. at COP-11 CMP-1 (Montreal), 2005
Issuance of units	By CDM EB	By host party <i>ERUs are issued by conversion of (AAUs) or RMUs (LULUCF), thus for every ERU issued an AAU or an RMU needs to be cancelled.</i>
Approval of the governing body	“registration”	“final determination” (<i>As the JISC does not issue ERUs, it only gives it final approval to projects and does not have a process to ‘register’ them.</i>)
Start date for crediting	January 1, 2000.(early) Currently: date of registration	January 1, 2008
Crediting period	7-year, renewable twice; or a single 10-year crediting period.	Between January 1, 2008 and December 31, 2012.
Eligibility of sinks (LULUCF)	Limited to afforestation and reforestation	All project types under KP Art. 3.3 and 3.4 <i>ERUs for LULUCF projects can be only issued by conversion of Removal Units (RMUs), not AAUs</i>
Sustainable Development	Needs to be demonstrated according to host country approval procedures.	It is host country’s prerogative to confirm projects’ sustainable development credentials
Active review	Validation (verification) is final after 8 weeks (15 days). Active review.	Determination of PDD (ERs) is final after 45 (15) days. Active review.
Third party verification	Validation of PDD Verification of emission reductions	Determination of PDD Determination/verification of emission reductions
Third party verifier	Designated Operational Entity (DOE), accredited by CDM Accreditation Panel (CDM AP). <i>Validation and verification must be by different DOEs, except for small scale projects.</i>	Accredited Independent Entity (IE), accredited by JI Accreditation Panel (JI AP). <i>Determination of PDD and emission reductions can be by the same IE.</i>
PDD format	Main elements defined in Marrakech Accords (MA) (2001), Versions 01-03 (2002, 2004, 2006). 4 PDD forms, plus a form for programmes of activities	Reference to CDM PDD in MA (2001) Approved by JISC-4 (2006) 3 PDD forms (large- and small-scale non-LULUCF, large-scale LULUCF projects)
Small scale projects	Defined in MA (2001)	Defined by Decision 10/CMP.1 (2005)
Criteria for Baseline-setting and Monitoring	Appendix C, Decision 17/Cp.7 (MA) Guidance by CDM EB to Meth Panel (EB-5, 2002, subsequent clarifications), Meth Panel recommendations	Appendix B, Decision 9/CMP.1 Guidance on criteria for baseline-setting and monitoring, JISC-4 (2006)
Methodologies	As approved by the CDM EB on the basis of Methodology Panel recommendations	- Approved CDM methodologies - Elements of CDM methodologies - New meth.s, incl. multi-project EFs
Decision on methodologies	CDM EB (assisted by Meth Panel) <i>Procedures in place for submission and approval of existing methodologies, as well as clarification and revision of approved methodologies.</i>	IE assesses the methodological approach (conservativeness, technical design) JISC approves or rejects the methodological approach, as part of the final determination.
Additionality	CDM EB Additionality tool Versions 01-05, EB 16-39 (2004-8)	Annex I to Criteria for baseline-setting and monitoring (JISC-4, 2006): - <i>additionality tool by CDM EB;</i> - <i>proving project is not the baseline scenario</i> - <i>case law (as in projects approved by JISC before)</i>

JI ACTIVITIES

AIJ pilot phase

JI started first as the Activities Implemented Jointly (AIJ) pilot phase launched by the first Conference of Parties in Berlin in 1995. AIJ projects were not allowed to receive credits and were launched to generate experience on both JI and the CDM.

The Dutch government launched a pilot programme on JI already in 1994 while also the US, Japan, the Nordic governments, Canada and Germany were active participants in the early AIJ pilot phase.²⁴ Joint Implementation Quarterly bulletin has been following the development of JI and the CDM since March 1995 when the publication listed 14 projects, 7 of which were located in Annex I countries i.e. were pilot JI projects.²⁵

Track 2 portfolio

The total of JI projects submitted to Track 2 accounts for a projected emission reduction of some 290 Mt during the first commitment period. Only eleven JI projects have been submitted for final determination by the JISC under Track 2: five projects has been approved, one has been rejected, and five were under consideration at the time of writing. All the other submitted projects are still in the determination phase. A variety of barriers have contributed to this.

A major reason is the dominance of Russian projects in the portfolio; the Russian government has established a project approval procedure only in March 2008 and at the time of writing no projects have yet been approved. The JISC requires a Letter of Approval (LoA) by the host government before registering projects under Track 2. Another reason for the slow start of project registration under Track 2 may include the capacity problems of both project developers and determinators. The lack of a clear methodological framework (i.e. approved methodologies as in CDM) leads to delays as many project developers attempt to develop their own methodological approaches. Those who try to use approved CDM methodologies often lack experience with their application, resulting deviation, selective application of parts of the methodologies and mistakes in their interpretation²⁶. Making corrections delays project submission, and as a result determinations of JI projects can take 6-12 months (in comparison to 9-15 months under the CDM), exacerbated by the fact that over 80% of projects in the JISC pipeline are concentrated in the hands of only two IEs, with case work approaching 50 projects for each of them²⁷. From the IE's viewpoint, limited experience with determination under JISC and the much bigger role of third party verification in JI increases their responsibility and makes their work more difficult. IEs lamented their difficulties in determining JI projects because of arbitrary use of benchmarks, poor accounting data, low quality of scientific and engineering information in the PDDs²⁸. Lastly, even at this point, not all host countries with approved and ready-to-go projects are eligible for JI.

²⁴ JIQ 1, vol.2, March 1996.

²⁵ JIQ 0, vol.1, March 1995.

²⁶ Carbon Policy Update, Point Carbon. 25 October 2007.

²⁷ Gassan-zade O., Semkiv O. Carbon credits from Eastern Europe – JI and GIS. Carbon Market Insights 2007, Copenhagen.

²⁸ Carbon Policy Update, Point Carbon. 25 October 2007.

Project types under Track 2

The largest number of projects in the EU focuses on renewable energy, mainly small hydro, wind and biomass, however, the great majority of the projected emission reductions come from large N₂O projects as shown in Figure 1. The N₂O projects clearly dominate the EU portfolio as by far the most viable project type not affected by the EU ETS. Renewables projects come second, supported by the renewable objectives of the new member states. The vast majority of the EU projects originate from the EITs which have joined the EU in the 2000s. However, more recently some JI activities have also been carried out in Germany.

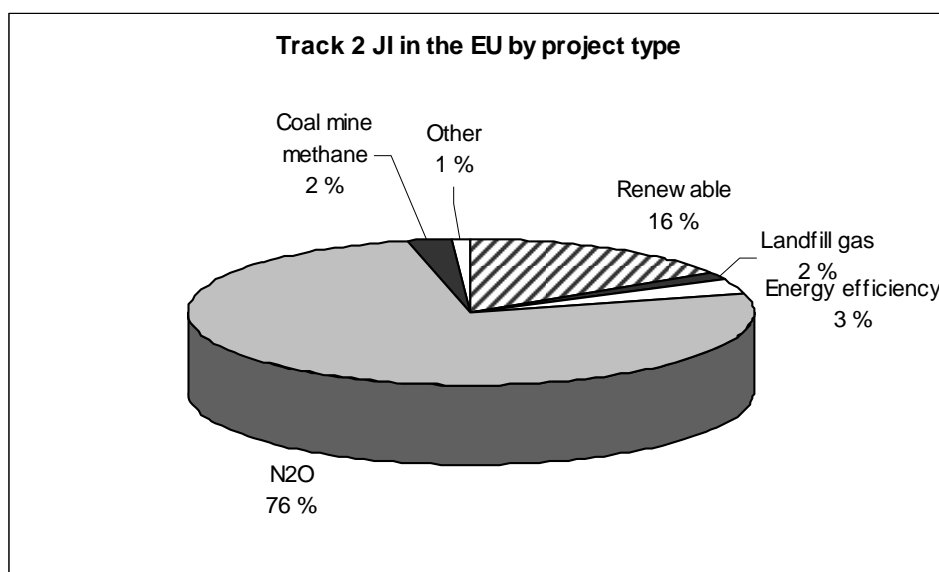


Figure 1. Projected emission reductions by project type in the EU, 1 October 2008.

Source: JISC Track 2 project database.

As shown in Figure 2, in Russia the most significant project type are the gas pipeline refurbishment projects. However, the project pipeline has developed towards other major project types from the sole dominance of gas pipeline refurbishment projects as N₂O reduction project cover 16% and coal mine methane projects 11% of the portfolio. As a result, the share of gas pipeline projects has been reduced in the Russian portfolio from 60% in September 2007²⁹ to 42% in October 2008.

²⁹ Korppoo, Anna (2007). Joint Implementation in Russia and Ukraine: Review of projects submitted to JISC. Climate Strategies Briefing Paper, October 2007.

