

Editor's note

The momentum for climate policy making has become much worse than about two or three years ago. In 2007, 'climate' was a marketing instrument. The TV set you bought had to be green or 'greened' and a holiday trip required a 'green' seat on the plane. The Nobel Prize for the IPCC and Al Gore underscored how important climate change had become as a policy topic. That seems to have changed now.

In 2008, the EU ETS started its second phase following a first 3-year learning phase. The latter had been disappointing in the sense that it had not resulted in a real price per tonne CO₂ emitted, but that could be easily explained as there was no flow between the first and second ETS phase. Consequently, the price during the first phase would either be equal to the fine for non-compliance or be close to zero. The latter happened.

Then, last year, the long awaited Copenhagen Conference had a disappointing end which was followed by high-level statements that 2010 will neither result in an agreement on a post-2012 climate policy regime. An important reason for that is also the slow process in the US Senate of adopting a climate bill.

This, in combination with the negative attention that the IPCC has received for mistakes in its Fourth Assessment Report, could lead to the conclusion that climate policy making is in deep trouble.

Although the above examples do not really contribute to making climate-concerned people happy,

a more careful look at ongoing developments shows that there are also several positive aspects to be noted.

First of all, people remain inventive in terms of developing new concepts to address climate change. The current work on low development pathways in both industrialised and developing countries shows that people are increasingly aware of the strong link between climate change and sustainable energy. It also shows that there is an increasing insight that climate policy is not only about defining a number (USD spent, percentage of emissions to be reduced, etc.), but that countries need to think about where they want to be in 30 years from now, what strategy is needed to get there, and which policies and (technical) measures, and capacities are most suitable for that. With such insight, climate policy making is not done solely at the Maritim Hotel in Bonn and COP sessions, but, for instance, also largely in stakeholder decision conferences in developing countries.

Second, climate change knowledge building seems to have become less focused on an absolute belief in outcomes of scientific models. Climate change policy making is about making risk assessments for the future. Given scientific insights, people still realise that without a solid climate policy there is a risk that our societies will be insufficiently resilient to climate change impacts.

Finally, the developments during the second phase of the EU ETS show that despite a severe economic crisis, people still believe in a long term price on CO₂ emissions. Even though industrial emission levels within the EU ETS area fell by 11% during 2009, prices of EU ETS allowances are still around EUR 15 per tonne (instead of zero). Market parties know that they may need their current surpluses in the future, during the third phase of the ETS.

Obviously, critical months and years are ahead of us. We need a new climate policy regime and the ETS price needs to go up to make more costly low-emission technologies work. But, given all the hectic of the past year, it could have been worse.

The JIQ Editors

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Green Investment Schemes: A Successful Carbon Finance Mechanism?

by Andreas Türk and Dorian Frieden *

The market for Assigned Amount Units (AAUs) has gained a strong dynamic over the last 18 months. Within more than 20 deals, some 170 million AAUs backed by Green Investment Schemes (GIS) have been put on the market, representing a value of around 1.7 billion Euro. This is only a small fraction of the roughly 1.8 billion AAUs that seller countries would still like to offer on the market. Most EU Member States in Central and Eastern Europe (CEE) have indicated that they would like to sell their total surplus under the Kyoto Protocol. Due to emission reductions in potential buyer countries caused by the financial crisis, recent estimates on the demand for AAUs are far below 1 Gt, while in 2009 a demand of 1.3 Gt was expected.

To date, seven seller countries have been involved in AAU deals, including Hungary, Slovakia, the Czech Republic, Latvia, Estonia, Ukraine and Poland. The most successful sellers so far have been Latvia, in terms of the number of concluded deals, and the Czech Republic in terms of the total volume sold. Romania is expected to prepare for AAU sales during 2010, and Bulgaria has recently drafted a GIS legislation. Russia has announced to implement a GIS in 2010, but is likely to limit sales to 100 or 200 million AAUs.

Six governmental buyers have been involved in AAU deals so far. Also Japanese companies are involved in the GIS market as they can purchase AAUs to meet voluntary domestic targets. The Japanese government and Japanese companies have been by far the largest buyers on the AAU market to date, followed by Spain, Austria, Portugal, the Netherlands and Belgium.

Complementary to JI and CDM

While most of the CEE countries offer predefined GIS programmes from which buyers can choose, in Ukraine specific details of greening activities and greening requirements are reached in bilateral consultations. The GIS developments so far have shown that most AAU seller countries take advantage of GIS to focus on mitigation opportunities which are

not well-suited to - and which lie outside of the prime targets of - Joint Implementation (JI) but are of long-term strategic importance for the seller country.

Improved energy efficiency in buildings provides a prime example of such opportunities. The project-based orientation of both JI and the CDM, for example, poses hurdles for such project as they offer small reductions by many actors. Under GIS, programmatic as well as project-based initiatives are possible, while the procedures for accounting for GHG emission reductions are simpler than under the CDM and JI.

GHG accounting issues

Several issues dominate decisions on implementation and acceptance of a GIS on the buyers' side. These include the monitoring, reporting and verification (MRV) system to be used, whether or not revenues from sale will be used to supplement already existing programmes, and the amount of the emission reductions achieved per Euro paid. The absence of internationally approved MRV systems for GIS has encouraged the development of simplified MRV approaches for emission reductions. Emission reductions are monitored, for example, based on reductions in energy consumption, or by verified random checks. Most countries participating in GIS schemes have proposed, in theory, credible mechanisms to monitor and verify emission reductions and AAU revenue flows, using, for example, independent audits by recognized international auditors and existing, and well known national institutions.

