

APRAISE Policy Workshop - 23 May 2014

“Improving policy makers’ knowledge base for environmental policy making”

Environmental policy making within the EU often starts with directives enacted by the European Commission. In most cases, directives describe the targets to be achieved, but Member States are flexible in their choice and design of policy instruments.

The EU-funded project APRAISE (7th Framework Programme) has analysed for a number of EU environmental policy areas which policy instruments have been chosen and what kind of effects these have had. APRAISE measures these policy effects against the environmental targets stated in the policies: mainly in the directives, but also in the national laws. The degree to which the targets are achieved, is called the effectiveness of policy instruments.

However, actual effectiveness can differ from what policy makers expected when they planned and implemented the policy, based on their best available knowledge. APRAISE explains this difference by taking the point that not only the type and design of policy instruments are decisive for the effectiveness of the transposed policies, but also many other factors can influence the policy output in favourable or unfavourable ways. These factors, specifically assessed in the APRAISE project, can result from:

- The broader economic, political and social policy context;
- The policy specific context such as policy design, operation and enforcement; and
- Interactions between policies and policy instruments.

“Improving policy makers’ knowledge base for environmental policy making”

Brussels, 23 May 2014

Venue: CEPS, Place du Congrès 1, B-1000 Brussels

1. Introduction: APRAISE quantitative and qualitative assessment of environmental policy effectiveness
2. Case study: **Renewable energy supporting policies** (Greece and Slovenia)
3. Case study: **Plastic waste recycling** (Germany and the Netherlands), **Biofuels policies** (Austria and UK)
4. Evaluation and conclusions

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Qualitative & quantitative

The APRAISE approach is to assess the effectiveness and efficiency of specific environmental policies by means of a combination of qualitative and quantitative approaches. The qualitative part of the assessment compares the actually achieved effectiveness of the policy with the originally intended effect and relates the differences to relevant impact factors referring to the context, implementation and interaction of the assessed policy instruments. For the quantitative assessment, different modelling approaches are applied, which are more micro or macro-economic, depending on the respective focus. Eventually, this combined assessment method has been applied to a number of key EU environmental policy areas. For comparative reasons, each assessment has been carried out in two EU Member States.

The results of this analysis will be presented at a workshop to be held on 23 May of this year in Brussels (see Box). The focus of this workshop will be on how a combination of qualitative and quantitative assessment methods can enhance policy makers’ knowledge base when designing an environmental policy, including the choice of policy instruments.

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Swedish CDM Call Receives over 350 Proposals

In December of last year, the Swedish Energy Agency issued a call for CDM proposals. With the call, the Agency intends to contract up to 10 million CERs that are generated during the second commitment period of the Kyoto Protocol (2013-2020). The call, which closed on 16 February of this year, received 350 CDM project proposals from more than 50 developing countries. The total volume of submitted proposals amounts to roughly 160 million tonnes of GHG emission reductions or CERs.

As explained in an earlier issue of *JIQ*, the Swedish CDM call has welcomed project proposals at different stages of development. Therefore, both registered and non-registered CDM projects are considered, as long as the CERs estimated in the proposal have not been issued to other investors. Of the submitted proposals, around two-third have already been registered by the CDM Executive Board. These projects have been approved by the host country government and have completed the validation process by a designated operational entity. The remaining proposals concern projects which have not yet been registered as CDM projects.

The Swedish CDM call invited both individual CDM projects and Component Project Activities (CPAs) under Programmes of Activities (PoAs). Priority project types include renewable energy, energy efficiency and waste management. The main geographical focus has been on countries in Sub-Saharan Africa and Southeast Asia, in particular those countries that have been underrepresented in the CDM and Least Developed Countries. About three quarters of the proposals are projects and the rest are PoAs.

The Swedish Energy Agency has explained that a large portion of the submitted proposals are located in Least Developed Countries and other low income countries. According to Ola Hansén, Head of International Carbon Market Unit, there has been a strong interest in the CDM Call from a wide range of countries and technologies: 'This shows that there is large potential in international climate cooperation which contributes to a global low carbon development.'

JIQ: Could you say more about the distribution of proposals across technologies: e.g. renewable energy, energy efficiency and waste management?