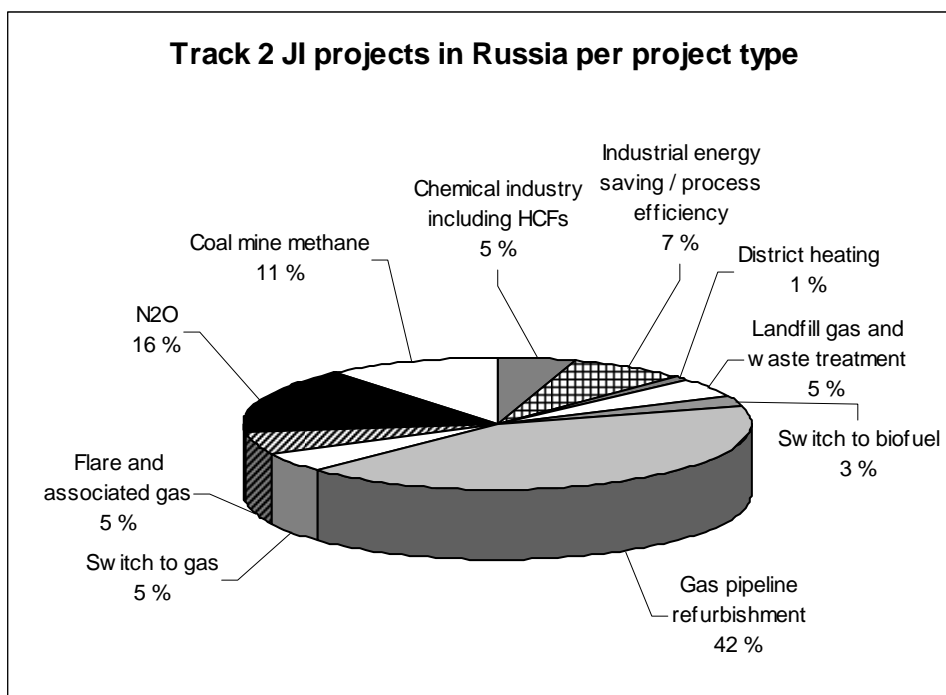


Figure 2. Projected emission reductions by project type in Russia, 1 October 2008.

Source: JISC Track 2 project database.

The additionality of the gas pipeline projects has been questioned. The case for additionality is based on the institutional setting of the Russian gas sector as the gas distribution companies only receive a fee from Gazprom for transporting the gas from the trunk pipeline to the end user while Gazprom charges the end user directly, in many cases based on the volume of gas fed into the pipeline rather than the volume that actually reaches the end user. There is no historical data available of the gas leakages in the distribution pipelines and as a result the baselines are based on the measurement of the leakages by the project developer. As recognised by many experts, this creates a motive for fraud, or neglect of the required maintenance of the distribution pipelines, in order to gain a higher baseline, and therefore, a larger amount of credits. Also the profits from these projects are large and financial data was not disclosed in the PDDs. As a result it is impossible to tell whether the investments in reducing the gas leaks could generate profits by selling the saved gas which could make the projects business as usual. However, in the system of Gazprom it is not straight-forward to sell the saved gas which remains insignificant in the total volumes of gas moved through the pipeline network. In any case, it seems that should such financial analysis be conducted, the correct comparison price to define the profitability of the saving activities is more likely to be the domestic rather than the export price of gas. This all said, the fact that the CDM additionality tool allows institutional barriers to be used as a justification of additionality, it would be difficult to judge the Russian gas pipeline refurbishment projects as non-additional. But the increasing gas prices in the Russian domestic market may contribute to a change of the existing institutional setup which would make the projects non-additional. As a result, the additionality of these projects should be reviewed after the first commitment period as is also required by the Russian JI legislation.³⁰

³⁰ Korppoo, Anna & Moe, Arild (2008). Russian gas pipeline projects under Track 2: Case study of the dominant project type. Climate Strategies Briefing Paper, March 2008.

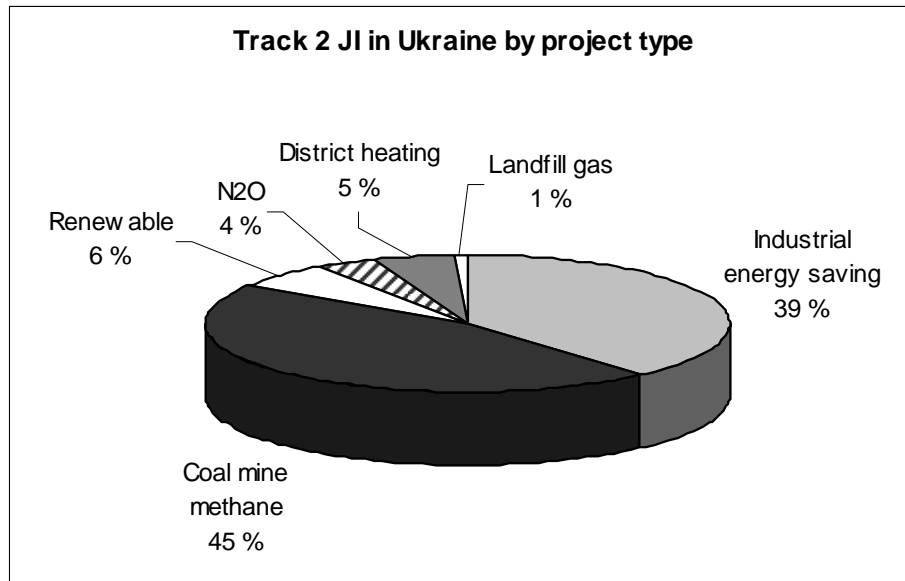


Figure 3. Projected emission reductions by project type in Ukraine, 1 October 2008.

Source: JISC Track 2 project database.

As shown in Figure 3, in Ukraine, the main project categories include coal mine methane and industrial energy saving. These project types have typically dominated the Ukrainian project portfolio. The industrial energy saving projects originate from the steel and cement sectors. Ukraine was the first country to receive final determination for a JI project under the Track 2 JI in March 2007.

When comparing case studies from the Ukrainian project portfolio it became obvious that projects can have very different mitigation costs per ERU as well as different lead times. Many projects would only be able to cover some 25-35% of the investment required for project implementation by selling the ERUs while some projects, especially coal mine methane and gas pipeline refurbishment projects (only included in the Russian portfolio) can make a profit by selling the ERUs.³¹

³¹ Korppoo, Anna (2008). Typical JI projects in Ukraine: Three case studies. Climate Strategies Briefing Paper, January 2008.

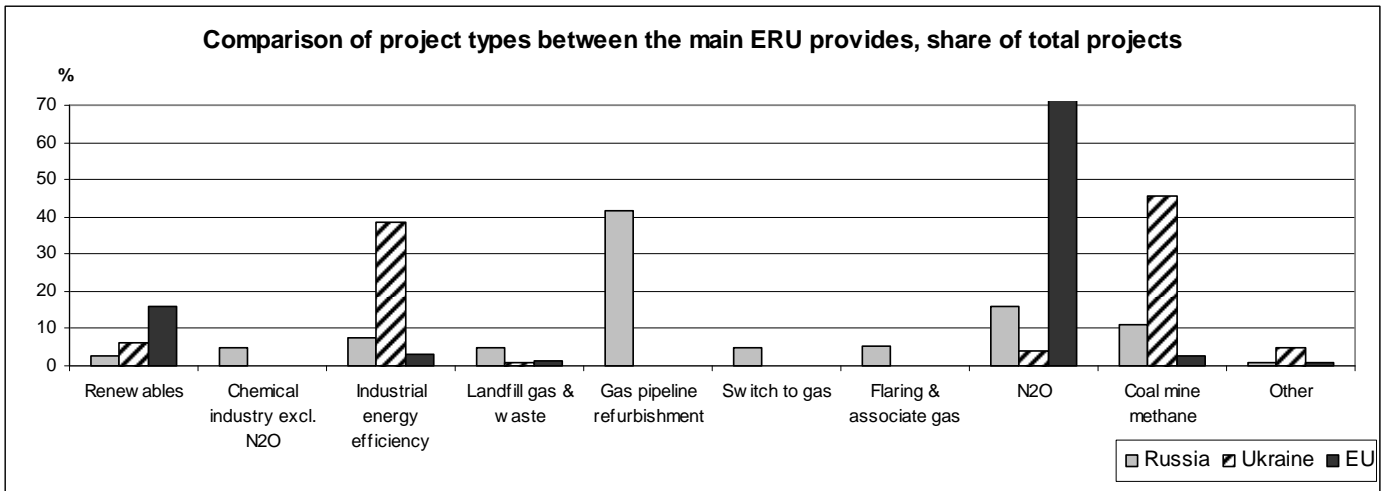


Figure 4. Comparison of project types between the main ERU providers.
Source: JISC Track 2 project database, 1 October 2008.