Recently, the issue of additionality has gained increased attention, as in some countries, such as in Hungary, there was concern that GIS funds may be used to finance programmes for which the state support has been reduced. In those cases, GIS would compensate budgetary problems. Most seller countries therefore avoid an overlap between GIS funds and existing national programmes and some are proposing that GIS programmes meet legal or financial additionality criteria.

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Emergence of buyer - seller GIS relations

As the possible supply of AAUs is much larger than the demand, the impact of AAU trading on the total carbon market, including CER and ERU trade, depends heavily on purchaser requirements, including not only the price but also requirements for credibility of the GIS. Moreover, the choice of a seller country often includes the interest of the buyer country to strengthen economic relations with the AAU selling countries and with possible technology exporters.

Most public buyers choose seller countries carefully, buying only AAUs which can be expected to be greened in a clear and transparent way. However, the largest buyers - Japan (both the government and private companies) and Spain - have also concluded deals in such countries as Hungary and Ukraine, where clarity regarding greening is lacking. In particular Japanese companies were suggested to be involved in low cost deals with no or only limited greening.

Such transactions have led to reputational consequences for both buyer and seller. For instance, even though Hungary was one of the “early movers” regarding the setup of a GIS and the first country which concluded an AAU deal, it has suffered reputational problems due to the uncertainty of revenue spendings and additionality concerns. Slovakia lost access to the AAU market after its controversial deal with the Swiss based company Interblue and as yet has been unable to establish a sufficiently credible GIS to re-attract buyers. Ukraine, even though expected to offer the largest amount of AAUs among the countries participating in the market so far, has only concluded three deals as of April 2010. While Ukraine has sold large amounts of AAUs in 2010, the absence of a clearly defined greening scheme may have hindered the country from concluding additional deals. Recent reports on the misuse of revenues from AAU sales, make it questionable whether Ukraine will still have the opportunity to sell important amounts of AAUs.

Limitations to GIS

Next to credibility issues, the future amount of salable AAUs may be affected by limitations in CEE countries to design and implementation of GIS schemes. Experience so far has shown that a number of barriers have emerged when implementing greening activities. Lack of funds to co-finance credible GIS has been a problem for CEE countries, particularly during the current economic crisis. Limited implementation capacity of host countries

constitutes another barrier. In some cases there have been difficulties in identifying greening activities which were acceptable to the buyer. Therefore, the supply of credible GIS-backed AAUs may be significantly limited in the short term. However, if credibility fails to be a critical issue for major buyers, very inexpensive, non GIS-backed AAUs could be brought onto the market, thereby depressing prices.

In addition to credibility issues, AAU price development will depend on the decreasing demand for AAUs and the ongoing uncertainty regarding banking of AAUs. The Copenhagen Climate Conference COP-15 increased uncertainty in the AAU market by opening the possibility that international AAU trading will end after the first commitment period of the Kyoto Protocol, with the consequence that AAUs will have no value after 2012. This situation has increased the pressure on CEE countries to sell as many of their AAUs as quickly as possible. The consequence may be increased temptation to sell AAUs of lower credibility and at lower prices.

GIS perspective

Several seller countries have made significant progress in implementing GIS schemes and in principle environmentally credible GIS mechanisms have been worked out. However, the success of GIS as a carbon finance mechanism shows mixed records due to the uncertainty regarding the greening component and use of revenues in several deals. In addition, there is a lack of experience with the long-term enforcement of emission reduction measures, one of the most crucial issues of an *ex ante* carbon finance mechanism. Such enforcement should be the responsibility not only of sellers, but also of buyers. While some buyers emphasize to follow up on the implementation and enforcement of GIS activities in the seller nations, other buyers may fail to do so, possibly undermining the integrity of the mechanism.

Looking ahead, GIS has provided insight into how to tackle a range of reduction opportunities not easily addressed through the private-market-driven mechanisms JI and the CDM. The experiences also have highlighted the critical role of institutional capacity and the role of purchaser integrity and responsibility in *ex ante* funding of GHG reduction initiatives. Given the lack of experience with international fund-based mechanisms for climate change mitigation, these lessons may prove helpful in conjunction with the development of fund-based support mechanism for developing countries after 2012

Ph.D Defence Michael Dutschke:

“Forests are Living Organisms with Specific Social Contexts”

On Thursday 1 April of this year, Michael Dutschke successfully defended his Ph.D thesis at the University of Groningen, the Netherlands. The thesis ‘Forestry, Risk and Climate Policy’ resumes over a decade of policy advice on land use decisions. It gives an overview of the history of the role of LULUCF in climate negotiations. It also discusses such issues as how to define a forest, how to calculate CO₂ sequestration over a longer time frame, where to find incentives for forestry projects, and role of LULUCF in a future climate policy regime. After the defence, JIQ spoke with Dr Dutschke.

JIQ: Nowadays, forestry is a key element of climate negotiations as it is key to reaching the long term climate targets. In your thesis, you conclude with a chapter on what a global climate regime could look like with a prominent role for forestry. Could you elaborate on this?

Michael Dutschke: All of this is not to deny the principal responsibility of fossil emissions for the human-induced GHG. Part of forest finance can come out of crediting offsets against reduction of emissions from deforestation and forest degradation, but there is a lot of upfront investment needed to make this offset mechanism viable and reliable. Some common tasks like forest and biodiversity conservation may never get at this stage.

