

CERs from Least Developed Countries: the African Perspective

by **Christof Arens and Nicolas Kreibich***

Introduction

With the post-2012 climate regime still undecided, the prospects of the CDM remain uncertain as well. There are, however, a number of encouraging signals, especially for countries which have been so far underrepresented in the CDM world: the EU, even in the absence of an international agreement on climate change, will continue to accept CERs for import into its emissions trading systems. Yet, this is limited to credits stemming from projects that start up before 2012. For projects that start after 2012, only credits from projects in Least Developed Countries (LDCs) are accepted. The revised EU Emissions Trading Directive and the EU Effort Sharing Decision both include further provisions fostering CDM project development in LDCs.

Furthermore, a number of CMP decisions support CDM project development in countries which have been underrepresented in the CDM pipeline thus far. CMP 3 (Bali, 2007) decided to exempt LDCs from paying the registration fee and the share of proceeds at CER issuance. CMP 5 (Copenhagen, 2009) expanded this provision to countries with less than ten registered projects. Furthermore, the EB was requested to undertake measures to support these countries, inter alia by developing tailored methodologies for GHG accounting and by implementing a loan scheme for project

development and for covering the costs for validation and the first round of verification.

These developments at international and European level will foster demand for CERs stemming from CDM projects in LDCs. The question is whether this increased demand can actually be met with adequate supply. This article will therefore analyse the potential for CDM project development in Africa, in particular sub-Saharan Africa. Currently, 34 LDCs are located on the African continent.

Technical opportunities for CDM projects in selected sub-Saharan LDCs

In order to identify the CDM potential of sub-Saharan Africa, Wuppertal Institute and GFA Envest have analysed selected sectors in eleven LDCs located in the region: Burkina Faso, DRC, Ethiopia, Malawi, Mali, Mozambique, Rwanda, Senegal, Tanzania, Uganda, Zambia.¹ Funded by the German Federal Environment Ministry BMU, this research is part of a larger research project which aims at fostering access to carbon finance for sub-Saharan African LDCs.

The assessment of the CDM potentials is partly based on existing literature and partly on own calculations. The study team analysed the potentials for renewable energy use, biomass residue use, end-use energy efficiency, and municipal solid waste, as well as industrial production processes. Projects under the emerging REDD+ scheme were excluded from the research due to the prevailing uncertainties of this project type. The sector potential findings, expressed in CERs per annum, are presented in Figure 1. The total technical abatement potential of all analysed sectors in the study region amounts to 128.6 mln CERs per annum.

The largest potentials in the sectors analysed were found for projects using biomass residues from agriculture, forests and woods. Agricultural residues, for example, comprise waste materials left in the fields

In this issue

- 1 CERs from Least Developed Countries
- 4 JISC amends accreditation procedures for independent entities
- 5 Recent changes for JI in Poland
- 8 JI project approval in Russia accelerates, but time is short
- 12 Waste Management Projects lagging behind in the CDM
- 14 An inefficient energy efficiency directive for the EU
- 17 "Challenges of CDM Project Development in the Balkan"
- 18 Reports
- 19 JIQ meeting planner

* Wuppertal Institute, Energy, Transport and Climate Policy Research Group, PO Box 1004 80, D-42004 Wuppertal, Germany, Tel. +49 202 2492 170, Fax +49 202 2492 250, e-mail: christof.arenas@wupperinst.org; nico.kreibich@wupperinst.org, Internet: www.wupperinst.org

¹ Arens, Christof, Martin Burian, et al., 2011, *The CDM project potential in Sub-Saharan Africa with focus on selected least developed countries*, Wuppertal / Hamburg : Wuppertal Institute for Climate, Environment and Energy / GFA Envest: 2011 <www.jiko-bmu.de/1001>

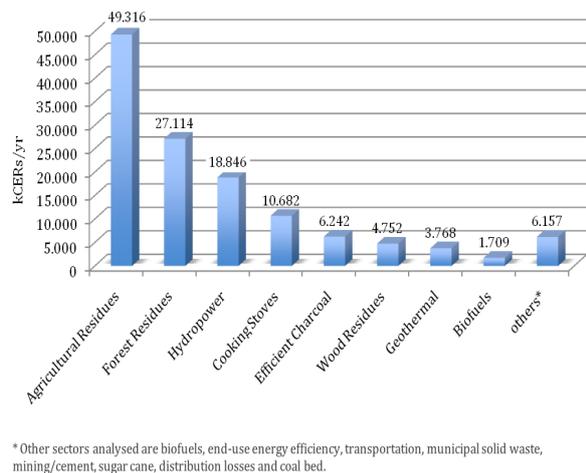


Figure 1. Technical CDM potentials of selected sectors in 11 sub-Saharan LDCs (in kCERs/yr). *Source:* Arens et al., 2011, see footnote 1.

after harvesting, as well as by-products stemming from production processes which can be used for energy generation. By analysing these types of residues, the study revealed a huge CDM potential of up to 894 projects and 9,606 MW installed capacity in the study region. The largest potential for the use of agricultural residues for energy production in CDM projects was found in Ethiopia and Tanzania. For the eleven countries covered by the study a potential of 49 mln CERs/yr were identified for this sector.

The analysis of the forest and wood residue sector also revealed high CDM project potentials amounting to up to 31.8 mln CERs/yr. It is estimated that using forest residues that accrue from logging operations for energy production could offer more than 1,000 project opportunities, with the highest potentials lying in Ethiopia, DRC and Uganda. The use of wood residues (by-products of sawn wood production) also showed considerable emission reduction potentials with almost 100 project opportunities in the study region and expected emission abatement potentials of 4.7 mln CERs/yr.

As the largest part of household energy consumption in sub-Saharan Africa is used for cooking, replacing existing stoves with improved cook stoves can also drastically reduce fuel consumption and lead to considerable emission reductions. The analysis of this project type was limited to projects following the small scale methodology AMS.II.G, i.e. focused on the introduction of efficient cooking stoves using (partly) non-renewable biomass. A detailed assessment supported by own calculations yielded an overall potential of 10.6 mln CERs/yr, with the highest potentials lying in DRC, Tanzania and Uganda.

While the majority of wood extracted from African forests is directly used as fuel wood, an increasing fraction is being transformed into charcoal through a traditional, inefficient production process. By

introducing more efficient low emission technologies, wood consumption could be reduced drastically, resulting in important GHG emission reductions. Considerable potentials for the implementation of this project type can be found especially in Tanzania, Uganda and Zambia, amounting to 1 mln CERs on average. Further promising potentials can be found in Mozambique, Malawi, Ethiopia and DRC.

In Africa, the huge potential of hydropower for energy production is still widely underutilized: estimates indicate that Africa currently only exploits 5 to 8% of its hydropower potential. Of the countries studied, Ethiopia and Tanzania show the largest opportunities for hydropower projects holding emission reduction potentials of 8.1 mln and 5.5 mln CERs/yr respectively. The overall hydropower potential for CDM projects in the study region has been estimated at about 18.8 mln CERs/yr. However, while these findings present hydropower as an interesting CDM opportunity, its exploitation comes with several risks attached. Not only could future climate variability make hydropower supply unreliable, but large hydroelectric projects can also have adverse social and environmental effects. These have to be carefully assessed when considering projects of this type and could prevent project development under the CDM.

Another energy source exploitable which has a large potential in Africa is geothermal energy. Currently, Africa already hosts 13% of all geothermal CDM projects of the overall global pipeline, including those under validation. This fraction could be further increased as several African countries have many underground reservoirs with high temperatures from which electricity can be produced. In the study region, opportunities for further using this energy source are especially high in the area of the Great Rift Valley. From the countries with available quantitative data, Uganda offers the highest potential for the implementation of geothermal projects, followed by Tanzania and Ethiopia.

Other CDM project opportunities in the region were found in the fields of Municipal Solid Waste management, combined heat and power projects (CHP) in sugar production, and energy efficiency. The study did not focus on transport other than biofuels and bus rapid transit, energy efficiency in buildings and domestic water heating so that potential CDM projects in these sectors have not been included in the above overview.

With regard to the geographical distribution of project potentials, the study revealed the largest CDM project and CER generation potentials in Ethiopia and Tanzania, followed by DRC and Uganda. Figure 2 illustrates the distribution of the project opportunities across the 11 countries analysed.

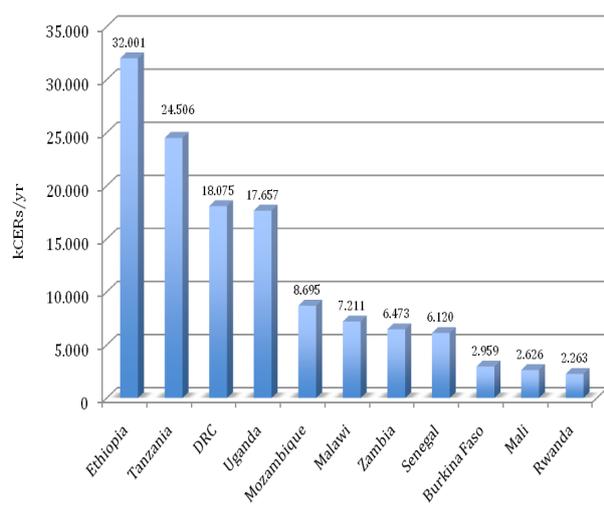


Figure 2. CDM potentials in selected sub-Saharan LDCs by country, Source: Arens et al., 2011.