Figure 4 compares the project types in the main ERU providing areas Russia, Ukraine and the EU. The project portfolio most dominated by a single project type is the EU portfolio over 70% of which is generated by N₂O projects. Also Russian and Ukrainian portfolios are clearly dominated by few project types, gas pipeline projects in the case of the former, and industrial coal mine methane and energy efficiency in the case of the latter.

Comparison of project types with the CDM

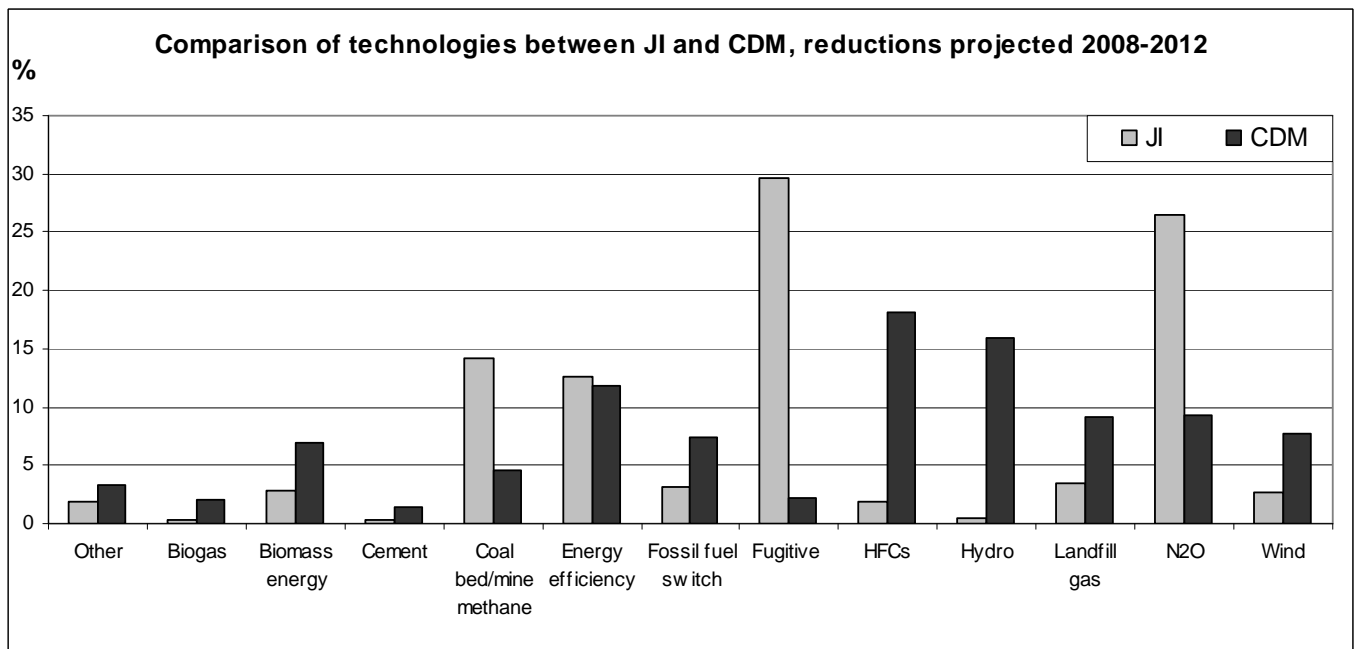


Figure 5. Comparison of technologies under JI and CDM.
Source: UNEP Risoe October 2008, available at <http://www.cdmpipeline.org/publications/CDMpipeline.xls> and <http://www.cdmpipeline.org/publications/JIpipeline.xls>.

Figure 5 provides a comparison of the technologies under JI and the CDM. Gas pipeline refurbishment projects under the category ‘fugitive’ as well as N₂O and coal bed methane projects are the most significant categories under JI. The CDM is dominated by HFCs and hydro power projects, however, the percentage share of the most significant project category is far smaller than under JI. It has to be noted, however, that in absolute terms the CDM portfolio is more than ten times the size of the JI portfolio. As a result only the fugitive emissions category (Over 90 Mt over the first commitment period) and N₂O category (some 80 Mt respectively) under JI are comparable in size with some of the CDM categories.

Track 1

Many JI host countries are preparing to host Track 1 projects in addition to Track 2. Table 3 provides an overview of the status of these preparations. The benefits Track 1 can provide include lower transaction costs of project implementation, faster project approval and a wider range of eligible projects. Track 1 can be used to credit ‘early mover’ projects which cannot be registered under Track 2 without revising their documentation according to the JISC rules which were published after the projects were initiated.³² Project developers may also be able to avoid the fees for JISC verification by redirecting the project to Track 1 after it has passed determination stage.

³² Wees, Mark van (2006). Making JI Track One Operational. The example of Romania. Presentation in Kiev, 24 October 2006. Available at http://www.capsd.nl/pages/documents/JITrack1markvanwees_000.pdf. Accessed 10 May 2008.

Table 3. Track 1 arrangements and attitudes in selected EITs.

Country	Status	Verification	Attitude to T1	T1 Projects
Romania	Track 1 procedures approved in March 2008.	IEs accredited by the JISC	Encouraging	0
Bulgaria	LoAs contain an option to use Track 1. Current procedures are for Track 2 only.	Not known	Not known	0
Czech Republic	Track 1 and Track 2 options are available (Uni-Track).	Nationally accredited IEs possible	Encouraging	0
Russia	Legislation passed on JI project approval applies to both Tracks (Uni-Track).	Nationally accredited IEs only (+JISC accreditation)	Leaves decision to project owners	0
Ukraine	Current JI procedures for Track 2 can be used under Track 1.	IEs accredited by the JISC	Ambivalent	0
Hungary	Track 1 and Track 2 options are available (Uni-Track).	Nationally accredited IEs	Encouraging	8
New Zealand	Track 1 procedures only. Option to select Track 2 is available.	New Zealand government	Encouraging	7
Germany	Track 1 and Track 2 options are available.	German Emission Trading Authority or relevant Federal State Authority	Encouraging	4

Sources: Kalas, Petr (2008); Trusca, Vlad (2008), Point Carbon, UNFCCC³³, Risoe JI pipeline (2008)³⁴, New Zealand Government³⁵

In practice attractiveness of Track 1 depends on individual Track 1 procedures in host countries and their policies towards Track 1. In all of the countries where Track 1 is possible, the projects must be verified by entities accredited nationally or internationally.

It has also been argued by some that Track 1 opens a new channel for countries to ‘greenwash’ their AAUs. Under this argumentation a large surplus of AAUs constitutes an environmental integrity risk for Track 1 JI unless the projects are truly additional³⁶. Since JI projects can access

³³ Kalas, Petr (2008). GIS/JI development and prospects in Czech Republic, Presentation in the Moscow Carbon Forum, 28 April 2008. Available at <http://go.worldbank.org/RHML4GJUW0>. Accessed 10 May 2008.

Trusca, Vlad (2008). Romania – JI Track I and Track II and GIS experiences. Presentation at Japan Carbon Investor’s Forum, 19 March 2008.

Point Carbon. JI country profiles: <http://www.pointcarbon.com/trading/cpm/analysis/hostcountryratings/ji/>

New Zealand’s Guidelines and Procedures for Track 1 Joint Implementation under the Kyoto Protocol. Available at http://ji.unfccc.int/JI_Parties/DB/E48QQ342M7VSOFWEI6MTBKVVVF9NFAM/viewDFP. Accessed 17 May 2008.

³⁴ UNEP Risoe JI pipeline, available at <http://www.cdmpipeline.org/publications/JIpipeline.xls>, accessed 13 October 2008.

³⁵ Notice of Approval of Track One Joint Implementation Projects by the New Zealand Government, available at <http://www.mfe.govt.nz/issues/climate/policies-initiatives/joint-implementation/notice.html>. Accessed 17 October 2008.

³⁶ See for instance Streck, Charlotte (2007). The various Tracks of JI... Presentation in the UNFCCC Technical Workshop on JI in Bonn 14 February 2007. Available at ji.unfccc.int/UserManagement/FileStorage/WN3T08N0I48JV62L9WYEW27FJM2YRZ. Accessed 10 May 2008.

the EU ETS through ERUs, there would be a danger this ‘hot air’ could be allowed to the EU ETS. However, this approach ignores the fact that many host countries still require Track 1 projects to be verified by a third party. Moreover, some buyer governments, concerned that the host governments might not be able to conduct proper review and verification of Track 1 projects, introduced stringent verification requirements for Track 1 and have officially stated they will review Track 1 projects more carefully than they would Track 2 projects approved at the JISC. As any JI projects, Track 1 projects require investor country approval and must be publically available with unique ITL identifier numbers through the registry websites of the host governments, which reduces the likelihood of such ‘greenwash’ if does not remove it altogether.