I propose a market-linked mechanism that generates an income stream from a global emission allowance auction. These funds will be earmarked within the budget of the acquiring countries and invested into REDD plus. They will have to report back to the Climate Secretariat on the deployment of these funds. Besides funding sustainable land management, the whole system grants a gradual involvement of developing countries into the climate regime between now and 2050.

JIQ: You address several forestry related policy aspects from an overall climate policy perspective. How would you address within this perspective socio-economic issues such as the needs of local people who rely on forests for their daily energy and cooking service needs?

Michael Dutschke: Forests are living organisms, and each of them has a specific social context. There is no generic, appropriate management practice for forests. This is where certification mechanisms come in. There are social standards for responsible forest climate

projects, and there are certification schemes for forest products. We cannot agree on global rules for land management on an international level, neither do we have the means to enforce them. But on the national level of consumer countries, we can set clear market signals by only importing certified timber and wood products and only accepting offset credits that comply with the highest standards.

JIQ: In your chapter 5 you discuss the role of official development assistance (ODA) in relation to CDM project development. However, there is no reference to forestry in this chapter. Could you explain that?

Michael Dutschke: Due to their social co-benefits, there is a big overlap between ODA and forest-related mitigation activities. ODA follows development fashions. Ever since the inception of the REDD debate, ODA investment into forest management has become fashionable again. The essence of the chapter is: We cannot avoid relabeling. The ODA additionality clause for CDM in the Marrakech Accords is unfortunate, because it is not operational. With respect to forestry: What we need is a long-term commitment to a sustainable management of the existing forest resources. In this respect, I see complementarities between ODA and carbon finance, and it would be counter-productive to keep both separated.

JIQ: As a forestry practitioner you have been involved in the work on the A/R panel of the CDM Executive Board. How would you evaluate the role of the CDM in terms of stimulating forestry projects and what are the perspectives for the future?

Michael Dutschke: For me, Afforestation and Reforestation CDM has been a complete failure so far. As such, there is a lot we can learn from it. In the future, we need to take an integrated view on land use in all its climatic aspects, and we must find more flexible solutions to the issue of potential non-permanence. Accounting for land use emissions and uptakes should be structured similarly in developed and developing countries, and host countries will have to take their fair share of responsibility.

The thesis **Forestry, Risk and Climate Policy** by Michael Dutschke can be downloaded from: <http://biocarbon.net>.

Offering Flexibility and Financing Opportunities for Innovative Technologies through Non-ETS Offset Schemes

This policy brief was prepared by the Non-ETS offset Projects Network (NEON)¹

Under the Kyoto Protocol, EU Member States² have a commitment to reduce or limit emissions of greenhouse gases (GHG) during the period 2008-2012. These commitments have been defined as national emission quota (so-called assigned amounts). For compliance, Member States need to remain below their quota. Through the EU emissions trading scheme (EU ETS) part of these assigned amounts have been further allocated by the individual Member States to installations in energy-intensive sectors in the form of annual emission allowances per installation. Should installations' emissions be higher than the allowances, they can buy allowances from other installations and/or purchase emission reduction credits through the Kyoto mechanisms CDM and JI.

Thus far, most abatement activities within and outside the ETS have been implemented separately, although the common policy aim for both sector clusters is to reduce GHG emissions. One possibility to combine abatement projects in the non-ETS and ETS sectors is through Non-ETS offset projects, which would be one option for so-called domestic offsets (DO). Such projects produce certified reductions of CO₂-eq. emissions in the non-ETS sectors. The certified emissions can be used in form of credits by EU ETS installations for compliance, and be purchased by the host government to meet its emissions target or in the voluntary offset market for companies or individuals aiming to offset their emissions.

Linking DO projects with the EU ETS market may have a number of possible advantages:

1. DO projects may accelerate the implementation of low-carbon technologies and therefore may stimulate their implementation within the EU and could unlock GHG savings and energy saving in non-ETS sectors.
2. DO projects create a price signal for non-ETS fields where emissions are growing and increase the liquidity of the ETS system by broadening the market. In this sense, they generate also private finance for non-ETS sector initiatives (e.g. decentralised renewable energy systems).
3. A (EU-wide) DO scheme may provide a market incentive for those activity areas where conventional public policy is relatively ineffective or insufficient (for instance innovation and/or demo/pilot funding, feed-in tariffs that are used to support low-carbon energy technologies projects outside the ETS).
4. In addition to the above, the Effort-Sharing EU Directive (2009) sets targets also on the non-ETS sectors; to this end, DO stimulates and mobilizes early movers in all non-ETS demand sectors
5. DO is an organized and large-scale. implementation of the option the EU needs to develop for harmonized issuing of emission allowances to projects that lead to emissions reductions (see Article 24bis of the EU ETS Directive³).

Some modalities for developing a DO scheme

DO projects require solid rules and procedures for the accounting of the CO₂-eq emission reduction credits. One possibility for this is to apply the rules determined for JI projects under the Kyoto protocol

¹ The NEON network members are: Joint Implementation Network (the Netherlands), Joanneum Research Institute (Austria), Government Institute for Economic Research (VATT, Finland), CDC Climat (France), General Council of Catalan Chambers of Commerce (Spain), CE.SI.S.P. (Italy), Fondazione per l' Ambiente 'T. Fenoglio' (Italy) Energieinstitut der Wirtschaft (Austria), National Technical University of Athens (NTUA-EPU, Greece), eco2ro (Romania), Emissierechten.nl (the Netherlands). For more information on the network please visit: <http://jin.wiwo.nl/index.php/domestic-offsets>.

² Except for Malta and Cyprus.