CDM in African LDCs – opportunities and barriers

The analysis presented above has been a purely technical assessment: what could the CDM portfolio in the study countries look like if all opportunities were used? However, for a balanced picture of potentials, also barriers to project development and implementation need to be explored. There are many barriers to implementing CDM projects in Africa. One major factor determining a country's CDM potential is the carbon intensity of the technology or capacity replaced by the CDM project. For the electricity sector, this intensity is measured by the Grid Emissions Factor (GEF) which is defined as the average carbon intensity of a host country's electricity system. Where applicable, the GEF was included into the sector potential analysis. It determines the CDM potential for on-grid renewable electricity projects and influences other projects types, such as, for example, forest and wood residues.

It was found that Burkina Faso, Mali, Rwanda, Senegal, Tanzania and Uganda have high GEF values making grid-connected CDM projects feasible: a high GEF implies a relatively strong emission reduction potential by a CDM project substituting electricity from the national grid. On the other hand, DRC, Ethiopia, Mozambique and Zambia have low GEF values, so that grid connected CDM projects currently have relatively low emission reduction potentials making these projects less attractive. No information was available for Malawi.

There are further factors hampering the implementation of CDM projects, such as the overall investment climate and the status of the local "Kyoto infrastructure". With respect to the latter, it was found

that all study countries have established Designated National Authorities for the CDM (DNAs), which in principle allows for the development of CDM projects in the study region. Yet the pure existence of CDM-related institutions does not guarantee functioning procedures and an enabling institutional framework. A close look at the country-specific situation is therefore crucial.

Furthermore, projects have to overcome the problem of high upfront and transaction costs involved in CDM project planning and implementation, and project developers have to develop strategies to raise the capital needed. This is particularly difficult as high interest rates, limited awareness and involvement of local financial actors and investors, as well as high levels of corruption, represent severe barriers for the attraction of foreign investments in several LDCs in sub-Saharan Africa.

Other barriers include the lack of experienced project developers and weak or split incentives between decision-makers and technicians to pursue CDM opportunities. However, the distribution of these barriers differs from country to country. Moreover, a number of these barriers are being addressed by recent initiatives, some of which will be described in the following.

Overcoming the barriers, mobilizing the capacities

Given the situation outlined above, Africa has seen a number of capacity building initiatives over the years. UNEP, the World Bank, and a number of other multilateral, as well as national development organisations, have conducted substantial support programmes.

A recent initiative by KfW Bankengruppe, for example, addresses the programmatic CDM approach. This approach offers great opportunities for project development in sub-Saharan Africa as it allows reaching small and diffused GHG sources which are hard to tap within single CDM projects. The KfW's Programme of Activities (PoA) Support Center provides advice and support to institutions and businesses implementing PoAs.² With regard to sub-Saharan Africa, it supports, for example, the development of SPEAR, a multi-country PoA targeting small-scale, grid-connected, renewable energy projects of up to 15MW in Kenya, Uganda, Tanzania, Rwanda and Burundi.

Another approach in dealing with the specific barriers CDM projects are facing in the region is being pursued by the African Carbon Asset Development (ACAD) facility. ACAD financially supports project development in its early to middle stages through local financial

² <http://www.kfw.de/carbonfund>

institutions, making it possible for projects that are not immediately fully financially viable to complete critical steps, such as PDD development and validation.³ Furthermore, the facility also provides technical assistance to project developers and capacity building for local banks and investment funds, enabling them to better identify and handle carbon investment opportunities.

ACAD is also heading a consortium addressing the lack of a "regional baseline" for the South African Power Pool or other methodological solutions to cross-border grid-connected renewable energy projects, as explained above. What is more, with its recent revision of the tool to calculate the emission factor for an electricity system, the CDM Executive Board allowed the application of a more differentiated emission factor for imported electricity, improving the conditions for on-grid-projects in countries depending on electricity imports.

³ <http://www.acadfacility.com>

⁴ Please check for further results and products: www.jiko-bmu.de/996

Outlook

Due to the uncertain future of the CDM and in light of the preferential access of post-2012 CERs from LDCs to the EU-ETS, a continuous rise of demand for CERs from Least Developed Countries is likely. In order to account for this increasing demand, scaling-up of CDM project development in LDCs is urgently needed.

The technical emission reduction potential in African LDCs is in fact substantial. At the moment, however, unlocking this potential through the CDM is still hampered by substantial barriers. In the context of the underlying research project, a further investigation of country-specific barriers, as well as studies on cross-cutting LDC-related issues, such as suppressed demand, microfinancing and innovative ways for mobilizing capacity in a sustainable manner, will be undertaken.

The knowledge and experiences gained within the research will be broadly available to the public, with the aim at contributing to tapping the potentials and project opportunities in the region.⁴

JISC Amends Accreditation Procedures for Independent Entities

By Zsolt Lengyel*

On 21-22 June of this year, the JI Supervisory Committee (JISC) held its twenty-fifth meeting in Bonn, Germany (see <http://ji.unfccc.int/index.html>). Among the outcomes of the meeting is a decision to formulate transitional measures for accreditation of independent entities for the determination (validation) of project proposals and verification of project results.

In its report to COP-MOP 6, the JISC proposed "amending the procedures and standards for the accreditation processes under JI, including through the consideration of synergies with other accreditation procedures, with a view to the possible development of a unified accreditation process for JI and the CDM."¹ Moreover, at the JI Roundtable (held in Bonn on 20 June of this year) JI stakeholders had an open and critical discussion on new procedures for accreditation (see below).

Thus far, the accreditation systems for CDM and JI have been completely independent. Whereas for accreditation under the CDM an independent entity

needs to undergo a 'performance assessment', for JI accreditation 'witnessing' is required. The big difference between 'witnessing' and 'performance assessment' is that the first is based on actual auditing activities whilst the latter is always based on a completed auditing activity. For witnessing an independent entity requires the nomination of a witnessing project. However, JI project developers have not been very keen on allowing their projects to be used for witnessing. Their main concern is that it could delay project procedures because a witnessing project is unlikely to be registered before the witnessing is completed. As a consequence, JI project developers seem to have taken the position that witnessing is fine, but "not with my project."

The latest amendment of the accreditation procedures, as decided by the JISC, eliminates the "witnessing" stage for those applicant independent entities that have obtained a so-called "indicative letter" demonstrating that they are systematically well-prepared for auditing JI projects. In the new situation,

* Zsolt Lengyel, Lead Auditor Swiss Association for Quality and Management Systems (SQS), head of office: +41 31 910 35 35; mobile: +31 610 274 085, e-mail: zsolt.lengyel@sqqs.ch

¹ Annual report of the Joint Implementation Supervisory Committee to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, FCCC/KP/CMP/2010/9

the following procedure has been agreed:

- An independent entity which has applied for accreditation but which has not yet initiated the witnessing process shall be granted accreditation by the JISC for a period of five years for both project design determination and project performance verification.
- These accredited independent entities shall undergo a focused assessment, such as on site assessments of determination and verification competence.
- Independent entities which had already started a witnessing can either continue with this process and become accredited without being subject of focused assessments, or terminate the witnessing and become accredited as described above.

With this decision the JISC has addressed the issue, as explained above, that witnessing could have been an obstacle for accreditation processes. Moreover, it would address the 'chicken-and-egg' problem that independent entities had little incentive to do a witnessing due to the small number of potential JI projects while, at the same time, the relatively small group of accredited independent entities slowed down the development of potential JI projects.

The JISC decision could result in the accreditation of the nine applicant independent entities that have successfully completed the 'desk review' and the 'on-site assessment' steps of the JI accreditation process, but not yet done or completed the witnessing (they have received an indicative letter).² How many of them will actually become engaged in JI activities remains to be seen though. Nonetheless, it is encouraging to see how ideas raised and discussed by stakeholders at the 20 June JI Roundtable have been incorporated in JISC decisions immediately following this roundtable. For example, with the new accreditation procedures the JISC idea of a 'focused assessment' has been combined with the "overnight accreditation and ex-post scrutinising of accredited independent entities" as suggested by the Roundtable participants. The small, but committed group of "JI lovers" (as the appr. 50 Roundtable participants were described by a seasoned UNFCCC secretariat person) have most likely gained inspiration and hope from the fact that their views were taken on board. Let's see how AIEs and project participant will be able to act together as time is running out for JI...

² <http://ji.unfccc.int/AIEs/listIL.html>

Recent Changes for Joint Implementation in Poland - better late than never

by Janusz Mizerny*

In May this year, the Polish Government passed a new act on emissions trading to adjust Polish law to the EU directives and the EU ETS changes after 2012. This long awaited key regulation had to be officially implemented by the end of June to enable power producers and other installations to apply for free EU emission allowances. The act also expands the scope of GHG emissions and new sectors included in the system: aviation and industrial installations. Moreover, it regulates principles for allocation of the EU emission allowances, including auctioning. However, apart from emissions trading rules, eventually the regulations and the procedure concerning development of Joint Implementation (JI) projects in Poland were significantly amended.

JI status in Poland thus far

So far, 17 JI projects have been approved in Poland by the government (the first one in June 2000) and another eight have obtained Letters of Endorsement. Half of these projects involve renewable energy technologies (wind farms, biomass and biogas plants, hydro and geothermal power) and the remaining projects cover N₂O emissions from four nitric acid

plants and CH₄ emissions from six coal mines. Three projects deal with energy efficiency improvement; two of these have been developed using a programmatic approach. Compared to other JI eligible countries, Poland is in fifth position (after Russia, Ukraine, Czech Republic and Bulgaria) in terms of number of projects and annual volume of expected Emission Reductions Units (ERUs). Poland's share in the JI pipeline is 5%, corresponding with 3.5 mln tCO₂.