SEA: 'The distribution of proposals across technologies was impressive. Different types of renewable energy projects such as solar, wind and hydro projects accounted together for about 40 per cent of the received proposals. The second largest share of proposals came from waste handling and disposal

projects, such as waste water treatment and landfill gas projects. The largest number of proposals came from household energy efficiency programmes concerning improved cook stoves or efficient lightning.'

A detailed assessment of the proposals is ongoing and shortlisted proposals of interest will be contacted shortly. In the previous issue of *JIQ*, it was explained that the call has three phases: an initial screening phase for all incoming proposals, a due diligence phase for shortlisted proposals, and a contracting phase for approved proposals (see *JIQ*, December 2013 issue).

JIQ: What is a likely timeframe for these three stages?

SEA: 'The assessment of proposals is ongoing. Shortlisted proposals are being contacted and we are moving on to the due diligence stage. We expect to finalise the first ERPA's during summer and to have a majority of the ERPA's in place before the end of this year. Proposals that have not been shortlisted will be notified before end of May.'

The Swedish Energy Agency has been responsible for the Swedish governmental CDM and JI programme for over a decade. The programme will fund up to 40 million tons of CO₂ equivalent emission reductions through the flexible mechanisms of the Kyoto Protocol as part of Sweden's national target for 2020.

To date, more than half of that volume has already been committed. The programme focuses on direct participation in individual projects and on participation in multilateral CDM and JI funds. To date the Swedish Energy Agency participates in over 80 CDM and JI projects in Asia, Africa, Latin America, and Eastern Europe, as well as in a number of multilateral funds. More than a fifth of the contracted volume comes from projects in Least Developed Countries.

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European Commission Proposes Reform of EU ETS as Part of 2030 Climate and Energy Framework

As part of the proposed EU “2030 Policy Framework for Climate and Energy”, the European Commission has proposed a reduction of the number of EU ETS allowances and the installation of a flexible auction reserve for market stabilisation. This proposal is part of a plan to reduce EU GHG emissions by 40 per cent by the year 2030.

On 22 January of this year, the European Commission presented a package of proposed policy measures for strengthening EU energy and climate policies by the year 2030. From a climate policy perspective, the main element of the package is a targeted reduction of 40 per cent of GHG emission by 2030 below 1990 levels. In addition, the package also recognises energy efficiency as a priority area, without formulating a clear target for it. Possibly, based on the evaluation of the energy efficiency directive, which will be completed in the course of this year, a quantitative energy efficiency target will be formulated.

EU-wide renewable energy target

Regarding renewable energy production, the January package by the Commission contained as a goal that by 2030 at least 27 per cent of all European energy should be produced with renewable energy technologies. This target was formulated for the EU as a whole, without formulating legally binding renewable energy targets for individual Member States. The idea was that a range of bottom-up actions within Member States would jointly have to lead to the overall 27 per cent target.

Without a national breakdown of renewable energy targets, the European Parliament decided on 5 February, in a plenary session, that it would only support an EU climate and energy package if it contained individual, binding targets for GHG emission reductions, renewable energy sources and energy efficiency.

Lowering the ETS emission ceilings

In the Commission’s proposal, the proposed 40 per cent GHG emission reduction by 2030 has subsequently been subdivided into targets for sectors covered by the ETS and for non-ETS sectors. ETS-covered installations are expected to jointly reduce their emissions by 43 per cent below year 2005 levels (2005 was the starting year for the ETS). This implies that the annual reduction rate of ETS allowances entering the market will increase from the current 1.74 per cent (until 2020) to 2.2 per cent per year as of 2021.

ETS stabilisation reserve

In addition to the proposed acceleration of reduction of ETS allowances, the Commission has also proposed to establish an auction reserve during the ETS phase for after 2020. The foreseen role of this reserve is to soften market fluctuations, so that supply of ETS allowances remains better in line with economic developments. In case there will be “too many” allowances (according to the proposal, when the ‘oversupply’ is higher than 883 million allowances) then 12 per cent of the oversupply will be transferred to the auction reserve.