³ EC Directive 2009/29/EC amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme in the Community (Official Journal of the European Union 5.6.2009).

(strict additionality, exclusion of double counting). Other modalities depend on the intended use of the certified credits.

While the voluntary market has existing standards which could be applied for voluntary offsetting of emissions, for credits to be used in the EU-ETS offset projects following provisions under Art.24 could be implemented, based on modalities and experiences with JI. In the latter case validation and verification of the projects could be supervised by the national governments concerned and/or a cross-national European body. The transfer of DO credits may take place through the currently existing JI focal points in the countries concerned.

Another way of financing DO projects would be to use the revenues from the auctioning of part of the EU allowances in a National Allocation Plan for supporting projects in non-ETS sectors. A third way for providing financing for DO projects may be through GIS schemes (in Eastern European countries) provided that through the validation/verification of the projects, those schemes may become more transparent. Nevertheless, given the current status, there are no more provisions for the GIS mechanism after 2012. One way or the other, harmonized rules on carbon accounting practices on the project level are desirable.

Issues for further research

Several issues that need further research and resolution for DO projects are that:

1. In the short term, DO projects may not directly contribute to complying with Member States' Kyoto Protocol commitments (unless if the state is the buyer of the credits), as transfer of project credits at installation level is accompanied by transfer of assigned amount at country level⁴. Non-additionality of projects may worsen the Member States emissions balance. Applying a discount to the issuance of credits to DO projects of, say, 20% of a maximum crediting period of say 8 years, may help ensure additionality.
2. DO project crediting may lead to double counting when the emission reductions of a project are indirectly included in the ETS market (as is the case with most climate policy measures). Hence, limit of energy use, leads often to saving of

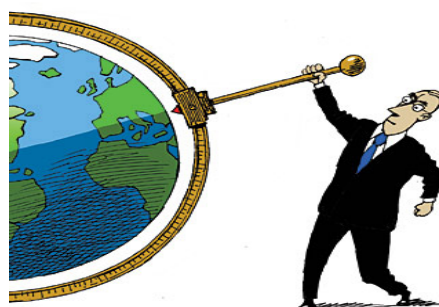
allowances of avoiding of buying them by power companies. Some type of projects may need to be excluded for DO application (as for instance projects in the electricity sector) and preferred DO sectors need to be defined.

3. DO carbon accounting schemes on the project level (i.e. bottom-up) may not match with national carbon accounting (i.e. top-down) practices. The alignment of these different approaches has to be explored.
4. DO as an incentive scheme has potential positive/negative interactions with 'conventional' domestic policies and measures, which are not yet completely understood.
5. There is a possible competition between private actors and the government regarding projects.

The main goal of the NEON network is to explore possible strategies and design modifications for resolving these issues, so that DO can support overall EU energy and climate policies. Furthermore, the network will attempt to gather and evaluate all available information on similar DO schemes globally, in order to come up with practical policy proposals and guidance for designing and implementing DO schemes.

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⁴ In the longer term, if the lifetime of the projects and the associated emission reductions outlive the crediting period, then the host country ends up with a net gain. Also, some host countries tax issuance of ERUs: that is the case for France, where project developers are given 9 ERUs in return for emission reductions of 10 tCO₂-eq.

Domestic Offsets under Article 24a

By Moritz von Unger and Jelmer Hoogzaad (ClimateFocus)¹

With Article 24a, the 2009 revision of the EU ETS Directive² introduced a new instrument to the field of European emissions trading: domestic offsetting. The provision foresees that “implementing measures for issuing allowances or credits in respect of projects administered by Member States that reduce greenhouse gas emissions not covered by the Community scheme may be adopted.”²

In principle, this creates a possibility for project developers in non-ETS sectors to reduce GHG emissions and sell these as allowances on the ETS market. However, it is not yet clear to what extent it will be made operational, and how Europe’s policy makers and the markets will respond to the options and opportunities the mechanism offers.

The EU Emissions Trading Scheme (EU ETS) in its current form covers about 40% of EU-wide greenhouse gas (GHG) emissions. Although targeted by various national policies and measures, 60% - or 3 billion tCO₂-eq. - of EU emissions are not subject to caps at installation or emitter level.³ The EU’s commitment target of at least -20% by 2020⁴ compared to 1990 levels can only be met if both capped and uncapped sectors contribute to the EU’s total reduction efforts.

The Union’s ‘Climate action and renewable energy package’ of April 2009⁵ contains a set of comprehensive measures to target emissions inside and outside the existing EU ETS. As part of the package legislation, the European trading scheme