Poland could have had more JI projects, had there not been obstacles to project approval. At the beginning of the first Kyoto commitment period (in 2008) Poland did not yet have national JI regulations nor a procedure for approval of JI projects. Consequently, project developers in Poland could not use simplified Track 1 procedures, but had to use the complicated, time absorbing and risky procedure governed by the JISC under Track 2. A Track 1 procedure was implemented by the Polish Government only in the second half of 2009. Before that, the approval of projects was even suspended by the Ministry of Environment due to the lack of relevant regulations.

* Janusz Mizerny, Green Projects, Poland, e-mail: j.mizerny@green-projects.pl, Internet: www.green-projects.pl

Janusz Mizerny (MSc) has been involved in climate change and greenhouse gases emission reduction projects since 2007. He gained extensive knowledge and experience while working for the Ecofys CDM team, and later as a freelancer. Since December 2010, he has run the company Green Projects which focuses on delivering solutions for a green future.



2009 regulation still difficult for renewables

The new regulation, Act on the management system for GHG emissions and other pollutants, entered into force on 18 September 2009 and defined all steps in the procedure, such as applications for a Letter of Endorsement (LoE), a Letter of Approval (LoA) and issuance of ERUs, timelines, and information to be provided in documents. The procedure is managed by the Ministry of Environment, but all JI relevant information is available on the web page of the National Administrator of the Emission Trading System (KASHUE / KOBIZE).

Despite the launch of the Track 1 procedure, however, development of new renewable projects was hindered by the fact that LoE issuance depended on obtaining a report of an Accredited Independent Entity (AIE) to confirm that a proposed project would not have an impact on the GHG emissions of EU ETS installations (so-called 'double counting', see below). Obviously, such confirmation was impossible to obtain for projects generating renewable electricity and delivering it to the national grid as there could always be an impact on the electricity production of ETS installation with a corresponding risk of double-counting. This should not have been a problem since the 2008-2012 Polish National Allocation Plan for the EU ETS contained a special JI set aside reserve for approved and planned JI projects. However, the legislator did not regulate how to make use of that JI reserve so that there was no possibility to start new projects and to earn carbon credits from projects with an impact on emissions from the EU ETS installations.

Weak interest in JI projects may also have resulted from the lack of awareness of possibilities and procedures

linked to development of emission reductions projects. Another reason may have been the strong focus of developers on the use of the EU funds aimed at new environmental investments, especially renewable technologies. In general, JI projects in Poland have had quite a tough life so far.

Dealing with JI - ETS double counting

New regulations concerning JI projects, amended by the new act on the EU ETS in Poland, have been in force since 21 June of this year. The changes in these regulations, though not numerous, are significant. An important change has been the addition of a definition of 'double counting'. Double counting is defined as a transfer of ERUs from a JI project to a buyer without decreasing the number of emissions allowances that have been allocated to an ETS installation even though the JI project has contributed to a reduction of the installation's GHG emissions. Double counting occurs if the JI project generates ERUs and the ETS installation obtains extra allowances from the same JI project.¹ As a consequence, several paragraphs were modified to include references to this definition, which solved several problems with approval of renewable energy JI projects in Poland.

Previously, obtaining an LoE was the first step in Poland's JI procedure for all kind of projects. As explained above, project proponents had to declare (together with a corresponding statement by the AIE) that the project would not have an impact on emission reductions of EU ETS installations. Otherwise, the project would not receive the LoE. However, after the recent procedural changes, the LoE is no longer required for these projects; each JI project that will lead to EU ETS emission reductions (all projects generating renewable energy fall under this category) only has to request and obtain the LoA. For other projects, the LoE procedure still applies, although the new rules have also resulted in modification of additional documents.

Real chance for JI renewable energy projects

With these latest changes, the legislator has given a real chance to develop renewable energy projects under the JI mechanism since the approval procedure in light of possible double counting has now been improved and simplified. However, there is one restriction for all new renewable energy JI projects: they have to be fully operational before the end of February 2012. On the other hand, the new rule does not only apply to new projects. Also projects already developed or under development are eligible to apply for the LoA.

Obviously, this simplification of procedures does not imply that projects will be automatically approved.

¹ For example, a Polish renewable JI project delivering power to the grid could reduce demand from an ETS covered power producing installation. This installation would therefore have lower GHG emissions and a greater surplus (or smaller deficit) of ETS allowances.

First of all, each JI project must be additional. Second, projects should not cause environmental deterioration and will diminish negative impacts on the environment. Third, each submitted JI project must be legally permissible and has to be realized using best available techniques. Fourth, hydropower plants need to comply with large hydropower regulations. For acquiring the LoA from the Polish Government, (1) a Project Design Document must be provided, together with (2) a verification report drawn up by the AIE, as well as (3) an environmental impact assessment (if relevant), (4) the Letter of Approval issued by an Annex I country acquiring ERUs, and (5) authorisation of that country of the future owner of the ERUs.

Potential project approval issues

To sum up, all renewable energy investments, either new, or already developed or under development, can now apply for JI approval. However, for already ongoing projects successful completion of all steps of the JI approval procedure might be difficult. First, these projects may have difficulties with demonstrating additionality, which is assessed by considering: (1) national and sectoral policies, (2) the project's Internal Rate of Return with and without ERUs revenues, and (3) existing investment barriers. It seems hard to imagine that already operational wind farms or biogas plants can prove their additionality credibly. In these cases, evidence must show that the project had been designed with the objective of using the JI mechanism, or that an investment was started as a JI project but then stopped due to unfavourable regulations.

Second, even if a retroactive additionality test is passed, the question of proper monitoring of the project remains. It can be defined based only on the already working system, but this may not necessarily fit to the UNFCCC rules and CDM methodologies (if applied). Furthermore, how can the operator of the wind farm present in the Project Design Document a realistic story of JI project development and provide credible evidence in the verification process? And what if the project developer did not implement BAT in the project? Therefore, this retroactive approval seems very uncertain and approval of such projects by the AIE and the Ministry of Environment is therefore doubtful.

Shortened JI approval processes

Apart from the modifications which are important for project developers, also some changes have taken place at the ministerial level. The most essential amendment includes shortening of the LoE and LoA issuance time, as well as faster ERUs transfer from the JI reserve to the buyer's account. Applications for both letters are subjects to assessment by the National Centre of Balancing and Managing of Emissions (KOBiZE). Previously, KOBiZE had up to 45 days for verification, but now it is 14 days in case of the LoE application and 30 days for the LoA. The Minister of Environment also has to work faster as there are only

14 days (instead of 30) envisaged now for issuing the letters. According to the latest rules, this phase of the procedure may take in total up to 2 months, which saves 1 month of waiting time. The transfer of ERUs is faster, too. This two-stage process consists now of at maximum 14 days (previously 21 days) for the Ministry of Environment and 7 days (previously 21 days) for KOBiZE. This implies a saving of 3 weeks at this phase.

Time is running out

These essential modifications of the current JI procedure were introduced by Poland only a year and a half before the end of the Kyoto Protocol's first commitment period. It is a pity that such regulations had not been in force from the beginning of 2008. Although the legally binding and usable JI reserve for dealing with double counting, amounting to 13 million tonnes of CO₂, has not been established within the NAP yet (it has to be approved again after litigation between the European Commission and Poland), it is high time all project developers interested in JI projects started their project preparations.

Especially renewable projects have to be commenced as soon as possible due to the completion deadline set for the end of February 2012. Even though the approval procedure is shorter, efforts taken by investors to obtain power purchase agreements and other crucial permits (e.g. environmental or building) may be obstructed due to bureaucracy and objections raised by local communities. Therefore, enterprises already settled design, permits and development plans seem to have the best JI chances.

We cannot predict the future of JI after 2012, as there are many undecided factors, e.g., an international post-2012 climate policy agreement, the situation on the emissions trading markets and decisions of the JISC, as well as internal country-specific policies. The challenge will be to fully exploit the existing JI potential against this uncertain background.

Box 1. Key points of latest Polish JI amendments

The new regulations concerning JI projects, amended by the new act on the EU ETS in Poland, contain the following key points:

- Renewable energy projects finally can meet eligibility criteria;
- Faster procedure for LoEs and LoAs;
- For renewable energy projects only LoA is required, LoE step is omitted;
- New renewable energy projects have to be completed by 28 February 2012 to be able to obtain LoA;
- Already developed RE project may apply for LoA, but serious concerns are related to proving additionality and proper monitoring, as well as to PDD verification;
- Application for ERUs generated by JI projects with impact on the EU ETS emissions will be possible once separate regulation on modified NAP and JI reserve is published.

JI Project Approval in Russia Accelerates, but Time is Short

by Job Taminiau*

In an article for JIQ in 2009, Korppoo and Moe (2009)¹ concluded that “the results of JI in Russia as of today are...poor, and the whole story with development of a framework and procedures looks fruitless and almost embarrassing.” Indeed, despite a substantially growing pipeline in Russia with JI project plans, no JI projects were approved by the Russian government. In the meantime, however, things seem to have changed. On 30 August 2010, the Russian government submitted its first Track 2 JI project to the JI Supervisory Committee (JISC) for registration,² which took place on 18 October 2010.³ Additionally, during the first Russian JI tender (see below), 14 Track 1 JI projects were approved by Russia together accounting for approximately 30 mln ERUs for the 2008 – 2012 period.⁴ These recent developments might warrant a new conclusion on progress with JI in Russia. This article discusses the prospects for JI in Russia by briefly examining the history of JI in Russia, the recent developments and the current JI portfolio.