For instance, according to this rule, in case of an oversupply of ETS allowances of 2 billion (as is currently the case in the ETS market), around 240 million allowances would be transferred to the stabilisation reserve. In case, less than 400 million allowance are in circulation in the market, 100 million allowances will be supplied from the reserve into the market. Allowances will also be transferred from the stabilisation reserve to the market in case the allowance market price increases to a level which is three times as high as the running average market price over a period of two years.

The European Council, at its meeting on 20-21 March of this year, did not take a decision on the above proposal. This has been postponed to a later meeting in the course of this year.

Interview with Axel Michaelowa

“For JI and CDM, the recent crash in market prices leads to a massive loss in human capacity and trust”

Twenty years ago (June 1994), JIN organised the International Conference on Joint Implementation (JI), on behalf of the Netherlands Government. At that time, JI was a relatively new concept under the UNFCCC, which was surrounded by uncertainties and controversies. Among the 163 participants was Axel Michaelowa, for whom it was his first international climate conference. Since then, Axel has become a frequent visitor of meetings and well-known contributor to climate change research, consultancy and policy advice. Recently, Axel celebrated his 20th anniversary of working professionally on climate policy issues. JIQ asked him about his views on progress made over the past two decades and challenges ahead of us.



JIQ: 20 years ago, climate policy making seemed to be based on setting long term, scientifically determined climate goals which Parties would then translate into national targets, through negotiations. The Kyoto Protocol was a first attempt in that direction (although the QELRCs were not based on science), but now this top-down negotiation approach seems to have lost momentum. How do you see future climate negotiations progress: negotiation targets per country derived from a global goal or a climate regime built up from nationally determined targets ('ambitious pledges')?

'A top down regime would in terms of effectiveness and efficiency of mitigation be by far preferable. However, it can only be built on a critical mass of governments taking climate change seriously. This requires pressure by the electorate. Such pressure will only come through a marked increase in extreme weather events and their damage, as well as irrefutable evidence of climate change that silences emitters' interests, such as a new, marked increase in global temperature. Moreover, other political and economic crises need to be absent. In the mid-2000s, we had such a window of opportunity with Hurricane Katrina and the Nobel Prize for the IPCC but then the financial crisis of 2008 struck...

In the short to medium term, given the Russian geopolitical crisis, as well as the lingering of economic malaise in Europe and other parts of the world, I only foresee a bottom-up, pledge and review system. As the new IPCC report has stated, current pledges will be inconsistent with a 2°C target path, and orient the world towards 3° warming. The question is at what point in time this inconsistency will be seen as

politically problematic. I fear that this will not be before the end of this decade.'

JIQ: In 1995, the JI concept was taken out of the negotiation process due to its controversial nature and sidelined as the AIJ pilot phase to make a remarkable comeback at COP-3 with the adoption of the Kyoto Mechanisms. How important have JI and CDM been, in your view, in terms of actual GHG emission reduction, awareness building, technology transfer and insights in GHG accounting?

'The CDM has shown that a monetary incentive for the private sector and a transparent procedure for approval and audit of mitigation projects can be extremely powerful. I remember that the most optimistic forecasts of CDM researchers at the end of the 1990s saw 50-100 projects coming on stream per year. Reality was an order of magnitude higher. This happened because private entrepreneurs in developing countries understood that emissions credits were a new export opportunity, and embraced this option wholeheartedly.

The CDM also showed that market mechanisms can identify cheap and large mitigation options ignored by public policy processes. While industrial gas projects under the CDM now have a bad press due to their low costs and "easy" reductions, no public funding vehicle did engage in such projects before they were discovered by the CDM...

JI showed that too much government involvement, as embodied in Track 1, can have a chilling effect on

buyers due to a loss of credibility. The way Russia and Ukraine laundered “hot air” through JI in the last months of 2012 further dented credibility of JI.

For both mechanisms, the recent crash in market prices leads to a massive loss in human capacity and trust. This is exacerbated by the way industrialised country buyers are wriggling themselves out of the fixed price contracts with developing country sellers. This is akin to a “scorched earth” approach and will be a severe barrier to market recovery should prices increase again.’

JIQ: Currently, market mechanisms play a limited role in the extension of the Kyoto Protocol. What role do you see for the CDM and JI in a future climate policy regime, possibly towards New Market Mechanisms or even in combination with NAMAs?