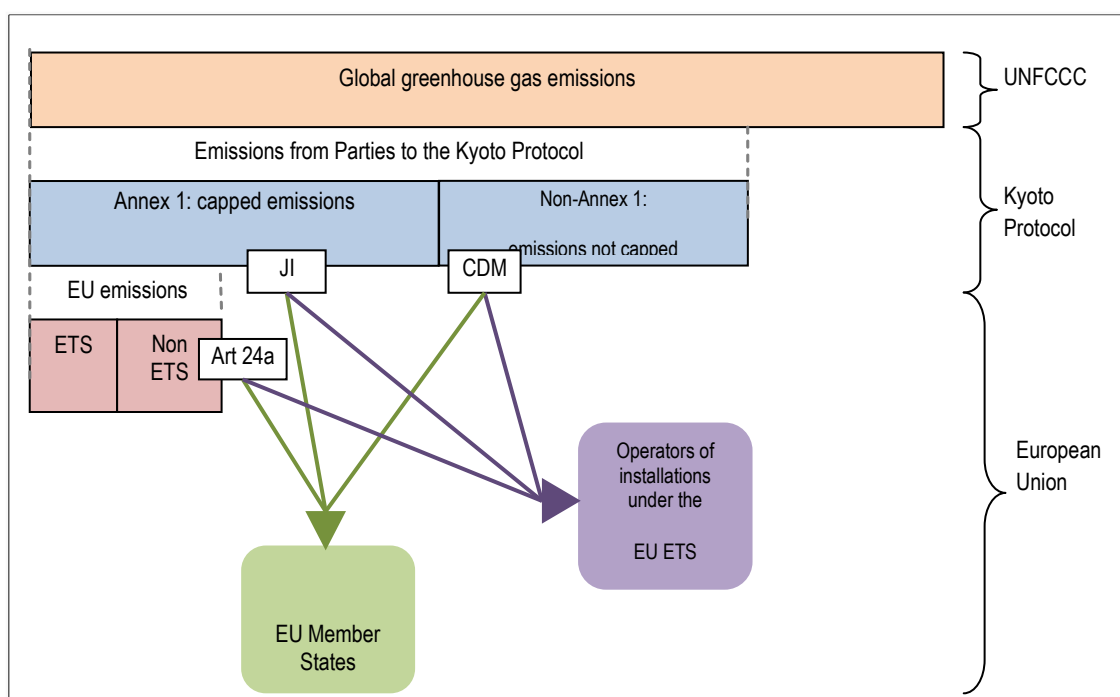


Figure 1. Offsetting mechanisms under the Kyoto Protocol and under the EU ETS
source: Climate Focus

- ¹ This article is a shortened version of a paper produced by the authors with the support of CDC Climat (www.cdcclimat.com). Contact: M.vonUnger@climatefocus.com.
- ² Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC.
- ³ The ‘Annual European Community greenhouse gas inventory 1990–2007 and inventory report 2009’ from 27 May 2009 reports 5045 million tonnes of CO₂ equivalents (MtCO₂e) in 2007.

Box 1. Roundtable on Article 24a project cooperation

On 1 March of this year, Climate Focus, Caisse des Dépôts and the Belgian Ministry of Health Food Chain Safety and Environment jointly organized a Roundtable on Domestic Offsets under Article 24 (a). The objective of the Roundtable was to:

- Exchange experiences with domestic offsets and JI so far in the different EU Member States;
- Inform participants of regulatory initiatives taken thus far in different Member States on the issue of domestic offsetting projects; and to
- Look for common ground between different EU Member States and the European Commission to use Article 24 (a) of the 2009 amendment of the EU ETS Directive to further stimulate domestic action and help establish a common approach for action at the European level.

For further information about the outcomes, please visit: <http://www.climatefocus.com/news/index.html>

was extended in scope to include a number of new industries (*e.g.* aluminium and ammonia producers) and two new gases (nitrous oxide and perfluorocarbons).

An additional layer of cap and trade was also added. The Effort Sharing Decision introduced emission targets for Member States in a range of areas not covered by the EU ETS, such as transport, buildings, agriculture, and waste, but excluding land-use, land-use change and forestry (LULUCF).⁶ The individual targets vary with Luxembourg, Denmark and Ireland having a reduction commitment of -20% and Romania and Bulgaria a target of +20% over 2005 levels.

The average target will be approximately -10% throughout the EU. A degree of flexibility is

introduced by allowing Member States to trade up to 5% of their annual emission allocation among them and they may use international carbon credits, Certified Emission Reductions (CERs) and Emission Reduction Units (ERUs), to meet their targets, provided that annual total of CER/ERU credits does not exceed 3% (or for some countries 4%). Moreover, they would be allowed to use credits resulting from Article 24a projects without any limitations.

Both cap-and-trade instruments, the Effort Sharing Decision and the EU ETS in its new form (which is to achieve a reduction of 21% over 2005 levels for the sectors concerned), are central to the EU plans to meet its global target of -20% reduction over 1990 levels by 2020. However, the instruments are very different in their conception. Most importantly, the Effort Sharing Decision does not reach the level of

⁴ 30% in the event of a sufficiently ambitious international agreement, cf. most recently the statement of the EU 28 January 2010 regarding the Copenhagen Accord: "As part of a global and comprehensive agreement for the period beyond 2012, the EU reiterates its conditional offer to move to a 30% reduction by 2020 compared to 1990 levels, provided that other developed countries commit themselves to comparable emission reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities."

⁵ See Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 (performance standards for passenger cars); Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 (renewable energy); Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC (EU ETS Directive); and Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 98/70/EC and Council Directive 1999/32/EC; Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 (Carbon Capture and Storage); and Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 (Effort Sharing Decision); all acts published at OJ L140/52 of 12 June 2009.

⁶ Article 1 (1) in conjunction with Article 2 (1) in conjunction with Annex I of the Effort Sharing Decision. Note that LULUCF may be included at a later stage following an amendment of the Decision (cf. Article 8 and 9).

private entities but is confined to the inter-Member State level.

Article 24a project cooperation could be a way to stimulate private sector GHG abatement activities in non-ETS sectors such as buildings, agricultural waste, forestry and transport sectors. Direct emissions from the buildings sector, for instance, were about 15% of the EU's emissions in 2005, when including indirect emissions the percentage rises to 30%. The financially feasible abatement potential for this sector is estimated at 19% (including indirect emissions) up to 2020.

The agricultural sector had with 10% in 2005 a smaller share in the EU emissions. The feasible reduction potential there is estimated at 10%.