Russia's history with JI: doubt, uncertainty and an unclear government position

In 2004, Russia issued a National Action Plan which stated mid-2005 as the deadline for establishing domestic JI procedures. Adoption of these procedures by the Russian Government was, however, delayed until May 2007.⁵ In addition to this delay, Korppoo and Moe (2007) noted that the adopted procedures could be characterised by bureaucracy, vagueness and duplicating work. For instance, the 2007 regulations did not state which organizations were to be involved in the project review and approval procedures and the regulations did not provide firm mechanisms

for approval of JI projects in the country. Moreover, no clarity was provided about the issuance of ERUs (Clifford Chance, 2007)⁶. Essentially, the regulations failed to promptly establish a JI approval system.

Since the launch of the Track 2 JI procedure by the JISC in October 2006, JI project proposals have been queuing up in the Russian pipeline. These projects have been developed by investors and project developers and submitted for validation of the project design document. This trend is illustrated by Figure 1 which shows that 66.5% of expected JI emission reductions during the period 2008-2012 originate from Russian projects.⁷ However, none of the Russian JI projects submitted under the 2007 regulations received governmental approval, which led some observers to doubt whether Russia would ever become active with JI under the Kyoto Protocol.⁸

According to Korppoo and Moe (2009), the lack of Russian interest in JI and the reluctance to approve projects could be explained by the following factors. First, for Russia, the revenues from JI projects are relatively small, especially when compared to the country's huge energy export revenues. Consequently, for the, often centrally led, top management of large companies, JI projects may be considered less important. Second, as JI lacked sufficient attention from the higher political levels, there was a lack of government initiatives to approve JI projects.

Recent increase in approved projects

In total, 22 Russian JI projects have been listed by the UNFCCC secretariat.⁹ Of these, there is only one Track

* Job Taminiau is an intern at Joint Implementation Network and can be contacted at job@jiqweb.org

¹ Korppoo, A. and A. Moe (2009). Economic Crisis and Russia: Boom or Bust for JI? *Joint Implementation Quarterly*, Vol. 15, No. 1, April 2009 <<http://jin.wiwo.nl/images/stories/JIQmagazine/2009Apr.pdf>>

² UNFCCC (2010a). Press release: Kyoto Protocol's Joint Implementation mechanism sees breakthrough approval from Russia <http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/100831_pr_ji.pdf>

³ Global Carbon (2010). UN approves first Russian Kyoto Project, 18 October 2010 <http://global-carbon.com/images/20101014_Press_release_GC_first_Russian_JI_project_en_1.pdf>

⁴ UNEP Risoe (2011). UNEP Risoe CDM/JI Pipeline Analysis and Database, 1 June 2011 <<http://cdmpipeline.org>>

⁵ Korppoo, A. and A. Moe (2007). Russian JI Procedures Adopted, but Work still Remains to be Done, *Joint Implementation Quarterly*, Vol. 13 No. 2 July 2007.

⁶ Clifford Chance (2007). Joint Implementation in Russia, Clifford Chance Client briefing <http://www.c6capital.com/UserFiles/File/joint_implementation_in_russia_primer_oct_071.pdf>

⁷ UNFCCC (2010b). *Annual report of the Joint Implementation Supervisory Committee (JISC) to COP/MOP* <<http://unfccc.int/resource/docs/2010/cmp6/eng/09.pdf>>

⁸ Kudlai, V. (2009). *Joint Implementation projects and the Kyoto Protocol in Russia: a step forward or room for concern?* White & Case legal alert <http://www.whitecase.com/publications_01282009/>

⁹ UNFCCC (2011). Russian JI projects as listed on the UNFCCC <<http://ji.unfccc.int/index.html>>

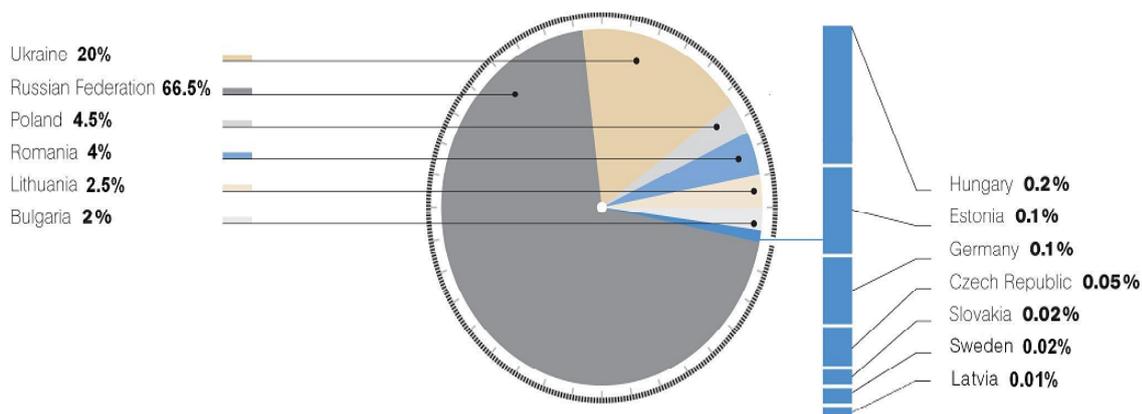


Figure 1. Percentage breakdown of emission reductions for 2008-2012 proposed in PDDs submitted under JI Track 2, by country. Russia's portion is illustrated in grey. *Source:* UNFCCC, 2010b.

The adoption of new JI procedures in October 2009 has been an important milestone in the JI developments in Russia.¹¹ These regulations allow Sberbank, as Carbon Unit Operator, to conduct tenders for identifying and selecting JI projects in Russia. Korppoo (2010)¹² distinguishes three important differences between the October 2009 regulations and the May 2007 regulations. First, Sberbank has been

allocated a central role in project selection. The 2007 regulations lacked a clearly defined actor that fulfils this central role. As a result, the central role was occupied by various Russian agencies, causing inter-agency strife. Second, participating project applicants must be Russian. Finally, the eligibility criteria were changed and now encompass three selection criteria:

- 1 Energy and environmental efficiency. Essentially, this is determined based on reduction in energy consumption and environmental impact.
- 2 Technical and financial potential. This criterion covers the sufficiency of the project's technological means, as well as the availability of own or attracted financing for implementation.
- 3 Economic and social effect. This criterion is based on the contribution to the economic and social aspects of modernization and technological development.

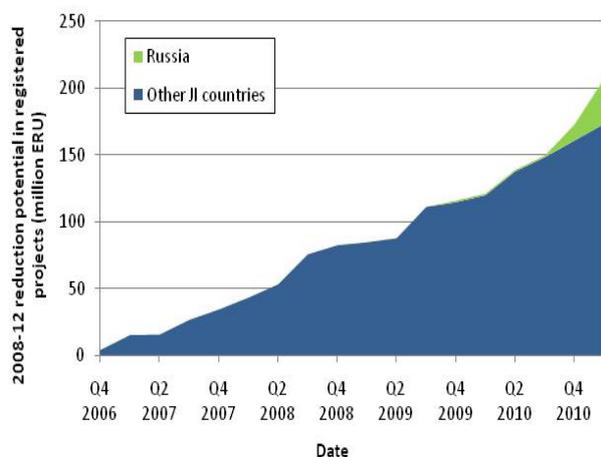


Figure 2. The 2008 – 2012 ERU forecast with the contribution of Russian JI projects highlighted in green. *Source:* JIAG, 2011¹⁰

In addition, these regulations outline that JI projects in the energy, forestry, solvent, waste and industrial sectors will be considered eligible projects. As Korppoo (2010) notes, this is likely to exclude gas pipeline refurbishment projects and N₂O reductions projects accounting for approximately 46 % and 7 % of the Russian project pipeline^{13 14}.

¹⁰ JIAG (2011). Joint Implementation Action Group newsletter #3 2011 <http://jiactiongroup.com/documents/JIAG_newsletter.pdf>

¹¹ Government of the Russian Federation Decree No 843: *Towards Implementation of Article 6 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 28 October 2009 <http://ji.unfccc.int/JI_Projects/ProjectInfo.html> These regulations were subsequently adopted at the Ministry for Economic Development level with Decision No. 485 1 of 23 November 2009.

¹² Korppoo, A. (2010). Russian Climate Policy: home and away <<http://www.fiaa.fi/en/news/1008>>

¹³ Korppoo, A. (2007). Joint implementation in Russia and Ukraine: Review of Projects submitted to JISC, *Climate Strategies Briefing paper* <<http://www.climatestrategies.org/research/our-reports.html>>

¹⁴ Korppoo A. and A. Moe (2008). Russian Gas Pipeline Projects: Case study of the dominant project type. *Climate Strategies briefing paper* <<http://climatestrategies.org/research/our-reports.html>>

Also, high-level political attention was a main missing element in the previous phase of JI in Russia. The growing political interest in the potential links between climate policy and economic modernization is another important element which is likely to have contributed to the recent developments. For example, at the COP in Copenhagen in 2009, President Medvedev said that Russia is committed to a 25% reduction target as “we will do this regardless whether or not there will be a legally binding agreement. For one simple reason: it’s beneficial to us” (Korppoo, 2010).

Current Russian JI portfolio

Under the first tender (February 2010 – March 2010) 14 Track 1 JI projects were approved by the Russian government and under the second tender (ended December 2010) 58 JI project applications were submitted. 18 submissions from the second tender were approved as JI projects (Bellona, 2011).¹⁵ An overview of the Russian JI projects submitted and approved in the two tenders is presented in Table 1.