Compared to Track 2, Track 1 allows host government more control over projects as it decides independently which projects qualify and can try to fast-track projects that are not otherwise popular among investors. Track 1 is free from the JISC-risk i.e. that after the investment in project determination and approval by the host government JISC would reject the project. It remains unclear how many of the projects under determination may choose to go through Track 1 eventually.

DEVELOPMENTS OF JI IN THE MAIN ERU PROVIDING REGIONS

The European Union

In Eastern Europe - which joined the EU in the 2000s - the preparation of JI activities started earlier than in Russia and Ukraine. Many of the ‘early mover’ projects are located in this region where for instance the Dutch government’s ERUPT programme has been contracting projects since 2001. However, the JI activities have halted almost completely by the mid-2000s. One of the reasons behind this includes the host countries joining the European Union which requires its members to implement the *acquis communautaire* or EU common law. Requirement to transpose the EU law to national legislation and comply with it, meant that the countries joining the EU had to comply with EU’s environmental standards. In particular the Landfill, Large Combustion Plant, and IPPC Directives had direct impact on feasibility of JI in respective sectors. As the *acquis communautaire* introduced EU environmental standards as the level of business-as-usual, many potential projects became non-additional. Although extended transitional period were granted to some countries, only few of them were able to take advantage of the remaining opportunities.

Upon joining the EU, the new member states also had to join the EU Emissions Trading Scheme, making even more potential projects ineligible. Project that were located at an EU ETS installation or were effecting emissions of an EU ETS installation could have led to double counting of their emission reductions through both ERUs and European Union Allowances (EUA) and thus had to be regulated separately by the European Commission.

The pressures of joining the EU, preparing for EU ETS, developing the National Allocation Plans (NAPs) handling communication with the European Commission, and working on preparing the registries and inventories for their eligibility status proved to be a strain to many of the new member states. The Eastern European governments that have been traditionally lacking

capacity to prepare the implementation of the Kyoto mechanisms³⁷ were overwhelmed by running the parallel processes for EU ETS and JI, with many of them considering JI a lesser priority. Political instability resulting from changes of government further dented their capacities.

JI has recently taken an upswing in Western Europe, particularly with regards to industrial gas projects. Under the voluntary agreements of the chemical industry with governments, destruction plants for HFC-23 and N₂O were set up in the mid-1990s. However, these plants only abate 85-90% due to downtime and no incentive to increase performance. The operators of those plants are now preparing installation of a second line of abatement to reach 99% abatement. Projects of this type are being prepared by BASF (2.2 million ERUs p.a.)³⁸ and Lanxess (0.9 million ERUs p.a.)³⁹ in Germany and by Rhodia (volume about 0.5-1 million ERUs) in France. Moreover, Rhodia is fairly advanced on a JI project to reduce high-global warming potential fluorized gases at its Salindres plant.⁴⁰ In Germany, 50 coal mine methane projects have been submitted for JI approval (for a typical project with an annual expected ERU level of 57,000)⁴¹. After deliberating more than one year, the German domestic focal point rejected 45 of these projects due to lack of additionality.⁴² The DFP argued that feed-in tariffs were high enough to make the projects commercially attractive. Moreover, Germany has approved the first programmatic JI for improvement of industrial boiler efficiency⁴³ in January 2008. Expected ERU volume is 0.25 million. The German portfolio is worth 7.9 Mt⁴⁴.

Ukraine

In Ukraine, the project approval system was established in May 2007. As of mid-April 2008, 18 projects had been provided with a LoA⁴⁵. The Ministry of Environmental Protection (MEP) has been the coordinator of the Ukrainian JI activities until very recently. In March 2008 the responsibility of a DFP for JI were handed over to the National Environmental Investment Agency, a government body under the MEP that was originally envisaged to be the implementer of a Green Investment Scheme (GIS) in Ukraine. The basics of the JI procedures, however, have not changed; a detailed description of the Ukrainian JI approval system is available in Korppoo

³⁷ OECD (2002): National Systems for Flexible Mechanisms: Implementation issues in countries with economies in transition. Workshop Report, Paris

³⁸ BASF (2008): Redundant catalytic decomposition of residual nitrous oxide (N₂O) from the BASF adipic acid plant in Ludwigshafen, http://www.dehst.de/cln_006/nn_689398/SharedDocs/Downloads/DE/JI_CDM/PDD__BASF__Ludwigshafen,templateId=raw,property=publicationFile.pdf/PDD_BASF_Ludwigshafen.pdf

³⁹ Lanxess (2007): Redundant thermal decomposition of residual nitrous oxide (N₂O) from the LANXESS adipic acid production in Krefeld-Uerdingen, http://ji.unfccc.int/JI_Projects/DB/T7KNF6AMXDZ4T6ZUCM1C9IQOOSIP2G/PublicPDD/QB33F1LEWHZ5NE9WSJ1X3HV46IDGWI/view.html

⁴⁰ Cros, Patrick (2008): Lutte contre les GES – Rhodia joue la carte d’une “chimie responsable”, <http://www.developpementdurablejournal.com/spip.php?article1934>

⁴¹ See Stadtwerke Herne AG (2007): Methane Capture and Power Generation from Coal Mine Methane in the Concession HER-FRIED, http://ji.unfccc.int/JI_Projects/DB/AHWPFFH3DK6DNI8Q1ZXOOYCNCC014W/PublicPDD/XAWQLVG79O48VR905QSCD1B0K7MY4J/view.html

⁴² DEHSt (2008): Survey of applications, http://www.dehst.de/cln_011/nn_476208/SharedDocs/Downloads/DE/JI_CDM/Antragsuebersicht__englisch,templateId=raw,property=publicationFile.pdf/Antragsuebersicht_englisch.pdf

⁴³ Energie-Agentur NRW (2007): JIM.NRW. Climate Protection through Efficient Heating and Steam Technologies, http://www.ea-nrw.de/_database/_data/datainfopool/broschuere_jim.nrw-en.pdf

⁴⁴ <http://www.cdmpipeline.org/publications/JIpipeline.xls>. Accessed 17 October 2008.

⁴⁵ Point Carbon. Ukraine country profile: <http://www.pointcarbon.com/trading/cpm/analysis/hostcountryratings/ji/>

2007⁴⁶. The main problems experienced with the Ukrainian JI approval system are related to the capacity of the government which has only allocated a limited number of employees to work on climate policy including JI.

In practice JI approval has been somewhat slow, however, the project developers mostly felt that the JI activities have the support of the Ukrainian government, and that a political reorganisation would not change this course⁴⁷. Ukraine is establishing a new unit to govern at least some of the activities related to the Kyoto mechanisms, however, its staff has been changed already once due to the change of government in 2007. Even though the line of responsibility inside the ministry is regarded as clear, project developers still need to employ a local agent who can maintain close contact with the JI focal point to ensure that the applications are being processed. Also the negative attitudes and the low level of preparedness of Ukrainian companies were reported as barriers. However, these problems were partly explained by the lack of real investment flows to the country, despite the stream of foreigners visiting the country looking for JI projects. Some interviewees summarized the situation by saying that many Ukrainian companies want to 'see the money first' before beginning project preparation⁴⁸.

The main reason for project developers to work in Ukraine has been the existence of a functional project approval system. The second most important motive is Ukraine's status as a non-EU country: the double counting rules do not apply, and the country is not subject to the same EU restrictions as are the new EU member states, which must comply with the *acquis communautaire* level of environmental standards. Since it has taken so long to get JI operational in Russia and most other potential host countries subject to EU rules, Ukraine is seen by many project developers as the only realistic option for engaging in JI projects⁴⁹.

Russia

In Russia, the process of establishing JI project approval system has been prolonged. The task was established by the National Action Plan in September 2004. The main framework for project approval was adopted in May 2007, however, major gaps still remained in this legislation, and further legal development was required⁵⁰. The project submission service was launched in March 2008, however, at the time of writing no projects have been officially approved. Nor is it clear when the actual approvals will be issued as it now appears there are issues with the composition of the project approval commission because of the recent change of Government. The delay with the establishment of the Russian JI approval system has certainly already led to a reduced use of the Russian JI potential due to the lack of trust by many project developers. Also the Russian JI legislation includes a reason for caution as it retains the Russian government a right to reject a JI project for an unspecified reason at any point even though it had already been approved. Indeed, the project developers have emphasised the lack of a functional approval system as a barrier to JI in Russia. Also corruption and problems with the banking sector were reported by several of the project developers. It seems obvious that JI is not a priority for the Russian government, perhaps

⁴⁶ Korppoo, Anna (2007). JI approval system in Ukraine: Outline and experiences. Climate Strategies Briefing Paper, December 2007.

⁴⁷ Korppoo, Anna & Moe, Arild (2008). Joint Implementation in Ukraine: National benefits and implications for further climate pacts. Climate Policy 8 (2008), pp. 305-316.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Korppoo, Anna and Moe, Arild (2007). Russian JI procedures: More problems than solutions? Climate Strategies briefing paper, June 2007.

partly as the country has received much more significant revenues from fossil fuel exports due to the increasing export prices of oil and gas. As a result, the JI revenue may seem insignificant, bureaucratic and dispersed between several non-governmental actors.