When considering the contribution of the waste sector to overall emissions in the EU, and when considering the implementation of the Landfill Directive as baseline scenario, the reduction potential in this sector is smaller. The same is true for the forestry sector which as a result of existing (baseline) afforestation initiatives in the EU, already creates a net carbon sink. The transport sector, on the other hand, was responsible for 20% of the emissions in 2005 and the reduction potential at negative costs in this sector is 22% in 2020.⁷

The introduction of a crediting instrument such as Article 24a EU ETS may prove an effective means to tap this potential and to have the market help reduce emissions at a large scale and at acceptable costs. However, the details are far from clear however. For one thing, Article 24a has a subsidiary function. Measures under this provision “shall only be adopted where inclusion is not possible in accordance with Article 24”. Article 24, for its part, authorizes the unilateral inclusion (subject to the approval by the EU Commission) of additional activities and gases (beyond what is already covered by the EU ETS) in the European trading scheme.

Thus, Article 24a offsetting can only come in where “inclusion [of the sector] is not possible in accordance with Article 24” (emphasis added). As the inclusion of an economic sector in a cap-and-trade scheme is not simply a technical matter which proves possible or not possible but involves a multitude of political, economic, social and other decisions, the exact

relationship between Article 24a and Article 24, including the competence to make the assessment, remains somewhat open.

On the legislative side, Article 24a requires the adoption of delegated legislation (“implementing measures”) to become effective. Through comitology procedures—the Commission adopts rules approved by Member States representatives and, in certain instances, by the EU Parliament—the mechanism's architecture remains to be defined, including project areas, criteria for eligibility, project definition, participation, crediting principles, and credit title. A particular challenge will be to ensure that double-counting of emission reductions is prevented and the implementation of “other policy measures to reduce emissions” is not impeded.

According to Article 24a, a project will need the approval of a Member State to be recognized in its offsetting function and, as explicitly mentioned in this article, a Member State can unilaterally refuse certain project types for its territory. However, whether a host Member State is authorized to define additional unilateral requirements, is not entirely clear.

The open design questions aside, the introduction of a 24a offsetting mechanism would come at a price. The already complex climate regulatory and control processes would become bigger. At the same time, demand from the market is expected but not tested. In the public opinion, carbon offsetting has sometimes, especially in Europe, a dubious image. From a market perspective, the expected number of credits is never clear, and calculations for allowances and price levels of the EU ETS are made more difficult.

However, reducing emissions through crediting mechanisms is not wholly new for Member States. Several Member States have been active in the field of domestic offsets in the past. Firstly, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia all host JI projects, rewarding foreign investors in projects that reduce emissions with ERUs. Interestingly, France, Germany and Sweden also launched domestic projects, being the former EU15 countries to use JI to source and develop domestic emission reduction opportunities. Beyond JI, Portugal has established a pioneer scheme

⁷ Ecofys, Ambitious emission reductions will be cost-neutral for the EU, <http://www.ecofys.nl/com/publications/documents/Serpec4pager.pdf>

on domestic offset projects within its territory with the establishment of a Portuguese Carbon Fund.⁸

What the situation is today and will be tomorrow is less clear. The failure in December 2009 to negotiate an ambitious international climate agreement could ultimately produce a national or supranational introversion with the EU concentrating less on international carbon crediting and more on domestic one. Furthermore, if Parties to the Kyoto Protocol fail to agree on a second commitment period, JI projects could no longer generate offsets (countries would no longer have AAUs from which the JI credits (ERUs) are drawn). Then the focus would shift to the EU's independent offsetting mechanism altogether.

What is the appetite among Member States to pursue a domestic offsetting strategy? Whatever the operational architecture of a new European projects mechanism will be, the generation of credits under Article 24a EU ETS in most cases will reduce a country's quota under the Effort Sharing Decision. At the same time, the offsetting mechanism may arguably trigger new opportunities to pursue national preferences and domestic goals; Member States may ultimately have a lot of flexibility under the implementing legislation. The right to refuse project types and the potential to link approvals to extra requirements would argue for a high level power on that end.

⁸ See the relevant regulation of the Portuguese Ministry of the Environment and Territory Planning at: <http://www.maotdr.gov.pt/Admin/Files/Documents/Regulamento%20de%20Apoio%20FPC.pdf>.

The Role of Women in Sustainable Energy Development

By Fany Yuval* and Asher Vaturi **

Introduction

Energy use by households forms a key part of a country's total final energy consumption. This has led to such measures as energy labels for household equipment and energy standards. However, domestic energy consumption is also strongly affected by behaviour of people. This article focuses on the latter aspect and in particular on the role of women in adopting sustainable energy technologies and behavioural changes leading to energy saving.¹

The linkage between energy and gender concern

Introduction of sustainable energy technologies in developing countries can have an impact on women's daily livelihood in different ways. For example, biomass-based renewable energy projects may negatively affect the access of households to traditional biomass resources. This would in many cases have an impact on the work of women in household activities.

On the other hand, some studies, such as Farhar (2000), have argued that renewable energy technologies allow for, e.g., cooking in healthy and safe circumstances.² Moreover, introduction of renewable energy technologies would reduce drudgery for women in developing countries for such activities as pumping of drinking water, food processing and grain grinding, and transport. Another perspective is the role of renewable energy in improving profitability and safety of energy-intensive micro enterprises led by women.