While the first tender resulted in a somewhat skewed distribution of projects between the sectors; *i.e.*, a clear priority to the oil and gas sector and to big state affiliated companies could be discerned,¹⁶ in the second tender it seems that there was a more even division among sectors.¹⁷ For instance, in the second tender, seven of the 18 projects are energy efficiency schemes, three will cut emissions from the

oil and gas sector, three are biomass, two are in waste management and one is a hydropower project. Five of the 18 projects are owned by iron and steel companies. As such, the metallurgical sector is seen as the big winner in the second tender.¹⁸ Overall, most projects are in industrial efficiency and in the oil and gas sector and also in terms of potential GHG emission reductions these project types dominate the list.

In the first tender, it took Sberbank four months to decide and agree with the interested parties, while the regulations allow Sberbank 45 days to assess the projects. Even though the 30 Mt CO₂-eq. limit was not reached in both tenders, the approval rate shows that about one in every two projects gets rejected. Moreover, while the 32 approved projects are estimated to result in approximately 58 MtCO₂-eq, currently 4.2 mln emission credits have been issued. These issues combined lead some project developers to conclude that the procedures need to be adjusted (CCGS, 2011).

The way forward?

There is still a large untapped JI potential in Russia. This is illustrated by the Russian JI pipeline which still contains a substantial number of 132 projects (UNEP Risoe, 2011) (including the projects approved by the government and projects in development before approval). While the majority of these projects have been in the pipeline for years and are unlikely to

Table 1. JI projects submitted and approved in the two Russian tenders

Sectors	Projects submitted		Projects approved		Approval factor	Share
	Projects	ERUs 2012	Projects	ERUs 2012		
Oil and Gas	14	19.71	9	17.13	86.4%	29.3%
Switch to NG	4	1.75	2	1.06	60.6%	1.8%
Industry/EE	20	32.24	7	19.87	61.6%	34.0%
Energy/EE	11	12.89	2	2.13	16.5%	3.6%
Renewables/Biofuel	11	7.42	5	2.81	37.9%	4.8%
Hydro	2	4.67	2	4.67	100.0%	8.0%
CMM	1	1.10	1	1.10	100.0%	1.9%
LFG utilization	4	7.67	1	0.97	12.5%	1.6%
Industry/GHG	6	18.34	3	8.79	47.9%	15.0%
Total	73	105.79	32	58.53	55.3%	100.0%

Source: Yulkin, 2011¹⁹

¹⁵ Bellona (2011). *Comment: less red tape could push more of Russia's struggling Joint Implementation Projects toward much awaited take-off* <http://www.bellona.org/articles/articles_2011/kyoto-russia-implementation>

¹⁶ Yulkin, M. (2010). *First JI Bidding in Russia: Overview of the Results and Lessons Learnt* <<http://ccgs.ru/en/publications/other/>>

¹⁷ CCGS (2011). *Climate Change Global Services (CCGS) Market News (31/01/2011): Russian Ministry of Economic Development approves projects under the second JI tender* <http://ccgs.ru/en/news/market_news/?file=news_44>

¹⁸ Point Carbon (2011a)

¹⁹ Yulkin, M., 2011. *Operations Director/Managing Director, Russia & FSU. Climate Change Global Services* <<http://ccgs.ru/en/main>> Information obtained through personal correspondence.

materialize, the new tenders issued by Sberbank might capitalize on the potential for JI in Russia.

Clearly, activity levels within Russia regarding JI have recently increased substantially. However, as the present JI governing procedures are being reviewed by the Russian government, a new tender is not expected at short notice.²⁰ In fact, after the second tender, Sberbank no longer accepts new project applications for consideration (Bellona, 2011). In addition, the criteria and nature of the new 2009 regulations are being criticized. For instance, a Russian industry lobby group urges the Russian government to change its JI procedures, including scrapping its tendering process, with the aim to reduce the time it takes to get credits issued.²¹

Also, even though the new regulations combined with the high level political attention seem to have reduced uncertainty, much uncertainty still remains. This is illustrated by the withdrawal in April of this year by the Danish Energy Agency from Russian JI activities because of the concern whether existing ERPA's would

be fully respected by Russian authorities, or whether the ERU transfer in the end would be conditional to requirements mentioned by Sberbank.²²

The Russian government is aware of the outstanding issues and concerns, and of the potential of JI in Russia. On 9 June 2011, President Medvedev said: "We definitely need to try to use the mechanisms laid down in the Kyoto Protocol [...]. There are significant funds involved" (ITAR-TASS, 2011).²³ Subsequently, on Monday 27 June 2011 President Medvedev ordered the government to finalize within two weeks a governmental resolution on approval of greenhouse gas reduction projects in order to simplify and speed up the approval process (Global Carbon, 2011).²⁴

With only 18 months left in this Kyoto Protocol commitment period (and a Russian opposition to a second commitment period²⁵), it will be challenging to resolve the outstanding issues and concerns in time and maintain recent JI momentum.



photo courtesy of Oilmillplant.com

²⁰ RSEU (2011a). Russian Socio-Ecological Union (RSEU) News (35/05/2011): The New Obstacle for Kyoto Mechanisms in Russia <http://rusecounion.ru/ang_kioto_23511>

²¹ PointCarbon (2011b). PointCarbon News (29/06/2011): Russian Business Group Produces JI Wish List <<http://www.pointcarbon.com/news/1.1554312>>

²² DEA (2011). Danish State's newsletter April 2011. Danish JI/CDM programme withdraws from Russian JI-activities <http://www.ens.dk/da-DK/KlimaOgCO2/Klimaprojekter/nyheder/Documents/newsletter_april_2011%20%28FINAL%29.pdf>

²³ ITAR-TASS (2011). ITAR-TASS news agency (09/06/2011): Medvedev calls for using Kyoto Mechanisms <<http://www.itar-tass.com/en/c154/161894.htm>>

²⁴ Global Carbon (2011). Global Carbon News (04/07/2011): Medvedev orders government to expedite Kyoto emission reduction projects <<http://global-carbon.com/en/348/news.html>>

²⁵ RSEU (2011b). Russian Socio-Ecological Union (RSEU) News (25/04/2011): Russia at Bangkok climate negotiations – against 2nd period of Kyoto, but for development of Kyoto Mechanisms <http://rusecounion.ru/ang_bangkok_25411>

Why Waste Management Projects are Lagging Behind in the CDM

By Tobias Koch, Bernhard Gerstmayr, Max Müller, Eise Spijker*

The authors of this article were triggered by an article in the April 2011 JIQ issue that raised the question whether or not the carbon market and waste-to-energy technologies are a good match. This article discusses the question from a different angle and concludes that the incentive for waste management project activities stemming from the CDM in its current form is insufficient and does not do justice to the real potential of alternative (and often better) uses of waste resources (other than dumping it in a landfill). The existing set of CDM methodologies like AM0025 and associated tools are currently not triggering the level of project activity that can be expected from the waste sector. Several methodology and tool related issues were discussed in Session IV on waste management standards during the 'Practitioners workshop on CDM standards' in Bonn.¹

The 'practitioners' meeting can be put within the context of the CDM EB49 decision, in which the Meth Panel was requested "to revise approved [waste management] methodologies to further improve their objectivity, applicability, usability and consistency."² Based on this, the Meth Panel stated its "intention to develop and improve six standards related to the solid waste sector in order to improve the methodologies."^{3,4} One of the prime indications for the poor match between the CDM and the waste sector is the relatively low success rate of waste management projects under the CDM in terms of registration and/or the common credit issuance underperformance for those waste projects that do get registered.

Is the CDM able to trigger waste management project activities?

The success rate of the entire scope 13 waste project activities under the CDM is less than 1% if

defined by reaching its commercial targets. Out of 544 projects, about 50% never reached verification, and of the remainder about 85% generate less than 20% issuance performance (percentage of the forecasted CER production). The bulk of the projects that do get registered predominantly include landfill gas destruction projects.⁵ Other types of waste management projects are few. Out of the 54 projects applying for CERs based on CDM methodology AM0025, only 19 are registered and not a single one has generated CERs thus far. Overall, with an issuance performance of 15.8 % for scope 13, waste management sector project activities are performing very poorly under the CDM.⁶

At the core of the underperformance problem appears to be a range of methodological issues. The most important issue is that all CDM projects that avoid the dumping of waste are required to use the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site." The heart of this tool is a so-called "First Order Decay (FOD) Model." Under the CDM this tool was first used in 2005 for a composting project in India.⁷ The tool and FOD model with it received significant criticism from the expert community as the usage of the model reduced the issued CER to 20-35% of actual emission reductions.⁸ The multiphased approach is the most problematic feature of the FOD model. It means that the model simulates the emissions trajectory of CH₄ from organic matter that slowly adds up as time passes and more waste is accumulated. This approach basically introduces a time-lag parameter (kj) that simulates the natural rate of decay of organic matter.

Although this approach makes good sense to forecast the amount of landfill gas for capturing and flaring the methane that is expected to be 'produced' year on year at a landfill, this parameter is highly problematic for other waste management activities that do not rely

* Tobias Koch, CTO Balderrie Energies GmbH, e-mail: t.koch@balderrie.com; Bernhard Gerstmayr, Bifa Environmental Institute, e-mail: bgerstmayr@bifa.de; Max Muller, Dipl. Ing. FH Umwelt- und Verfahrenstechnik, Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) GmbH, e-mail: max.mueller1@gmx.net; Eise Spijker, Joint Implementation Network, e-mail: eise@jiqweb.org

¹ Bonn – Germany on 8-10 June 2011, Information on this workshop can be found at: http://cdm.unfccc.int/methodologies/Workshops/cdm_standards/index.html

² Executive Board of the Clean Development Mechanism 49th meeting of 11 September 2009. The report can be found at: <http://cdm.unfccc.int/EB/049/eb49rep.pdf>

³ See presentation from *Clare Lonergan (UNFCCC Secretariat)* held at the 'Practitioners Workshop'. Presentation can be found at: http://cdm.unfccc.int/methodologies/Workshops/cdm_standards/s4_unfccc.pdf

⁴ Methodologies Panel Meeting 47 report paragraph 9-11.