The main reasons to continue project development in Russia regardless of the barriers consist of the strategic interests in Russia by various foreign governments contracting project developers and the large volume of project potential available. For the private players the main motivation was the super-profits presented by large scale Russian projects, among the few remaining in the CDM/JI market. Also the geographical closeness of Russia to many European countries compared to the CDM host countries as well as the lower prices of ERUs compared to CERs generated by the CDM were reported as drivers. Project developers are also keen on hedging the portfolio risk between these two mechanisms and a number of host countries which supports project activities also in Russia⁵¹.

The future of Russian JI may be influenced by Gazprom which has recently been showing interest in JI. While it might be too late for Gazprom to develop a large project portfolio during the first commitment period, the company could make a significant contribution to the portfolio should the Russian JI approval system become operational in the near future. At the time of writing, the latest information by the Russian government states that the first JI projects could be approved 'within weeks'.⁵²

Belarus

Belarus is not a member of Annex B of the Kyoto Protocol, and therefore, has not been allocated AAUs to trade. As a result, the country is not allowed to host JI projects. However, the Belarusian government has expressed its keen interest on gaining the status of an Annex B party and hosting JI projects. An amendment to the Protocol adding Belarus to Annex B was adopted in 2007, however, 75% of the parties to the Kyoto Protocol must ratify to amendment in order for it to enter into force. Due to political and institutional problems this seems unlikely to happen in time for Belarus to host JI projects during the first commitment period. Belarus has developed domestic institutions to comply with the Kyoto compliance regime as well as a portfolio of potential JI projects⁵³. The option of hosting projects outside the Kyoto Protocol to produce Voluntary Emission Reductions (VERs) remains, however, the case of Belarus is indeed relevant for the future of the Kyoto Protocol. The Russian proposal concerning new countries taking commitments under both the Kyoto Protocol and the Convention is an attempt to tackle this problem, however, the process is likely to be too late to make Belarus an actor in the JI market during the first commitment period⁵⁴. The case of Belarus is also more complicated than a similar application by some other country might be due to the authoritarian Lukashenko regime which is difficult to many governments to support, even by ratifying an amendment to the Kyoto Protocol.⁵⁵ In some countries no official contacts with the Government of Belarus are allowed.

⁵¹ Korppoo, Anna & Moe, Arild. JI in Russia, an unpublished article manuscript,

⁵² Russia to approve first JI projects "within weeks", 14 October 2008, PointCarbon.

⁵³ For a list of projects see Korppoo, Anna & Tashchilova, Svetlana (forthcoming). Belarus and the membership of Annex B: SWOT analysis. Submitted to Climate Policy.

⁵⁴ Korppoo, Anna & Tashchilova, Svetlana (2007). The Belarusian amendment to Annex B: a serious commitment or just hot air? Climate Strategies Briefing Paper, August 2007; Tashchilova, Svetlana (2008). Workshop report: Carbon financing prospects for the Republic of Belarus. Climate Strategies.

⁵⁵ Korppoo, Anna & Tashchilova, Svetlana (forthcoming). Belarus and the membership of Annex B: SWOT analysis. Submitted to Climate Policy.

Kazakhstan

Although not an official JI country, Kazakhstan has made steps to be recognized as an Annex I country and is counted as a JI host country by several investor governments. Japan, for example, has issued Letters of Approval (as an investor) to projects in Kazakhstan as JI projects. Kazakhstan has seen a fair share of interest from project developers due to potentially lucrative high volume project opportunities in gas, oil and power sectors. Fugitive emission reductions, energy efficiency and fuel switch – close to 90% of electricity is coal-fired – appear to be the most promising project types.

Kazakhstan's participation in the Kyoto Protocol is hindered by the special position it has negotiated for itself under the framework. Once Kazakhstan ratifies the Kyoto Protocol it will have a non-Annex I country status for the purposes of the UNFCCC, and Annex I country for the purposes of the Kyoto Protocol. To be able to participate in JI and International Emissions Trading Kazakhstan will need to accept a reduction target through an amendment of Annex B to the Kyoto Protocol. Some steps were taken towards Annex I status already. The COP/MOP -2 in Nairobi approved Kazakhstan's proposal to join the Kyoto Protocol as an Annex I country with 1992 base year. It was widely expected that Kazakhstan would ratify the Kyoto Protocol before COP/MOP-3 in Bali in December 2007 and would make efforts to continue with the negotiations on its situation at the conference. This, however, did not happen, partly because Kazakhstan was carefully watching the development of the situation with Belarus, partly because domestically the Parliament has not been able to finalize ratification process.

As the case of Belarus has demonstrated, no amount of effort on the part of Kazakhstan at this point can give it access to JI and International Emissions Trading mechanisms. Even though Kazakhstan has better diplomatic relations with the rest of the world than Belarus, the required ratification of the amendment of Annex B by 75% of all Kyoto Protocol members appears to be an insurmountable task. It will be obviously wiser for Kazakhstan to abandon Annex I ambitions and make efforts to have its full non-Annex I state returned. The government, however, still insists on following Annex I route, which could potentially mean that Kazakhstan will not be eligible for any mechanisms, neither JI/IET nor the CDM.

New Zealand

New Zealand has also been hosting some JI projects. At the time of writing, New Zealand had registered projects worth 2.3 Mt⁵⁶. Even though the government JI programme no longer approves projects, more allowances may be registered based on old domestically contracted projects. Both Tracks are allowed, however, in practice all the registered projects are following Track 1 procedures. New Zealand provides a more stable and predictable environment to implement projects than many post-socialist countries, however, environmental and financial additionality requirements for projects are high. About half of the portfolio focuses on renewable energy projects.

⁵⁶ Notice of Approval of Track One Joint Implementation Projects by the New Zealand Government, available at <http://www.mfe.govt.nz/issues/climate/policies-initiatives/joint-implementation/notice.html>. Accessed 17 October 2008.

JI AND EU ETS

Double counting

Ten Central and Eastern European states have joined the EU in 2000s, following almost ten years of negotiations and preparations. In 2004, in the first batch of enlargement Czech Republic, Slovakia, Hungary, Poland, Slovenia, Lithuania, Latvia, and Estonia became EU members. In 2007 they were joined by Bulgaria and Romania.

When joining the EU the new member states had to adopt all of the EU legislation, which meant that they had to join the EU ETS, develop NAPs, transpose the Emissions Trading Directive, and an amendment to it commonly known as “Linking Directive” into their legislation. The first batch of countries that was admitted in 2004 was able to participate fully in Phase I of the EU ETS, whereas Bulgaria and Romania immediately went on to join Phase II.

Contrary to Phase I of EU ETS, Phase II is a Kyoto compliant market, in which each EUA is backed by an AAU. Thus implementation of Phase II in potential JI host countries in Central and Eastern Europe meant that project that were located at an EU ETS installation or were effecting emissions of an EU ETS installation could have led to double counting of their emission reductions through both ERUs and EUA (AAUs) and therefore had to be regulated separately by the European Commission.

To make sure that the installations covered by EU ETS do not receive EU Phase II allowances for emission reductions resulting from JI projects, the EU Commission has adopted the ‘Double Counting Guidelines’⁵⁷. The guidelines made it possible to proceed with existing JI projects and issue them ERUs by cancelling an equivalent amount of EU allowances from their registries.

Two types of possible cases of double counting are recognized. In case of *direct double-counting* JI projects cause direct emission reductions at an installation covered by EU ETS, for example a JI project reducing emissions from a cement plant. In this case, the amount of EU allowances equivalent to project reductions is withheld from the allocation of the installation. JI projects with *indirect double-counting* affect emissions at a group of installations or the whole sector. For example reduction of electricity consumption due to an energy efficiency project reduces power generation at a number of plants connected to the grid, which reduces overall carbon dioxide emissions. In this case, the whole sector should receive fewer allowances to reflect the effect of the project.

To account for cases of potential double-counting, new member states had to set aside EUAs when drafting their NAPs that could be cancelled so that the projects would be able to claim ERUs. Two set-asides had to be set-up: one for projects that had been approved by the host country government and another one for the projects the host country has been notified of and intended to approve in the future. Any projects affecting emissions at EU ETS sectors or installations that were not included in JI set-asides at the time of submission of the NAPs (2007) would not be able to claim ERUs. Moreover, the amount of allowances that were set-aside for a particular project puts the limit on the amount of ERUs that can be claimed for the project’s emission reductions, even if its performance is better then originally planned.