“If policymakers endorse mitigation ambition consistent with the 2°C target, all available cheap mitigation options need to be harnessed. Thus all types of market mechanisms would be needed: project-based, sectoral and policy-based ones. So, the CDM, JI, international emissions trading, policy crediting and sectoral trading should play like an orchestra. Unfortunately, the last years have seen an opposite tendency, dismantling working mechanisms.”

JIQ: An important challenge of climate negotiations over the past 20 years has been to deal with the divide between Annex I and non-Annex I Parties and to organise active involvement of developing countries. The CDM was an important milestone for that in the Kyoto Protocol and NAMAs, TNAs and focus on finance and adaptation have been other milestones. What future steps do you recommend towards a global climate coalition with active participation of non-Annex I Parties in actions for mitigation and adaptation?

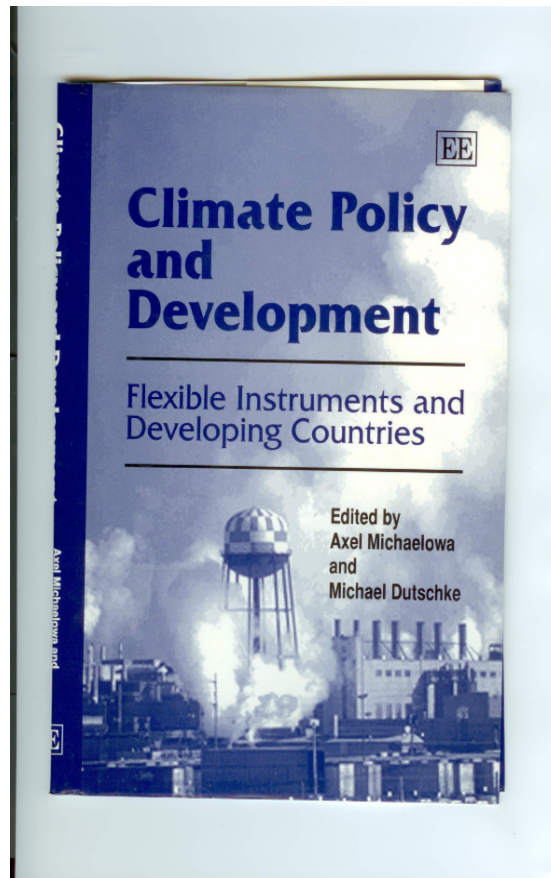
“I hope that we see a fading away of the Annex I-Non-Annex I dichotomy and a much less ideological approach to mitigation commitments based on “graduation and deepening”. The higher a country’s capacity for mitigation and its responsibility for GHG emissions (emissions per capita and per unit of GDP), the stronger mitigation commitments should be.

Obviously, rapidly industrialising countries with strong emissions increases have seen a strong rise in capacity, as well as responsibility. While these countries have been able to silence the IPCC in this respect, I hope that their populations will increase pressure on governments to significantly contribute to global mitigation.”

JIQ: When you started your career on climate change, the UNFCCC had just been adopted and entered into force. Back then, climate change sometimes seemed to be a bit of sideline issue. Based on your earlier answers, climate change should nowadays be at the heart of economic and development planning. What would you suggest regarding mainstreaming of climate change in economic planning and do you think that the current instruments under the UNFCCC are sufficient to support that?

“Unfortunately, often new nicely-sounding terms like “Green Growth” or “low emissions development” are used to obfuscate failures in mitigation policies such as unwillingness to price emissions. We need to address this issue head on. Arguing that mitigation policies pay for themselves through “co-benefits” inevitably leads to a disappointment and failure in keeping climate change to a manageable level.

While I understand that many disappointed mitigation experts want to use every straw they can to remain relevant, the message that mitigation is cost- and painless will backfire. Mitigation of climate change is a challenge for many generations, and we have so far only very partially addressed it. I hope that before the end of my working life, we will have more impressive steps towards its solution.”



Additionality and Baseline Setting in New Market-based Mechanisms

Recently, INFRAS published a study on accounting of GHG emissions reduction in new market-based mechanisms (NMM and FVA).¹ The first part of the study presents insights on how to define crediting baselines and determine additionality in new Market-based Mechanisms in general. The second part looks closer into the question on how the emerging mitigation pledges from host countries may inform baseline setting and additionality.