These links between renewable energy technology introduction and improvement of women's daily livelihood were recognized and defined firstly in 1992, at the UN Conference on Environment and Development (UNCED). UNCED led to international recognition that social justice and environmental justice are linked. UNCED established an international consensus regarding the need for

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¹ The study was prepared first for the EU project EFONET (Energy foresight network) <http://www.ist-world.org/ProjectDetails.aspx?ProjectId=cca17b4c61b04700aba3602f8c91369f>

sustainable development that balances economic growth with concerns for social justice and concerns for environmental protection. Extension of the benefits of development to all people, men and women, is fundamental to the fulfillment of the social equity objectives of sustainable development.

Later, the Beijing Fourth World Conference on Women in 1995 concluded that “throughout the world women continue to have fewer options and opportunities than men. Unequal treatment of men and women, and their differentiated social and economic roles, has also led in many countries to higher levels of poverty for women than for men” (Karlsson and McDade, 2001).³

The focal point of these important international recognitions is the linkage between sustainable development and rational use of resources, including energy and poverty. The lack of access to energy services is known as “energy poverty,” a condition that often has huge impacts on the livelihood of women. The basic idea is that improving women’s access to affordable energy contributes to achieving economic growth and poverty reduction. In order to achieve the global poverty reduction target, the distinct energy concerns of women need to be addressed through gender sensitive policies and programs (Tieho, 2002).⁴

Women benefit from access to electricity

Presently, over 2 billion people throughout the world do not have access to electricity. This situation can be improved through extension of power grids as well as installation of decentralized small-scale energy systems. These systems are generally powered by diesel fuel or by renewable technologies using solar, micro-hydro, wind, and hydro or biomass resources. In addition, wider availability of liquefied petroleum gas (LPG) and other cleaner fuels are needed to generate affordable alternatives to traditional biomass-based cooking and heating fuels (Tieho, 2002).

In order to lift the income levels of poor families and communities, energy policies and projects must be targeted to reach those who are most in need. In many contexts, it is women who suffer the most from conditions of extreme poverty. Considering world poverty, 70 percent of the 1.2 billion people who live on the equivalent of one dollar a day are women.

As a result of their traditional roles for collecting fuel and water, in many developing countries women and girls would benefit the most from access to improved energy services. Moreover, many women suffer from health problems related to gathering and using traditional fuels. In addition to the time and physical burdens involved in gathering fuel, women suffer from serious long-term physical damage from strenuous work without sufficient recuperation time.



photo: <http://www.next100.com/Women%20in%20Africa.jpg>

² Farhar, Barbara C. 2000. “Progress on Linking Gender and Sustainable Energy,” in *Renewables: The Energy for the 21st Century*, Proceeding of the World Renewable Energy Congress VI (WREC2000), Part III, edited by A.A.M. Sayigh, Oxford: Pergamon, pp. 1518-1523.

³ Karlsson K., and McDade S., (2001), “Introduction,” *Generating Opportunities: Case Studies on Energy and Women* (New York: UNDP, 2001). Available on line at www.undp.org/energy/publications/2001/2001a.htm

⁴ Tieho M., (2002), *Promoting the role of women in sustainable development*, Gender and Development, Vol. 10, no. 2.

Therefore, reduced drudgery for women and increased access to non-polluting power for lighting, cooking, and other household and productive purposes could strongly improve women's levels of empowerment, education, literacy, nutrition, health, economic opportunities, and involvement in community activities.

For long, when discussing benefits from renewable energy, it was assumed that these would equally accrue to men and women. However, studies, such as that of Karlsson and McDade's (2001), have shown that in most countries this assumption does not reflect reality and has in fact led to "gender blind" projects which in some cases have not been successful due to the failure to look at the distinct situation of women and men in relation to energy production and use patterns.

Gender matters in the energy sector

Gender equality issues in the energy sector have social and economic impacts (Woroniuk and Schalkwyk, 1998).⁵ Women and men should be regarded equally and emphasizing gender equality issues should be most beneficial in the long term to the society in general and to the sector in particular. Obviously, gender differences in access to and control over household activities (income, pricing decisions, etc.) affect women and men differently.

This article has argued that in order to improve gender equality, energy efficiency initiatives should focus on targeting women's priorities (Fox, Johnson and Rosser, 2006).⁶ Raising gender sensitivity can promote participation of women and men in the energy sector, for the benefit of all: it could lead to reconsideration of energy from different aspects, to enrich the alternative solution for problems, services offered, designing the way and timing of using energy, and spreading knowledge ahead to children and others.

In order to cope with gendered sensitivity orientation, several actions are recommended. First, increased attention to the links between gender and energy from different aspects can be achieved by mapping the empirical situation. This requires collection and analysis of statistics and development of participatory planning and monitoring steps (Fox, Johnson and

Rosser, 2006). Second, energy planning should focus on meeting the livelihood and domestic needs of women and men and on developing new tools to enable energy planners to take up gender issues. This should include gender equality measures across a broader spectrum including pricing, investment priorities, infrastructure investments, dislocation, equitable participation by women and men.

Understanding the essentially greater and critical value of electricity for women in many areas, both inside and outside the home (e.g. lighting in public places increases safety, public transportation, etc.) can empower women to make choices about energy services and ensure that the technologies meet their needs and circumstances. Consultation with energy end users, when designing facilities, would encourage women to become energy agents and entrepreneurs so that they could play an active role in energy supply and consumption (Fox, Johnson and Rosser, 2006).

⁵ Woroniuk B. and Schalkwyk J., 1998. Donor Practices: Evaluation, OECD Gender Tipsheets, OECD, Paris <http://www.oecd.org/dataoecd/2/13/1896352.pdf>

⁶ Fox, M. F., Johnson, D. G., and Rosser, S. V. (2006) (eds.). Women, Gender, and Technology. Illinois, US: University of Illinois Press.