⁵⁷Commission Decision of 13 November 2006 on avoiding double counting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol pursuant to Directive 2003/87/EC (http://ec.europa.eu/environment/climat/emission/pdf/1_31620061116en00120017.pdf)

The complexity of the rules as well as the significant difference in the price of EUAs and ERUs in combination have almost put a stop to all project development in the EU ETS sectors. JI projects on renewable energy, energy efficiency, cement and fuel switch were practically ruled out, with non-CO₂ reductions and small-scale projects not connected to the grid remaining as the only options. Methane reduction projects such as landfill gas and fugitive emissions projects in most cases had to be limited to gas flaring, as power or heat generation could have caused double counting. Even landfill projects opportunities were limited as many new member states adopted earlier dates for the introduction of the Landfill Directive, making such projects non-additional.

Also procedurally, after 31 December 2006 it became virtually impossible to initiate JI projects which cause direct or indirect emission reduction in the EU ETS, because JI reserves in the National Allocation Plans could no longer be changed. Additional hurdle was also put in the way of all other project types. Under the double counting rules, each project has to receive a conclusion from an independent verifier that it does not cause double-counting (or that it has been accounted for in a set-aside). The host country has to communicate the project documentation together with the conclusion to the European Commission before they can issue an LoA.

Demand for ERUs

It would be incorrect to say that EU ETS has only had a negative impact on JI. Through the Linking Directive, EU ETS has generated main demand for ERUs, spurring much of the most recent developments in Russia and Ukraine. Point Carbon estimated that JI projects will generate close to 377 million ERUs (best estimate) in 2008-12⁵⁸. Currently about 18% of the projects in JI pipeline are destined to the EU governments/multilaterals, and about 8% to Japanese government and companies. If the current trends are sustained it will leave approximately 70-75% of the current project pipeline or 260-280 Mt to be available to installations within the EU ETS.

Lessons and prospects for Phase 3

Point Carbon's database in 2004 listed 53 projects in countries that were to be covered by EU ETS, with expected emission reductions totalling about 35Mt of CO₂e. Of this volume, about 45 % were affected by EU ETS through direct double-counting, further 10-15 % of the total volume were projects indirectly influencing EU ETS such as renewables, and up to 5% of the total volume were affected due to the fact that some landfill projects fell either under the landfill directive on methane collection or indirect double-counting if the gas was used to produce electricity. In total 50-65 % of the project pipeline were affected as the result of linking directive and *acquis communautaire*⁵⁹. More projects have disappeared through the course of time either due to changes within the host companies, or due to unfavourable institutional environment for JI in their countries, leaving only a fraction of the original pipeline still feasible to this date.

⁵⁸ CDM/JI supply: Will there be enough for everyone? Carbon Market Analyst Report. Point Carbon, 14 May 2007.

⁵⁹ EU enlargement and the JI market, Point Carbon, 2004.

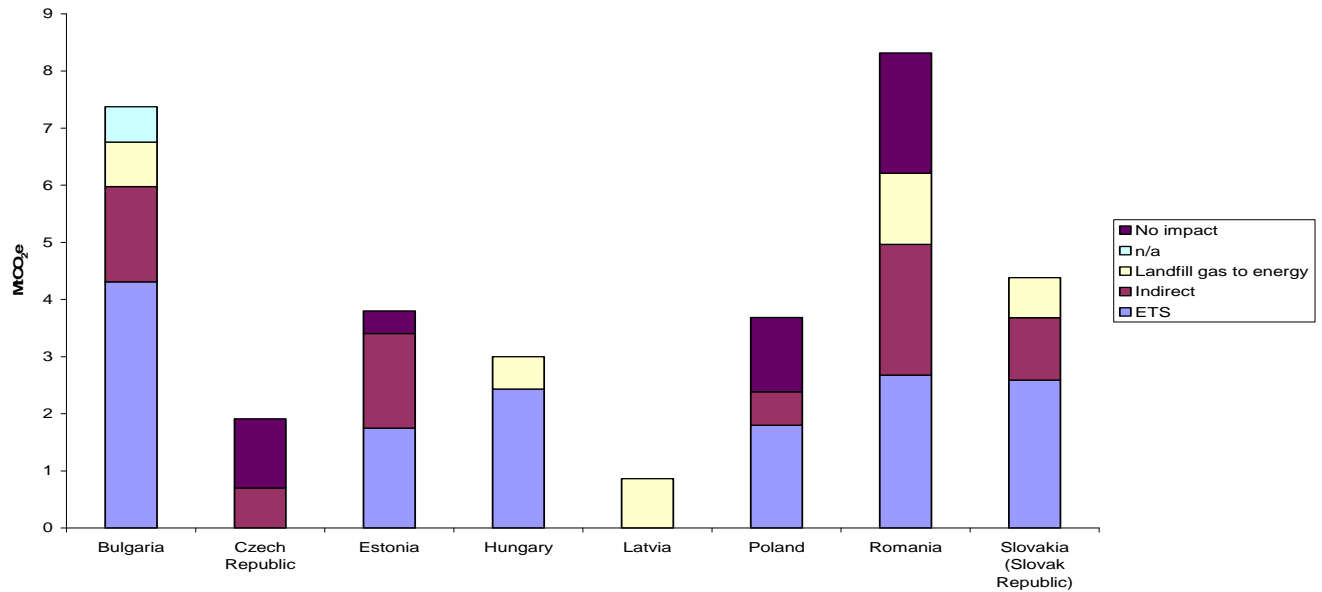


Figure 6 Effect of EU ETS on JI project pipeline in new Member States, Point Carbon, 2004

EU accession and introduction of the EU ETS has had a devastating effect on the prospects for JI in the Central and Eastern Europe, however the benefits the countries have received from them far outweigh the minor losses in JI. To some degree it could be argued that JI in Central Europe was substituted by project-based emissions trading as installations still were able to sell their reductions as EUAs.

For the new member states there could be however a silver lining from introduction of the *acquis communautaire* in that the non-ETS emission reductions (such as landfill) resulting from more stringent environmental regulations enhance their AAU surplus, which could be then sold through GIS. This ‘additional’ freed AAUs however would only be visible if such reductions show up in the Member State’s inventories first. Within the scope of this paper we have not been able to examine whether this trend is actually taking place.

Interestingly, several attempts were made to develop projects as JI in the “old” EU member states, in particular in the UK and Germany, and both were blocked by the respective host government, allowing the sovereigns to save the emission reductions towards their own obligations under the Kyoto Protocol. Most recently, as described in the above section on Track 2 portfolio in the EU, the attitudes have changed somewhat as some EU countries are trying to find a way to utilize JI to spur further activity on the market.

With the tighter caps and wider sectoral scope, it is unlikely that there will be any significant prospect for JI in Phase III EU ETS. Judging by experiences in Phase II, EU countries are likely to continue to experience difficulties in balancing their priorities between encouraging additional investment through JI and achieving their targets under the burden sharing agreement. More thought therefore should be given to provide the private sector with certainty on their domestic JI policies, so that their feasibility and priorities are decided early on.

JI AND OTHER MECHANISMS

International Emissions Trading

The fact that ERUs are created by converting them from AAUs influenced how JI procedures were developed (often delaying them) and how the host countries viewed their responsibility in regulating JI activities. Either considering trading in the international market at later stage, or because of fears over compliance, many EIT countries have been protective of their AAU surplus. It has been regarded as a national asset or at least state property which redistribution needs to be carefully controlled. In some cases this has led to over-bureaucratization of the JI process (Russia), while in others it has incentivised the host countries to develop restrictive approach to JI (Hungary and Slovakia).

Green Investment Schemes

The concept of a Green Investment Scheme was formally introduced by Russia at COP6 in December 2000. Under a GIS, revenues from trading surplus allowances would be earmarked for environmentally related purposes⁶⁰. Thus, a GIS could finance a range of activities from capacity building in statistical and reporting methods to large-scale emission reduction projects. Outcomes may or may not be quantifiable, but the intention is to fund projects which in someway contribute to emission reductions or other environmentally or socially beneficial outcomes.

Directing revenues from AAU sales to physical projects which will lead to further quantifiable reductions in CO₂ emissions is typically known as “hard greening”. Financing activities supporting general climate change policy in the host countries, which would assist emission reducing activities but not necessarily result in actual reductions is known as “soft greening”.

Examples of soft greening include capacity building to the national authorities, support to inventory and registry activities, public education and outreach programmes. Between soft and hard greening falls the implementation of policies and measures that reduce emissions on the national level but could be more difficult to quantify and administer. As it was originally expected many of the seller countries would have huge capacity building needs and thus would prefer the soft/semi-soft greening route, but the buyers have put pressure on the sellers to accept the necessity of hard greening⁶¹.

Although the concept of hard greening in principle was clear, the concept has been more difficult to define in detail:

- Should the ratio of AAUs to emission reductions be 1:1,
- Can ancillary benefits be counted in the ratio⁶²,
- How long should a project crediting period be,
- What monitoring and verification methods to use, and
- How to define priority sectors and activities.