Under the Kyoto Protocol, three market based mechanisms were established: CDM, JI and International Emissions Trading (IET). In addition, many countries have introduced emissions trading schemes (ETS) and a number of crediting mechanisms have emerged which are partially linked to ETS. At COP 17 (Durban, 2011), Parties agreed on a framework for various approaches (FVA), under which both market and non-market-based approach are discussed, and a New Market Mechanism (NMM). Both the FVA and NMM have been further elaborated on at COP 18 (Doha, 2012) but their modalities and procedures are still missing.

A pivotal part of any rules to govern crediting mechanisms are baseline setting (the reference level used for the issuance of credits), and additionality assessment (whether a mitigation activity would also have happened in absence of the crediting mechanism). Both issues are particularly relevant for both the FVA and the NMM. Despite the difficult market environment for international carbon markets, policy makers and non-governmental standard setting organizations are in the process of reforming existing and establishing new carbon market mechanisms. In considering the establishment of new or reforming existing mechanisms, the experiences with the CDM provide particularly important lessons and insights, due to its early implementation, the broad coverage of sectors and project types, the mature methodological framework, and the large number of projects. These lessons are also useful for potentially up-scaled mechanisms that credit emission reductions for entire sectors or policies, instead of projects.

Baseline assessment

A key lesson learned from the CDM, is that setting robust baselines can be challenging. In some sectors, perverse incentives, such as carbon leakage or market distortions, can undermine efforts to reduce emissions. In other cases, the estimation of future business-as-usual (BAU) emissions is associated with considerable uncertainty, which can result in significant over- or under-crediting. Once uncertainty and perverse incentives are addressed, the study recommends setting baselines in ambitious, below BAU emission levels, while considering the specific circumstances of the sector and project type concerned.

The update of baselines is a key methodological and policy choice which needs to balance two opposing objectives: providing for investors certainty over time and ensuring that baselines continue to be robust over time. In practice, a reasonable approach is to update different underlying parameters at different time intervals (*e.g.*, between 1 and 10 years), depending on how likely they may change over time. Fixed crediting baselines, expressed in absolute tonnes of emissions, could be used in conjunction with absolute emissions pledges or domestic ETS which are usually fixed *ex-ante*. A fixed baseline could allow the crediting of emission reductions achieved beyond the ETS cap or pledge.

Whether and how policies and regulations should be considered in setting and updating baselines is another challenge for crediting mechanisms. As a general rule, the authors of the paper recommend that adopted policies and regulations reducing GHG emissions should be included in a baseline. In order to provide incentives to abandon policies that increase GHG emissions, such as fossil fuel subsidies, the authors recommend, as a general rule, that the effect of such policies is excluded in setting the crediting baseline.

Additionality assessment

Robust methodological approaches used for additionality assessment are key for ensuring the

¹ L. Schneider, J. Fuessler and M. Herren with M. Lazarus (2014): Crediting emission reductions in new market based mechanism – Part I: Additionality assessment & baseline setting without pledges. INFRAS. Zürich, January 2014.

J. Fuessler, M. Herren and A. Kollmuss with M. Lazarus (2014): Crediting emission reductions in new market based mechanism – Part II: Additionality assessment & baseline setting under pledges. INFRAS. Zürich, January 2014.

Both parts of study can be downloaded at: <http://www.infras.ch/e/projekte/displayprojectitem.php?id=5183>

integrity of crediting mechanisms. Considerable experience has been made with project-based mechanisms, while fewer approaches have been proposed and tested for sector-based and policy-based crediting mechanisms.

For project-based mechanisms, the barrier and investment analysis, which are currently the main approaches for additionality assessments, strongly depend on subjective assumptions and assessments, such as future fuel prices, and are prone to fraudulent statements, due to the information asymmetry between project developers and verifiers or regulators. Standardised approaches, such as positive and negative lists, emission performance benchmarks or market penetration approaches provide more objective means for additionality assessment but have other disadvantages. These approaches require large data sets on sector characteristics in the country and may not necessarily be a good proxy for the likelihood that a project can go ahead without credit revenues. In some sectors, for example, projects with low GHG emissions or a small market penetration can nevertheless be economically highly attractive. The authors therefore recommend a combination of investment analysis and impact analysis, applied to project types rather than individual projects. They furthermore recommend abandoning very subjective methodological approaches, such as the barrier analysis.