⁵ Ina Ballik, CDM Technical Reviewer EM Certification and Verification Services, 9 June 2011.

⁶ http://cdm.unfccc.int/methodologies/Workshops/cdm_standards/s4_erm.pdf

⁷ NM0090 Waste composting in Dhacca.

⁸ Urs Brodmann, Factor Consulting, 30th "Analysis of Reformatted Methodology NM0090", September 2005.

on naturally occurring decay processes under normal atmospheric and climatic conditions. Most other type waste management activities, like composting, recycling, digestion, gasification, incineration and pyrolysis, rely on a much quicker conversion processes than in a landfilling scenario. For these processes this time-lag parameter is of no technical relevance since the conversion of waste (and thus the avoidance of all potential future methane emissions) now occurs in matters of minutes, hours, days, weeks or months instead of years and even decades under natural conditions. This is all the more frustrating for project developers and investors given that methane avoidance performance upon waste conversion for most waste management activities is close to 100%. Landfill gas capturing systems however can only capture a fraction of the produced methane.

In a way the time lag parameter 'spreads out' the methane emissions avoided over a longer time period. Given a limited crediting period for CDM projects, this introduces a significant problem for all waste management activities other than landfill gas capture and flaring. The problem being that waste management projects can only claim, with sufficient financial-economic certainty, the methane emissions avoided over either the first seven or ten years. The FOD-model based emissions reduction calculation example below shows what impact this has on CER generation and the limited impact on the internal revenue of the project.

Example: Estimated CERs of AM0025 CDM project

Table 1 shows the numbers from a 1,000t waste per day compost and recycling facility in Pakistan. The DOCj value is correctly assessed by discounting the weight of the waste with the "dry mass" established by measurement. These values provide a realistic picture of project performance when using the currently applicable baseline rules.

This time-lag parameter problem is introduced in most CDM 'waste' methodologies and is one of the reasons that waste management projects are lagging behind in the CDM. Lower potential CER returns are especially problematic for a sector that is already heavily dependent on public finance. Waste treatment facilities in developing countries are known to have a high rate of technical and financial failure in developing countries.⁹ Therefore, it is highly unlikely that private

⁹ UNDP, Solid Waste Management Sourcebook-1.3.1 Introduction

capital will be available under attractive conditions. The time-lag parameter issue, however, is not the only issue of concerns; there are also several other methodology-specific issues relating to the complexity of the methodologies regarding baseline setting and monitoring. For AM0025, for example, up to 50 parameters have to be monitored for simple projects even without incineration activities. Also the current sampling procedures for waste fractions are either impossible and/or impractical to implement and verify.

Yes, the CDM could provide an incentive for waste management, but...

In its current design it is unlikely that the CDM will spur significant investments in waste management project activities, other than methane capture and destruction at landfills. Existing methodologies and supporting tools require revision and new methodologies need to be developed. The way in which the 'Tool to determine methane emissions' has to be used (with a fixed kj parameter), is one major barrier for all kinds of waste management projects and hampers technology transfer in this sector. A more flexible approach would be to set the time-lag parameter at a more project- and technology-specific level. This would allow certain waste management projects to claim a higher methane emission avoidance performance already during the crediting period. For most alternative waste management technologies kj would then be at or close to 1.

If one wants to give a proper incentive to waste management activities during the remainder of the Kyoto period, fast-track revision and update procedures for waste management methodologies and tools by the Meth Panel and waste management experts are needed. On this matter there is no time to waste!

Table 1. Estimated credit performance of an AM0025 CDM project

	Year	Project emissions	Baseline	Leakage	CERs
1	2012	4,632	32,167	1,025	26,511
2	2013	4,632	61,902	1,025	56,246
3	2014	4,632	89,395	1,025	83,738
4	2015	4,632	114,819	1,025	109,163
5	2016	4,632	138,336	1,025	132,679
6	2017	4,632	160,092	1,025	154,436
7	2018	4,632	180,225	1,025	174,568
8	2019	4,632	198,859	1,025	193,203
9	2020	4,632	216,111	1,025	210,454
10	2021	4,632	232,086	1,025	226,430
11	2022	4,632	246,883	1,025	241,227
12	2023	4,632	260,592	1,025	254,936
13	2024	4,632	273,296	1,025	267,640
14	2025	4,632	285,073	1,025	279,417
15	2026	4,632	295,992	1,025	290,336
16	2027	4,632	306,120	1,025	300,463
17	2028	4,632	315,515	1,025	309,859
18	2029	4,632	324,235	1,025	318,578
19	2030	4,632	332,329	1,025	326,673
20	2031	4,632	339,845	1,025	334,189
21	2032	4,632	346,826	1,025	341,170
				7 year CP	737,341
				10 year CP	1,367,428
				21 year CP	4,631,915

An Inefficient Energy Efficiency Directive for the European Union

By Arianna Vitali Roscini*

The fact that European energy policy lacks the necessary drive and commitment on energy efficiency, is not news to the people working on this topic. In recent months however, high level officials in the European Commission have started to be increasingly vocal about the need to reinforce energy efficiency and savings legislation as this could help solve the climate problems, raise living standards and create thousands of new jobs. The expectations about the European Commission's proposal for an Energy Efficiency Directive (EED) were therefore high.

The new legislative proposal,¹ which would amend and merge the Energy Services and Cogeneration Directives, is the Commission's primary legal tool to help the European Union (EU) achieve its target of saving 20% of energy by 2020.

However, WWF's analysis of the proposal concludes that it fails to add any significant changes to the existing framework; this draft legislation will most probably not succeed in putting the EU back on track towards achieving its energy savings target. The article below aims to provide a short analysis of some key points of the new proposed Directive, and presents WWF's comments.

A binding energy savings target is still missing

While two of the three 2020 targets of the 2008 climate package, the GHG emission reduction and renewables targets, are binding, the 20% energy savings target is still not. This has led to a lack of assigned responsibilities and ownership among policy-makers at the EU and national levels and, as a result, energy efficiency policy is lagging behind and the target is likely to be missed.

This was acknowledged by the European Commission in its Energy Efficiency Plan of March 2011,² where it is stated that with current policies the EU is likely to meet only half of its 20% energy savings target (see Figure 1).

While the Commission's Impact Assessment states that only a binding target would ensure that 20% energy savings are achieved, its proposal still embraces a "wait and see approach." The proposal requires Member

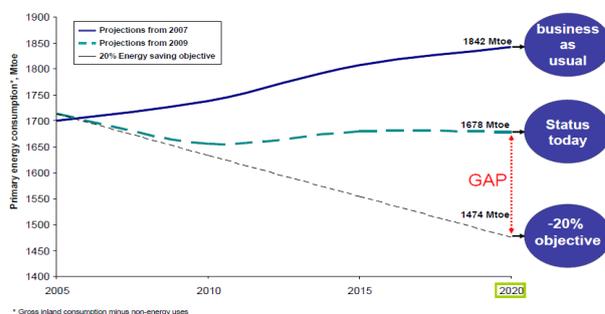


Figure 1. Graph taken from a European Commission presentation on "A new Directive on Energy Efficiency - Challenges addressed & solutions proposed" <http://ec.europa.eu/energy/efficiency/eed/doc/2011_directive/20110622_energy_efficiency_directive_slides_presentation_en.pdf>

States to individually establish national targets in line with the 20% objective. By 30 June 2014, the European Commission will assess whether the sum of the 27 national objectives puts the EU on a trajectory to meet its overall 2020 energy savings target. Only if the evaluation predicts failure, the Commission will submit a legislative proposal setting binding national targets.

According to WWF, one of the main shortcomings of the new proposal is this lack of an effort sharing mechanism which distributes clear responsibilities to Member States to reach the 20% objective: the current wording allows each country to set an indicative target at any level of ambition.

Setting a binding target will not in itself close the gap since the actual savings can only be achieved with appropriate delivery and financial mechanisms and with tailored policies. However, a framework to steer sectoral energy efficiency measures in the right direction and to help channel private and public funding towards the necessary investment is urgently needed.

Renovation of public buildings

In line with the mantra that the public sector has to play an exemplary role in energy efficiency, the European Commission's proposal suggests that Member States should annually renovate 3% of the

* Policy Officer for Energy Conservation, WWF European Policy Office, e-mail: avitali@wwf.eu
¹ Proposal for a Directive of the European Parliament and of the Council on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC, Brussels, 22.6.2011, COM(2011) 370 final <http://ec.europa.eu/energy/efficiency/eed/eed_en.htm>
² "Energy Efficiency Plan 2011", COM(2011) 109 final, Brussels, 8.3.2011 <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0109:FIN:EN:PDF>>

floor area of buildings owned by public bodies with an area exceeding 250 square meters. The proposal suggests that the refurbishment should bring the building at least to the level of minimum energy performance requirements set by Member States in compliance with the Energy Performance of Buildings Directive (EPBD).³

According to the Energy Efficiency Plan, publicly owned or occupied buildings represent about 12% of the EU's building stock.⁴ However, the renovation obligation set by Article 4 is not designed to have an impact on all public buildings. It will only affect larger buildings (over 250 m²), owned by public bodies.⁵ Buildings with a particular architectural value will probably be excluded should this obligation be transposed at national level. Because of all these exemptions, the 3% renovation rate will only cover a small percentage of buildings.