⁶⁰ For further information see Tangen *et al.* (2002), *ibid.*, and Korppoo, A. (2003). *Implementing Kyoto in Russia and CIS: Moving from Theory to Practice*. Workshop Report. Climate Strategies.

⁶¹ Takashi Hongo (2006). Green Investment Scheme. Presentation at Carbon Market Insights 2006, 1 March 2006, Copenhagen.

⁶² An idea that was discussed a couple of years back, but does not appear to be a major concern any longer.

While the buyer countries wanted to see high CO₂ reductions as well as tightly controlled and monitored project implementation, the seller countries insisted they wanted to go away from JI in their approaches to hard greening under GIS⁶³.

It is hard to say whether the buyer strategy has worked or the views have changed but in reality very few countries have made soft greening their priority. On the contrary as it became clearer how difficult JI is, Central and Eastern European countries sought ways to improve investment flows into emission reducing projects and mobilize their dormant Assigned Amount surpluses. GIS schemes appeared to be a viable alternative, which could help avoiding the cumbersome world of JI. Especially in the new EU member states where JI potential was almost wiped out by the introduction of the EU ETS, the governments were eager to use the GIS to support JI-like projects⁶⁴.

The Central and Eastern European countries however quickly ran into the problem of state aid, and later on structural funding, which put restrictions on what kind of projects could have been funded under GIS. As a result, the proposed GIS programmes in Central Europe have moved from the idea of using GIS to fund JI activities made ineligible through double counting to the concept of channelling GIS revenues to roll out programmes targeting smaller state-owned and residential projects not supported by any other subsidies and small enough to avoid the state-aid and structural funding regulations.

Herein came a question of the timing of emission reductions. Smaller projects would produce only limited reductions, but if accumulated over time, significant. Most recently it also became apparent that JI as a mechanism is running out of time, and that 1-2 year lead times on projects in combination with 2012 cut-off on the project crediting periods force project developers to focus only on large scale high-revenue projects. Therefore an idea was floated by some of the project developers⁶⁵ that the crediting period for GIS projects should be extended so that reductions are accumulated over a longer period of time than JI's standard 5 years of the first commitment period. Despite their seeming attractiveness these ideas were not always welcomed by the buyers, some of who feared their liabilities as investors could be extended over an indefinite period of time. The acceptance for expanded crediting periods has increased somewhat over time, as the time available until 2012 decreases, but the issue of long-term liability still remains among the buyers most important concerns.

Another stumbling block in the discussion between buyers and sellers has been effectiveness of emission reductions per unit of Assigned Amount traded through GIS. Initially all seller countries have stated a 1:1 crediting ratio would not be neither desirable nor feasible, while others have pointed out that if the spending target is important but the marginal abatement cost is higher than the market price of AAUs, a lower ratio would be advisable. The current trend has been to indicate in the GIS policies that the projects with the highest emission reduction effectiveness will be supported in the specific priority areas identified by the host countries. It is not clear what their target ratios could be, nor whether the buyers are any longer concerned about this issue. It is clear that as the new EU member states prepare for deep cuts under the announced

⁶³ Trusca, Vlad (2007). Point Carbon/REC side event Green Investment Schemes in Action. 11 December 2007, Nairobi.

⁶⁴ Chmelik, Thomas (2005). Joint Implementation in the Czech Republic: building on our own experience. Available at: <http://www.ieta.org/ieta/www/pages/download.php?docID=1229>. Accessed 16 May 2008.

⁶⁵ Jesse Ussel (2007). Post-2012 Uncertainties and Implications for Financing JI Projects. Presentation at Russia and Kyoto Protocol conference, St. Petersburg, 24 May 2007. Available at <http://www.pointcarbon.com/events/recentevents/stpetersburg07/>

EU post-2012 targets of 20-30% reductions by 2020, the governments want to give themselves as much advantage as possible by utilizing GIS.

The crediting period and the crediting ratio are in fact two sides of the same coin as they address the same issue: the amount emission reductions would be counted as the direct result of implementation of a GIS scheme. A longer crediting period would open the window of opportunity for projects with a relatively low emission reduction effectiveness, whereas higher crediting ratio requirement would allow to reduce the crediting periods of projects implemented under the GIS. The difference however is purely administrative and matters only from the point of view of accounting and ease of monitoring. The cumulative emission reductions from the project over its lifetime would remain the same regardless of how the crediting period is counted under the rules of a particular GIS scheme.

Another link between JI and GIS has been the relationship between the price of ERUs and the price of AAUs greened through GIS. Some seller countries thought that ERU would be an appropriate benchmark⁶⁶, while others believed that CER should be used as a benchmark instead⁶⁷. In general the seller countries viewed the value of greened AAUs as higher or similar to that of the project-based credits because of lower delivery risks and their efforts to mitigate reputational risks and ensure environmental credibility of the GIS. The buyers obviously advocated for a lower valuation of AAUs, at a discount to the ERU prices. The details of the negotiations are understandably not made public so it is hard to follow the most recent trends.

Is GIS competition for JI?

The tendency towards hard greening in the GIS schemes has been a cause of concern for the JI project developers and buyers, who feared that GIS could become a competitor for JI⁶⁸. Some of these fears are justified as the host governments struggled to balance their wishes to support real reductions and the need to differentiate between JI and GIS. Some countries (i.e. Ukraine) have blurred the difference almost completely, by the setup of the GIS procedures.

While we admit the possibility that competition between these mechanisms could be possible, one must note the difference in demand for ERUs and AAUs. Unlike ERUs, the AAUs can not be used to companies in EU ETS, with the potential buyers limited to Annex I governments and Japanese companies.

⁶⁶ Trusca, Vlad (2007). Point Carbon/REC side event Green Investment Schemes in Action. 11 December 2007, Nairobi.

⁶⁷ Feiler, József (2008). GIS in Hungary: Context and architecture. Budapest, April 24, 2008.

⁶⁸ Joint Forum on Project Formation, 21 October 2005. IISD coverage:
<http://www.iisd.ca/sd/jfpf/ymbvol118num1e.html>

Table 4. Differences between JI and GIS in main AAU trading countries.

Country	Difference between JI and GIS	Main requirements	Sectoral focus
Romania	Simpler structure than JI	Not defined	No distinction made between priorities for JI and GIS
Czech Republic	Size and scope	Not defined	Building sector energy efficiency (housing and administrative), incl. fuel switch from lignite to biomass
Poland	Not defined	Not defined	Energy efficiency, renewables, transportation, methane recovery
Latvia	Projects smaller than bankable under JI. Programmatic model.	Financial feasibility, verifiable benefits, sustainable development.	Energy supply and demand management (renewables, energy efficiency in buildings and lighting, district heating), low carbon R&D, transportation
Hungary	Projects not eligible under JI. Programme window & project window (JI-like).	Emission reductions, cost-benefit ratio, additionality, roll-out potential, matching state funding.	Housing sector refurbishment, renewables, transportation. KP Act allows: GHG reductions, LULUCF, adaptation.
Ukraine	Projects facing issues under JI (additionality and baseline)	Quantifiable emission reductions, additionality, JI-like approval process	No focus. District heating and LULUCF projects might be given priority

Sources: Trusca, Vlad (2008); Kalas, Petr (2008); Wojtal, Lidia (2008); Shimazaki, Kyoichi (2008); Bisters, Valdis (2008); Feiler, Jozsef (2008); Point Carbon (2008)⁶⁹

Should JI and GIS compete in terms of scopes and types of projects, the choice whether to pursue JI or GIS will be down to the project developers and hosts based on whether their projects could qualify under both the existing GIS frameworks and JI. For instance the following three factors could be considered:

- (1) *Financial gains from the implementation of the project.* In the case of GIS the project owners receive cash and in the case of JI they receive ERUs that could be sold on to the market.
- (2) *Transaction costs.* In the case of GIS, the project owners will have to deal with newly setup (and untested) GIS approval and monitoring systems and domestic bureaucracy,

⁶⁹ Trusca, Vlad (2008). Romania – JI Track I and Track II and GIS experiences. Presentation at Japan Carbon Investor’s Forum, 19 March 2008.

Kalas, Petr (2008). GIS/JI development and prospects in Czech Republic. Presentation in the Moscow Carbon Forum, 28 April 2008. Available at <http://go.worldbank.org/RHML4GJUW0>. Accessed 10 May 2008.

Wojtal, Lidia (2008). Joint Implementation and Green Investment Scheme Opportunities in Poland. Presentation at Japan Carbon Investor’s Forum, 19 March 2008.

Shimazaki, Kyoichi (2008). Latvia’s participation in International Emissions Trading. Presentation in the Moscow Carbon Forum, 28 April 2008. Available at <http://go.worldbank.org/RHML4GJUW0>. Accessed 10 May 2008.

Bisters, Valdis (2008). AAU Trading standards: the Latvian Approach. Presentation at Japan Carbon Investor’s Forum, 19 March 2008.