For sector-based mechanisms, emission reductions are assumed additional if they fall below the crediting baseline. However, the additionality of individual measures, technologies and projects within the sector is an important issue when designing the incentive scheme to reduce emissions in the sector. The sectoral programme is only effective if it largely rewards those projects that deliver additional emission reductions.

For policy-based mechanisms, it seems difficult, if not impossible, to develop objective criteria to assess additionality. Policies are often motivated by several policy objectives, such as the diversion of energy sources, enhancing energy security, enhancing public services, realizing economic gains through enhanced energy efficiency, saving natural resources, or reducing air pollution. Another difficulty is that the decision on policies often depends on specific political factors, such as the political power of different actors in the country and public awareness on the issue. This makes it difficult to assess whether and how the incentives from a crediting mechanism impact the political power balance in a decisive way. Therefore, the authors recommend not to pursue the crediting of policies (possibly with the exception of policies that do not generate significant other benefits than reducing GHG emissions).

Box 1. Baselines and additionality in combination with GHG reduction pledges

While the first part of the study presents insights on how to define crediting baselines and determine additionality in new Market Based Mechanisms in general, the second part of the study looks closer into the question on how the emerging mitigation pledges from host countries may inform baseline setting and additionality. The following are the main findings:

- Pledges need to inform baseline setting and additionality. If not, host countries may face difficulties of meeting the pledge at the expense of international crediting.
- The type of pledge and the stringency of its definition may impact the ability to derive baselines and additionality. For instance, crediting baselines under relative pledges face considerable challenges in their operationalization, compared to absolute pledges.
- Based on the pledge, the host country can develop a program of mitigation activities that are necessary to meet its pledge, and differentiate these domestic actions from mitigation actions for international crediting that go beyond these mitigation actions. With this, the host country can draw the line between domestic mitigation activities that aim at meeting the pledge and activities that can be used for international crediting.
- Defining how pledges “trickle down” to impact crediting baseline setting is a political and methodological challenge for which further work and experiences are needed. However, many developed and developing countries have already gone through such exercises or are currently in the middle of mitigation policy processes, e.g. establishing national QELROs, considering different instruments including carbon taxes, efficiency standards, ETS, crediting, etc.

It appears that baseline setting (and additionality) under a host country pledge is simpler to operationalize in the context of top-down sectoral approaches to mechanisms. Project-by-project approaches that are by their very nature bottom-up, appear to face more challenges, but are still feasible. The study shows the close relationship of host country pledges, approaches to meeting the pledge and scope for crediting mechanisms. Further analysis may promote the understanding of these interactions and may help countries in defining pledges, policies and measures while allowing for international crediting.

Implications for future market mechanisms

Based on the lessons learned from existing mechanisms, the study results indicate that crediting mechanisms should use specific methodological approaches that are best suited for the sector and project type concerned, rather than prescribing one or few methodological approaches for baseline setting and additionality assessment. The methodological approaches should not vary between countries with largely similar circumstances. Where possible, they

should also be consistent across sectors and project types with similar circumstances.

Another general lesson learned is that methodological approaches should be developed based on actual data from installations, and be reviewed thoroughly and road-tested before their adoption and implementation.

Finally, the study concerns governance aspects arising from the introduction of new crediting mechanisms. A key aspect is to what extent the governance should be centralised and under UNFCCC supervision and to what extent it could be under domestic, bilateral and non-governmental governance structures. The study indicates that a more centralised approach has important advantages over a more decentralised approach, for ensuring environmental integrity, for private sector market participants, as well as for establishing a market with high liquidity. Without internationally agreed rules, the quality of units from different crediting mechanisms may not be comparable. A centralised oversight better ensures a similar stringency of baselines across countries, sectors and project types, providing a level playing field for entities in the market and thereby enhancing the cost efficiency of crediting mechanisms.