WWF is concerned not only about the scope of renovations, but also about the proposed renovation level. According to Article 4 of the EPBD, Member States must set minimum energy performance requirements with a view to achieving cost-optimal levels as resulting from the comparative methodology framework set by Article 5.⁶ In practice, Member States' minimum energy performance requirements will not even be as ambitious as those resulting from the cost-optimal methodology (the EPBD allows discrepancy between national requirements and the cost-optimal ones calculated with the comparative methodology).⁷ Furthermore, the comparative methodology framework, which was due by 30 June 2011, has still not been published, and is not in itself a strong guarantee for deep renovations.

Even though the renovation target for public buildings seems to be strong at first sight, it will cover only a limited number of buildings and will lead to renovations at sub-optimal level.

Box 1. What does deep renovation mean and why it is important?

While there is still no common definition for deep renovations at EU level, WWF defines it as a refurbishment that reduces the energy performance of a building to a level comparable to the passive house standard if technically feasible, or a reduction of 75-90% energy consumption compared to the building's performance before renovation.

According to the Impact Assessment of the EED, refurbishment cycles take about 30-40 years, but for renovations linked to the improvement of energy efficiency this cycle can be extended to as much as 60-80 years. Thus, each renovation that does not reduce the energy consumption to the lowest level possible for any specific building, locks the building's energy saving potential for an extremely long period.

National energy efficiency obligations, but with an opt-out clause

One of the key provisions of the new Directive was meant to require Member States to set national energy efficiency obligation schemes. However, last minute high level negotiations introduced an opt-out clause which allows Member States to adopt alternative mechanisms instead.

National energy efficiency schemes work with an obligation for energy companies to save a certain amount of energy through energy efficiency improvements in the dwellings of the customer. Denmark, France, Italy, UK and the Belgian region of Flanders have already adopted such schemes, but they are considerably different in scope and design. The proposal for the EED now tries to set some common design requirements whilst still leaving some flexibility to adjust the obligations to each national situation.

The Commission proposal leaves the Member States the choice to put the obligation either on energy distributors or on retail energy sales companies.

³ Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast).

⁴ "Energy Efficiency Plan 2011", page 4.

⁵ Since owned is not equivalent to occupied, rented buildings will be excluded.

⁶ Article 5 of the recast EPBD requires the Commission to establish a comparative methodology for calculating cost-optimal levels of minimum energy performance requirements for buildings. Member States will have to fill in national data in the methodology, such as climate conditions, and calculate the optimal level for setting the requirements according to their national situation. They will then compare this result with the minimum performance requirements they have established in their building's code. This methodology is therefore used as a benchmark and helps each country to define the level of ambition of their building's legislation.

⁷ Recital 14 of the EPBD clarifies that "The Commission should lay down a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements. Member States should use this framework to compare the results with the minimum energy performance requirements which they have adopted. Should significant discrepancies, i.e. exceeding 15 %, exist between the calculated cost-optimal levels of minimum energy performance requirements and the minimum energy performance requirements in force, Member States should justify the difference or plan appropriate steps to reduce the discrepancy."

Furthermore, it quantifies the savings the obligated parties must achieve annually in 1.5% of their energy sales, by volume in the previous year (excluding energy used in transport). Energy savings can be calculated using engineering estimates, metering or standard values and should take into account the lifetime of each measure. The standard and lifetime values can be established nationally, otherwise Member States should use the default values fixed in Annex V of the proposal, for instance the default lifetime value of a boiler is set at 20 years.

Energy savings resulting from measures with a short term horizon, such as the installation of compact fluorescent light bulbs and energy efficient shower heads, energy audits and information campaigns, shall only account for a maximum of 10% of the target for each obligated party.

In WWF's view, the provision on national energy efficiency obligation schemes has been completely jeopardized by the introduction of the opt-out clause. This clause allows Member States to put alternative measures in place that ensure an equivalent level of savings, once the measures have been communicated to and approved by the Commission. In practice, it is likely that Member States will be able to use existing energy efficiency programmes as measures contributing to the equivalent savings. As an example, Germany could choose not to implement an energy efficiency obligation scheme, but instead count the energy consumption reductions achieved through its already well-functioning KfW⁸ rehabilitation programme to meet the equivalent level of savings requested by the opt-out clause. To avoid this scenario, the European Commission will need to check the additionality of energy savings carefully, if the opt-out clause remains in the final text.

Furthermore, the possible alternative measures will not contribute to changing the business model of energy companies; they will not convince companies to sell energy services to clients rather than continuing to profit by selling kWh.

Another important aspect of well-functioning energy efficiency obligation schemes is to ensure that energy companies carry out long lasting measures of good quality, not only energy efficiency improvements that have short-term pay back. In the residential building sector, in particular, the energy efficiency obligations should also aim at increasing the number of deep renovations. To do so, the EED should ensure that long lifecycle measures are better rewarded than short-term savings and that the obligated parties reach at

least a certain amount of energy savings through deep renovations (in parallel with the requirement that only 10% of energy savings can be delivered through short term measures).

ETS and EED: two complementary instruments within EU climate and energy policy

The Emission Trading Scheme (ETS) Directive⁹ and the future EED are two fundamental pieces of legislation that contribute to reducing GHG emissions in Europe: their interaction is inevitable and a recalibration of the ETS could be necessary for the well-functioning of the EU climate and energy policy mix.

Once adopted and implemented, EED will lead to reductions of energy consumption which could either be considerable or quite modest, depending on the final level of ambition of the Directive. These reductions will in return reduce GHG emissions: the EED, with all other energy efficiency legislations (e.g., the Ecodesign Directive), generates energy cuts on the demand side that indirectly translate into reduced GHG emissions for the power sector. This could lead to an excess of ETS allowances on the market and a decrease of the carbon price due to lower demand.

A re-adjustment of the ETS is needed to ensure that both directives will remain mutually supportive instruments. In more concrete terms it is the ETS cap which should be strengthened to counterbalance the increased number of allowances resulting from energy savings measures. A recalibration of the cap would ensure that energy efficiency legislation and the ETS remain complementary and together contribute to reaching the 80-95% GHG emissions reduction in 2050 the EU has set as its target.

Conclusions

The Energy Efficiency Directive is a unique opportunity to improve EU energy legislation, even though the Commission's proposal is far from being adequate to reduce the EU's energy consumption by 20% by 2020. The legislative process is still in its early stages and there will be opportunities to improve the proposal before its adoption.

WWF's priority in energy savings and efficiency remains to push for the EU to achieve at least 20% energy savings by 2020 through a well-tailored policy mix that includes

- a binding target for energy savings,
- increased deep renovation rates for existing residential and public buildings, and
- stringent national energy efficiency schemes, which are additional to existing measures.

⁸ KfW stands for Kreditanstalt für Wiederaufbau, a German Development Bank.

⁹ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

“Challenges of CDM Project Development in the Balkan”

Review of the book Montini, Massimiliano (ed., 2010): *Developing CDM projects in the Western Balkans*, Springer, Dordrecht

By Axel Michaelowa*

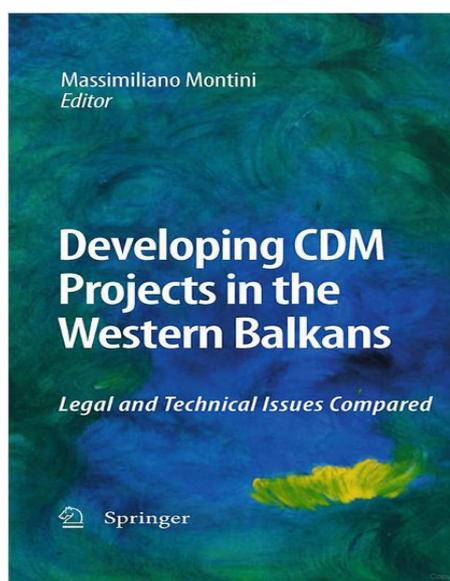
The Balkan region is normally not considered as a key player in the CDM world. Nevertheless, Italy has displayed a keen interest in providing capacity building and technical assistance to this region, probably due to historical and existing economic ties. Montini, a law professor at the University of Siena, brings together experiences from process, covering Albania, Macedonia, Montenegro and Serbia. While capacity building in Serbia already started in 2002, the other countries came on board in 2004/5. DNAs mainly became operational in 2008.

The first part of the book on legal issues related to the CDM consists of two sections. The first one provides three chapters on the Kyoto Protocol, experiences with the CDM and contractual issues regarding CDM projects. Chapter 1 contains an interesting history of Italian climate policy that includes references to all relevant legal texts that can be rarely found in non-Italian literature. Chapter 3 provides a good overview about the critical issues in CDM contracts and nicely differentiates the different project types.

The second section describes the setup of CDM approval authorities in the target countries. After an introductory chapter on the design of a Designated National Authority (DNA), for each host country the setup of the DNA is described. Chapter 4 describes the different possible setups of a DNAs with their pros and cons in an austere bullet style. A discussion of the DNA setup in nine host countries around the world follows; this could have elaborated a bit more about the actual performance of each DNA. Chapter 5 on Albania shows that it took three years to set up the DNA. Albania uses a quantitative weighting for the different sustainability criteria. Macedonia was faster, taking two years. As chapter 7 describes, DNA setup in Montenegro was complicated by the country's independence from Serbia. Initially, a joint DNA for Serbia and Montenegro had been envisaged. Generally, DNAs have a two body structure with a high-level body and a working group/secretariat below.