Reports

Curtin, J., 2010. The Copenhagen Conference: How should the EU respond?, The Institute of International and European Affairs (IIEA), <http://www.iiea.com/publications/the-copenhagen-conference-how-should-the-eu-respond>.

This paper first offers a context for the EU's approach to climate change followed by a review of EU leadership on the issue. It also provides an analysis of the content of the Copenhagen Accord and the overall direction of negotiations from a European perspective. The paper concludes with an assessment of the reaction within the EU to the Accord and offers initial thoughts on how the EU might increase its influence at future international climate negotiations.



Green Resources, 2010. A Forestry CDM/VCS Case Study from Tanzania, <http://dgroups.org/file2.axd/1127b62b-e67b-4c7f-97cb-c587e224035b/Carbon>.

This report describes a voluntary carbon market project in the field of forestry, which has been developed in Mapanda/Uchindele, Tanzania, by Green Resources. In addition, the report discusses a CDM project in Idete, Tanzania. The voluntary carbon market project has been validated and registered according to the VCS standard. The PDD for the CDM project is about to be submitted. This study describes the project and some of the advantages, opportunities and pitfalls around reforestation projects. The authors argue that reforestation is critical to the future of the CDM in Africa and to the success of REDD and this is discussed in detail in the study.

Spencer, Th., K. Tangen and A. Korppoo, 2010. The EU and the Global Climate Regime - Getting Back in the Game, Briefing paper 55, The Finnish Institute of International Affairs, <http://www.upi-fia.fi/en/publication/106/>

This paper analyses the role of the EU during the climate policy negotiations. It focusses on two central elements of the EU's position in the international negotiations: 1. the EU's emission reduction target, and 2. the EU's demand that the negotiations should produce a 'single legal outcome'.

Angelopoulos, K., G. Economides, and A. Philippopoulos, 2010. What is the Best Environmental Policy? Taxes, Permits and Rules under Economic and Environmental Uncertainty, CESifo Working Paper No. 2980, Category 1: public finance, March 2010.

This paper studies the importance of uncertainty and public finance to the welfare ranking of three environmental policy instruments: pollution taxes, pollution permits and Kyoto-like numerical rules for emissions. The setup is the basic stochastic neoclassical growth model augmented with the assumptions that pollution occurs as a by-product of output produced and environmental quality is treated as a public good. To compare alternative policies, the study computes welfare-maximizing values for the second-best policy instruments. It concludes that, in all cases studied, pollution permits are the worst policy choice, even when their revenues finance public abatement.

Gilbertson, T. and O. Reyes, 2010. Carbon Trading: How it Works and Why It Fails? <http://www.thecornerhouse.org.uk/pdf/document/Shortbook.pdf>.

This book analyses the functioning of the EU Emissions Trading Scheme and the emissions trading mechanisms of the Kyoto Protocol. In addition, the book discusses a number of project case studies in Thailand, Indonesia, Brazil and India.

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.

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Abbreviations

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|---------------------|--|
| AAU | Assigned Amount Unit |
| Annex A | Kyoto Protocol Annex listing 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 |
| CCS | Carbon Dioxide Capture and Storage |
| 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 |
| ERPA | Emission Reduction Purchase Agreement |
| 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 |
| ITL | International Transaction Log |
| JI | Joint Implementation |
| JISC | Joint Implementation Supervisory Committee |
| KP | Kyoto Protocol |
| LULUCF | Land Use, Land-Use Change and Forestry |
| MethPanel | Methodology Panel to the CDM Executive Board |
| MOP | Meeting of the Parties to the Kyoto Protocol |
| PIN | Project Information Note |
| PDD | Project Design Document |
| SBSTA | UNFCCC Subsidiary Body for Scientific and Technological Advice |
| SBI | UNFCCC Subsidiary Body for Implementation |
| TNA | Technology Needs Assessment |
| UNFCCC | UN Framework Convention on Climate Change |

JIQ Meeting Planner

10 May 2010 - 11 May 2010, Geneva, Switzerland

Workshop on water and adaptation to climate change in transboundary basins.
Contact: info.ece@unece.org; http://www.unece.org/env/water/meetings/trans-boundary_adaptation_workshop.html

26-28 May 2010, Cologne, Germany

Carbon Expo 2010 - Global Carbon Market Fair & Conference
Contact: <http://www.carbonexpo.com/>

31 May - 11 June 2010, Bonn, Germany

32nd session of the UNFCCC Convention subsidiary bodies
Contact: http://unfccc.int/meetings/unfccc_calendar/items/2655.php

10-12 August 2010, Sydney, Australia

6th Australia - New Zealand Climate Change & Business Conference
Contact: <http://www.climateandbusiness.com/index.cfm>

16 August 2010 - 20 August 2010, Fortaleza, Brazil

Second International Conference on Climate, Sustainability and Development in Semi-Arid Regions (ICID II)
Contact: <http://ictsd.org/i/events/59501>

29 November - 10 December 2010, Mexico

16th Conference of the Parties (COP 16)/ 6th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 6)
Contact: http://unfccc.int/meetings/unfccc_calendar/items/2655.php

8-13 May 2011, Linköping, Sweden

World Renewable Energy Congress (WREC) 2011 hosted by Linköping University, Sweden
Contact: WREC 2011 Secretariat - Travel Team AB, Ågatan 23, SE-582 22 Linköping, Sweden, info@wrec2011.com, www.wrec2011.com.