Among the three types of crediting mechanisms, project-based mechanisms are well established and their advantages and limitations are well known. They have demonstrated to be able to deliver units to the market at a significant scale. A key benefit of

project-based mechanisms is that they directly expose private entities to a carbon price and thereby provide incentives to reduce GHG emissions in a cost-effective manner. This is not necessarily the case for sector-based and policy-based mechanisms where private entities may receive other types of incentives.

The biggest challenges for project-based mechanisms are the subjective rules often used to demonstrate additionality and set crediting baselines. Standardised approaches increase the objectivity, but do not necessarily reduce the number of non-additional projects qualifying for credit issuance. Sector-based crediting mechanisms could provide significantly up-scaled emission reductions. Whether these reductions are additional depends on the quality and conservativeness of the baseline. Deriving reliable baselines could be challenging given that the future emissions of a sector depend on many factors that can change over time.

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The Role of Public Acceptance in Technology Deployment

Categorisation of clean technology acceptance elements

In its *Roadmap for Moving to a Competitive Low Carbon Economy in 2050*, the European Commission has outlined how the EU can become a competitive low-emission economy by 2050, with possible actions leading to a GHG emission reduction of 80 to 95 per cent by 2050, compared to 1990 levels (EC, 2011). From the scenarios described in the Roadmap, it can be concluded that an "80 to 95 per cent" scenario is technically feasible. Moreover, economic benefits could possibly outweigh the costs, especially when new job opportunities in innovative industries and enhanced competitiveness in low emission growth are considered.

In addition to these technical and economic aspects, it is essential to include an analysis of the social aspects that influence the acceptance of clean technologies and measures (Batel, *et al.*, 2013; Musall & Kuik, 2011). Technologies that are technically and economically

feasible in a given context may not necessarily be successfully implemented due to social resistance, lack of awareness of the technology, *etc.* Against this background, it is vital to improve public acceptance in order for technologies to live up to their technical and economic potential.

Elements of public acceptance

Considering that the success of climate-friendly technologies and measures depends to a large extent on their social acceptance, it is important to have clear insight on the elements that influence public attitudes. These elements may be categorised as follows:

- **Awareness** of climate change and knowledge of clean technologies;
- **Fairness** of the decision-making process;



- Overall evaluation of **costs, risks and benefits** of a technology;
- **Local context** of technology implementation;
- **Trust** in decision-makers and other relevant stakeholders.

Awareness

People's knowledge, experience, social responsibility and environmental (e.g., climate change) awareness are main factors that affect their acceptance of clean technologies and measures. Based on the literature, it can be concluded that there is a positive relationship between people's awareness of climate change impacts, and their preparedness to act, including acceptance of climate-friendly technologies (Spence, *et al.*, 2012; Strazzer, *et al.*, 2012; Thøgersen & Noblet, 2012).

Apart from climate change awareness, it is important that the public becomes sufficiently familiar with proposed technologies. For new technologies, timely, complete and balanced knowledge needs to be provided in order to raise awareness on its costs, risks and benefits. Experience shows that potentially useful technologies may not be considered for implementation if the public is unfamiliar with these (UNDP, 2010).

Fairness

The perceived fairness of the preparatory and decision-making processes influences how the public will evaluate a technology or measure. Procedures are considered to be fair when they are open and transparent, the public and stakeholders have a voice in decisions, and these inputs are given consideration by the decision makers (Terwel, *et al.*, 2011).

In addition to public participation in the planning and decision-making process, economic participation may also increase the social acceptance of technologies. Several studies have found that joint ownership or community co-ownership of projects leads to higher social acceptance (Musall & Kuik, 2011; Strazzer, *et al.*, 2012).

Evaluation of costs, risks and benefits

Social acceptance of a clean technology or measure will depend on an assessment of its costs and benefits, as well as potential risks. This assessment is inherently subjective, as the public usually does not have complete knowledge or appropriate information. The assessment made is therefore either a result of their level of awareness, or based on an assessment made by someone else, such as the project developer, the government, or an interest group.

Costs, benefits and risks of a project may be public or private, and in addition to the overall cost-benefit analysis, an equal distribution of outcomes among stakeholders influences the evaluation and eventual

acceptance. In case stakeholders are significantly worse off, compensation can take place to rebalance the sum of costs, risks and benefits (Kamas & Preston, 2012).