The second part of the book discusses project potential and experience. Its first two chapters describe the CDM project cycle and discuss the theoretical CDM potential, while the following four chapters discuss project experience in each host country. Chapter 10 on the potential unfortunately only provides the final estimates, totalling 13 million annual CERs for the region, without explaining the underlying assumptions. Albania mainly features hydropower and forestry potential. Macedonia has a high share of energy efficiency. Montenegro has achieved energy efficiency improvement in the steel industry and PFC reduction in aluminium production, whereas Serbia has high biomass power potential. Unfortunately, the structure of the potential estimates varies substantially among countries so comparability seems limited. In Montenegro, projects have been tendered, whereas in other countries development seems to be more bottom-up.

Anyone interested in CDM in the Western Balkans will find a range of interesting information in Montini's book.



* Axel Michaelowa, Senior Founding Partner, Perspectives GmbH, Zurich Office, Klosbachstrasse 2, 8032 Zurich, Switzerland, Tel + 41 448204208, mobile +41 762324004, Fax +41 448204206, e-mail: michaelowa@perspectives.cc, Internet: <http://www.perspectives.cc>

Delbosc, A., N. Stephan, V. Bellassen, A. Cormier and B. Leguet, 2011. Assessment of supply-demand balance for Kyoto offsets (CERs and ERUs) up to 2020, CDC Climat Research, Working Paper no 2011-10 <http://www.cdcclimat.com/IMG/pdf/11-06_cdc_climat_r_wp11-10_equilibrium_supply-demand_cer_and_eru_by_2020.pdf>

The purpose of this document is to estimate the supply and potential demand as regards Kyoto carbon credits (CER and ERU) up to 2020. Two distinct periods have been pinpointed: 2008-2012, the first commitment period of the Kyoto Protocol, and 2013-2020, the phase when the climate-energy package will be implemented in Europe, and the period for compliance with international commitments agreed in Cancún. Demand for Kyoto credits is estimated at between 2.2 and 4.4 billion for the 2008-2020 period. The large spread reflects 1) uncertainty about the size of European demand; and 2) uncertainties regarding the use of Kyoto credits by other actors. The estimate of Kyoto credit supply by CDC Climat Research is 1.3 billion between now and 2013 (1.1 billion in CER and 0.2 billion in ERU). By 2020, Kyoto projects could generate up to 4 billion credits. All in all, the authors estimate that the credit market will be in deficit by 2013 and should be in surplus by 2020, unless there is an increased European commitment, or new sources of demand appear throughout the world.

IGES, 2011. Possible Elements of Market-based Mechanisms: A Summary of Views from Parties on the Elaboration of Market-based Mechanisms under Post-2012 Regime <<http://www.iges.or.jp/en/cdm/report.html>>

In response to the decision 1/CP.16, paragraph 82, the views of Parties are submitted to the secretariat upon the elaboration of market-based mechanisms under post-2012 regime to enhance the cost-effectiveness of, and to promote, mitigation actions. This paper provides a summary of the views in accordance with the following categories: principle, institution/regulatory body, MRV methodology, relationship with existing mechanisms (CDM, JI, international emissions trading), and others.

Kant, P., 2011. Easing the Additionality Trap in CDM Forestry Projects, IGREC Working Paper IGREC-23: 2011, Institute of Green Economy, New Delhi <<http://www.forestcarbonasia.org/other-publications/easing-the-additionality-trap-in-cdm-forestry-projects/>>

This paper recommends that in CDM forestry projects located in Least Developed Countries, and in those that are wholly owned by village and community level institutions in other Developing Countries,

the proposed condition for additionality that the forestry project would not have been taken up without financial benefits should actually be made a presumption. Another simplification suggested by the paper is that the proof of additionality become both easier and more objective without compromising on the environmental integrity of the CDM credits generated.

Salinas, Z. and E. Baroudy (lead authors), 2011. BioCarbon Fund Experience: Insights from A/R CDM Projects, World Bank Carbon Finance Unit <http://wbcarbonfinance.org/docs/57853_ExecSumm_Final.pdf>

Housed within the Carbon Finance Unit of the World Bank, the BioCarbon Fund (BioCF) is a public-private initiative mobilizing resources for pioneering projects that sequester or conserve carbon in forest- and agro-ecosystems, mitigating climate change and improving local livelihoods. The overall goal of the Fund is to demonstrate that land-based activities can generate high-quality emission reductions with strong environmental and socio-economic benefits for local communities.

The BioCF became operational in 2004 with Participants providing funds for both Afforestation and Reforestation projects (A/R) under the CDM and other land-based projects currently excluded from the CDM (e.g., Reducing Emissions from Deforestation and Forest Degradation-Plus (REDD+) and sustainable agricultural land management). As of May 2011, the BioCF had contracted 8.6 million Emission Reductions from 21 A/R CDM projects. These projects are located in 16 countries and five regions of the world. This report presents insights from these A/R CDM projects.

Unger, M. von, D. Conway and J. Hoogzaad, 2011. Carbon Offsetting in Europe Post 2012: Kyoto Protocol, EU ETS, and Effort sharing, KfW Bankengruppe, ClimateFocus <http://www.climatefocus.com/documents/files/carbon_offsetting_in_europe_post_2012_kyoto_protocol_eu_ets_and_effort_sharing.pdf>

The present report, commissioned by KfW on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety under the ongoing CDM/JI Initiative, provides an analysis of the regulatory situation post-2012 for JI and offsetting in and for the European Union. It aims at identifying where uncertainties lie but also where certainties exist, where further policy measures are required and where the existing framework remains adequate. The ultimate aim is to enable policy-makers and investors to gain detailed insight into the prospective situation for offsetting in Europe upon approaching the end of the first commitment period under the Kyoto Protocol and the start of the Third Trading Period under the EU ETS, and to present policy options that will facilitate decision-making in a climate of uncertainty.

The **Joint Implementation Quarterly** is an independent magazine with background information about the Kyoto mechanisms, emissions trading, and other climate policy issues. *JIQ* is of special interest to policy makers, representatives from business, science and NGOs, and staff of international organisations involved in climate policy negotiations and operationalisation of climate policy instruments.

Chief Editor:

Prof. Catrinus J. Jepma
University of Groningen/ Open University, Dept. of Economics, the Netherlands

Editors:

Wytze van der Gaast
 Anna van der Gaast-Witkowska
 Vlasis Oikonomou
 Eise Spijker

International Advisory Board:

Prof. José Goldemberg,
Universidade de Sao Paulo, Brazil
 Prof. Thomas Ch. Heller
Stanford Law School, USA
 Prof. Richard Samson Odingo,
University of Nairobi, Kenya
 Dr. R.K. Pachauri
Tata Energy Research Institute, India
 Mr. Michel Picard
Lafarge, France
 Prof. Maciej Sadowski
IEP, Poland
 Dr. Ye Ruqiu
State Environmental Protection Administration, China

JIQ contact information:

Joint Implementation Network
 Laan Corpus den Hoorn 300
 9728 JI Groningen
 The Netherlands
 tel.: +31 50 5248430
 fax: +31 50 2011326

e-mail: jin@jiqweb.org
 Internet: www.jiqweb.org

Copyright © 2011 - JIN

Abbreviations

AAU	Assigned Amount Unit
Annex A	Kyoto Protocol Annex with GHGs and sector/source categories
Annex B	Annex to the Kyoto Protocol listing the quantified emission limitation or reduction commitment per Party
Annex I Parties	Industrialised countries (OECD, Central and Eastern European Countries, listed in Annex I to the UNFCCC)
Annex II Parties	OECD countries (listed in Annex II to the UNFCCC)
non-Annex I Parties	Developing countries
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction (Article 12 Kyoto Protocol)
COP	Conference of the Parties to the UNFCCC
DOE	Designated Operational Entity
DNA	Designated National Authority
EGTT	Expert Group on Technology Transfer
ERU	Emission Reduction Unit (Article 6 Kyoto Protocol)
EU ETS	European Union Emissions Trading Scheme
EUA	European Union Allowance (under the EU ETS)
GHG	Greenhouse Gas
IET	International Emissions Trading
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LULUCF	Land Use, Land-Use Change and Forestry
PIN	Project Information Note
PDD	Project Design Document
REDD	Reducing emissions from deforestation and forest degradation in developing countries, including conservation, sustainable management of forests and enhancement of forest carbon sinks
SBSTA	Subsidiary Body for Scientific and Technological Advice
SBI	Subsidiary Body for Implementation
TNA	Technology Needs Assessment
UNFCCC	UN Framework Convention on Climate Change

JIQ Meeting Planner

4-6 July 2011, Marrakesh, Morocco

The Africa Carbon Forum trade fair and knowledge-sharing platform for carbon investments in Africa.

Contact: acf@risoe.dtu.dk; <http://africacarbonforum.com/2011/english/index.htm>

31 August 2011, Zurich, Switzerland

The Zurich Carbon Market Association will organize a workshop "Voluntary carbon markets"

Contact: eventregister@zurich-cma.org, www.zurich-cma.org

12 - 14 October 2011, Andhra Pradesh, India

International Conclave on Climate Change (ICCC-1) "Clean Energy & Energy Security", Center for Climate Change Engineering Staff College of India, Hyderabad, AP, India

Contact: <http://www.iccc-esci.com/>

28 November - 9 December 2011, Durban, South Africa

COP 17 and CMP 7 (UNFCCC)

Contact: http://unfccc.int/meetings/unfccc_calendar/items/2655.php