Feiler, Jozsef (2008). Hungary: framework for Kyoto mechanisms. Presentation at Japan Carbon Investor’s Forum, 19 March 2008.

Ukraine Introduces GIS Regulations. Carbon Policy Update, Point Carbon, 13 May 2002

whereas in the case of JI they will be dealing with an established international approval and monitoring system, and some domestic bureaucracy complementing it.

- (3) *Approval risks.* The likelihood of a project being approved under GIS may be higher than under JI. Therefore, when considering the approval risks, the project developers could be expected to focus on the assessment of the likelihood of project being approved as JI.

First, the price of ERUs is likely to be higher than that of AAUs which can be gained through a GIS. So, unless GIS pays for a much larger share of the project than potential ERU proceeds, the choice for JI would be clear.

Second, the experiences of the project developers during the early years of JI, and remaining hurdles, are likely to deter them putting their hopes on the GIS until the mechanism has been road-tested.

Third, the assessment of the approval risk varies greatly depending on whether Track 1 or Track 2 is considered as an alternative to GIS. The case for a competition between GIS and JI is clearest in case of Track 1 JI. Both are characterized by domestic approval, host country deciding on additionality and baseline issues and focus on national priorities in project selection. Since ERUs are converted from AAUs and in both cases there is an impact on the Assigned Amount, theoretically it should not matter to a country whether a project should go through Track 1 or GIS. In fact some have argued that Track 1 JI should be the transit route to GIS.⁷⁰ This assumption would only be valid for projects outside the EU or in the non-EU ETS sectors since Track 1 projects are not immune to issues of double-counting and set-asides.

As a result, it appears that the crediting periods and remuneration in cash versus ERUs would be most significant differences between JI and GIS. Unless the financial gains outweigh the risks, it is not likely that JI and GIS could compete for the same projects.

In reality, in most countries active in GIS at the moment, the difficulty of choice will not be a problem. Current GIS front-runners Latvia, Hungary, and Czech Republic are designing their schemes to dodge JI-like projects because of the state-aid rules. The only country so far where a competition between JI and GIS appears to be plausible is Ukraine. However, the Ukrainian GIS, which mandates appointment of a project manager through a state tender is likely to discourage the interest of project developers and project owners from the scheme due to concern over potential interference from the state-appointed third party.

Interaction with other Emissions Trading Schemes

There are also other emissions trading systems enacted or under development which might have demand for ERUs, such as the US system proposed by the Lieberman Warner bill, New Zealand ETS, and an emissions trading scheme in Australia. Their interaction with JI, eligibility to host JI projects, and demand for ERUs warrant further examination but remain outside of the scope of this paper.

⁷⁰ Lengyel, Zsolt (2008). Relevant lessons for GIS learnt JI Track 1 and Track 2 in various Central & Eastern European countries. Presentation in the Moscow Carbon Forum, 28 April 2008. Available at <http://go.worldbank.org/RHML4GJUW0>. Accessed 10 May 2008. Wees, Mark van (2006).

TRENDS OF JI DURING THE FIRST COMMITMENT PERIOD

Given all the uncertainties, several development paths would be possible for JI during the first commitment period. We present three idealised scenarios which give an idea of the potential trends of the JI market during the first commitment period. In reality, elements of more than one of the described paths could materialise at the same time.

Painful Death

JI slowly dies by 2010 as many of the projects in the Track 2 portfolio never get host party approval. The main assumption in this scenario is that the Russian project approval process fails to become properly functional due to administrative delays, and the potential main provider of ERUs must be counted out. This scenario leads to a general feeling of disappointment with JI. First, the project developers active in Russia lose their business. Second, the Russian government, however to blame for the lack of a functional project approval system in Russia, claims that JI which was promised to Russia in Kyoto was not delivered. These disappointments reflect negatively to the post-2012 negotiations, especially the latter. Under this scenario, Ukraine remains the only realistic provider of ERUs to the market, but does not take advantage of this position because of its own administrative constraints and frequent political changes.

Russian Surge

The Russian portfolio dominates the JI market as the long-awaited JI approval system finally becomes fully functional in 2008. This leaves time for some further project development during the first commitment period. Also the Russian Track 1 becomes operational and Gazprom starts hosting projects which add to the size of the Russian portfolio. The role of the Central Eastern European countries which were the early movers on JI remains minimal. The majority of the JI project portfolio is focused on the gas sector due to the dominance of the Russian gas pipeline refurbishment projects and projects hosted by Gazprom. This development would differentiate the JI and CDM portfolios even further.

Market Certainty

A boost is given to JI already within the first commitment period by increasing certainty of a post-2012 agreement and the role of JI in it. Future demand for ERUs is guaranteed through a deal on mechanisms in Poznan or Copenhagen and an announcement that JI projects started late in the first commitment period will be recognised beyond 2012. Within 2010-12 it becomes certain also that JI market will continue and spread geographically to include ex-Annex I countries taking on commitments (Korea, Mexico, etc.). The latecomers Belarus, Kazakhstan as well as Russia which took longer than expected to finalise its JI approval system eventually start supplying ERUs to the JI market.

PROSPECTS FOR THE FUTURE OF JI

One of the peculiarities of JI is that there is no wide constituency left to defend and negotiate its role in the new post-2012 agreement. As the Central Eastern European states have joined the EU they can no longer participate in the UNFCCC negotiations as individual Parties but only

represent the collective viewpoint of the EU. In addition, their views may have a lower weight than those of the old EU member states. Russia's approach to post-2012 negotiations is likely to include resisting deep emission cuts and engaging large developing countries. As a result, little time and energy is left for JI. As to Ukraine, as the Russia proverb goes, one soldier in the field is not a warrior.

The role of JI in post-2012 negotiations therefore will be highly dependent on the progress and shape of negotiations on the CDM. While very little thought has been given to negotiating priorities and evolution of JI post-2012 so far, there is an abundance of discussion forums and ideas as to how the CDM should develop. Negotiations on programmatic CDM, sectoral CDM, new crediting mechanisms and new crediting periods for CDM could affect the shape of JI in the future. However, the EU has stated that it would like to see JI continue beyond 2012⁷¹.

Finally, another aspect affecting post-2012 JI could be the influence of non-Annex I countries planning to take on commitment in the new regime, such as South Korea, Mexico, and Turkey. Being potential beneficiaries and hosts of new JI projects, they might also show interest in how the mechanism is defined and operationalized post-2012. The fact that current accumulated experience with JI has not been particularly encouraging, might prompt them to try to re-examine and renegotiate JI rules and modalities.

In case of these countries moving from the CDM to JI it must be decided what happens to their existing CDM projects which still have crediting periods left beyond 2012. As a result, it looks like countries could be hosting both their existing CDM projects until the end of the crediting period at the same time when they are already hosting JI projects under their new status as Annex I countries.

CONCLUSION

A lot has changed since the idea of JI was introduced in Berlin in 1995 including the political economy of potential countries have changed, however, the project types have stayed the same. JI worked out not to be exactly as originally envisaged.

JI Track 2 which was originally expected to start 1-2 years after the adoption of the Marrakesh Accords, only started in 2006 due to delays in the Kyoto Protocol's entry into force caused by the prolonged ratification process of Russia. Projects under Track 2 have taken longer to be determined and ready for the JISC approval as the few IEs have not been able to cope with the sudden large demand for project determination.

Ten Central European countries have joined the EU since the establishment of the idea of JI, and as a result introduced the EU environmental standards and gained access to the EU ETS through which they are able to trade emission reductions more effectively and with a higher value than under JI. In addition, the EU membership has limited the types of JI projects in the new member states. The EU ETS has curtailed JI in Central Europe without any other scheme providing alternative support, including GIS.

Just like under the CDM, a skewed geographic distribution had developed under JI, with the current market and the future of the mechanism hinging on Ukraine and Russia. Unlike the CDM, the two biggest potential JI suppliers have had only a modest progress in moving the

⁷¹ Earth Negotiations Bulletin, 7 April 2008, Vol. 12, No 362, p.8.

mechanism forward and it remains to be seen whether their huge theoretical potential can be unlocked. It seems clear, however, that JI is not a priority for Russia which holds some 65% of the current Track 2 project portfolio but has not approved a single project as yet. We do expect that eventually the approval process in Russia will start and a large share of the projects in the Russian pipeline will come to the market. It is however already clear that Russia will not be able to repeat the success of CDM in China, even though it has similarly large reduction potential.

Short crediting period, which started later than that of the CDM and will finish earlier, provided another impediment to JI. This combined with the even later start than planned now threatens JI with an early death. Just as the host countries seem to have finally found their footing and the institutions and legislation were put in place, JI seems to have run out of time.

Both within and beyond the first commitment period, the future of JI depends on how quickly and in which format the post-2012 agreement will emerge and how it will integrate JI. By early 2010 the market would need clarification as to whether JI projects that span over to the second commitment period can be developed and under which conditions. Without this certainty the project development will stop and the momentum will be lost.

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