Local context

While the public generally has a positive attitude towards clean technologies and measures in general, individual projects or policies regularly face resistance from the local community. Even though local resistance may follow from ignorance or selfishness (or 'NIMBY' behaviour), it is vital that local critical attitudes are not ignored, considering that local acceptance is of great importance for the success of a project (Musall & Kuik, 2011; Kaldellis, *et al.*, 2013).

According to Sijmons and Van Dorst (2012), people tend to resist change in their environment, more because of personal concerns about quality of life, than

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that they fear the new technology itself. Instead of disregarding local views, both rational and emotional parts of the local debate should be taken seriously into consideration. Rational objections to projects, as well as specific fears and emotions, should be identified, discussed and dealt with (Sijmons & Van Dorst, 2012; De Boer & Zuidema, 2013).

Trust

Public trust influences the public acceptance of technologies and measures. Hereby, public acceptance depends on the trust in the properties of the technology, as well as in the related stakeholders (Terwel, *et al.*, 2011; Einsiedel, *et al.*, 2013; Huijts, *et al.*, 2012). Trust can be considered a cross-cutting issue, as it influences the other four elements discussed above, and is in turn also influenced by them. Public trust in stakeholders depends on the perception of their organisational competence and integrity. Environmental NGOs generally experience higher public trust than for-profit companies, as the public expects the latter group to act mainly out of self-interest (Terwel, *et al.*, 2011).

POLIMP

This article is a summary of the 1st Policy Brief of the POLIMP project: “Acceleration of clean technology deployment within the EU: The role of social acceptance”. The draft of the policy brief has been presented during the POLIMP stakeholder workshop in Brussels on 25 April of this year. The draft policy brief, as well as presentations delivered at the workshop, are available on <http://www.polimp.eu>. The final version of the policy brief is to be released in June of this year.

The POLIMP project (“Mobilising and transferring knowledge on post-2012 climate policy implications”) is coordinated by JIN and has received funding from the European Commission (FP 7 Programme). The project aims to facilitate a process to identify, for different policy and decision making levels, knowledge gaps about implications of possible directions of EU and international climate policies. Subsequently, it will cover these gaps with knowledge packages derived from a broad range of existing reports, research and climate policy decisions.

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GreenEcoNet Annual Conference and Platform Launch Event

25 June 2014 (10:00 – 16:30) CEPS, Place du Congrès / Congresplein 1, Brussels

The GreenEcoNet project aims to enhance familiarity with small and medium enterprises (SMEs) demonstrating best-in-class green practice, thereby enhancing the learning potential from proven practices. For that, GreenEcoNet develops the first European wide online platform to strengthen dialogues within the private sector, as well as among the private sector, EU and Member State policy makers and the research community on issues related to green economy and SMEs.

The GreenEcoNet Annual Conference aims at presenting and discussing the network’s priority topics for the year to come. Two topics have been selected on the basis of the upcoming political agenda and interviews with key stakeholders.

- **Governance for SMEs: How can policies help ‘green’ entrepreneurs**
“How can policies help ‘green’ entrepreneurs by improving access to information, financing and technical assistance?”
- **The circular economy and opportunities for SMEs: Waste as business**
“What action and information might SMEs require to realise business opportunities related to the circular economy, and how can SMEs improve their cooperation and knowledge sharing to fully exploit the potential of the circular economy?”

In the afternoon, the project consortium will launch the GreenEcoNet platform. This event will include a visual presentation of the platform and its suite of



instruments aimed at creating a dynamic environment for exchanging best practice ideas and stimulating the green economy debate. During this session, SMEs will be given the opportunity to present the barriers and difficulties (e.g. regulatory and financial ones) that they experienced in managing the transition to a green business model.

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Herold, A. and A. Siemons (2014). Up-Front Information for Emission Reduction Contributions in the 2015 Agreement under the UNFCCC, Background paper, Öko-Institut e.V., Berlin, Germany (contributing authors: N. Höhne and M. Hagemann, Ecofys) <<http://www.oeko.de>>

This background paper elaborates on the ongoing discussions about the up-front or *ex-ante* information that Parties shall provide together with their nationally determined emission reduction contributions for the post-2020 climate agreement. Due to the fact that mitigation contributions are determined nationally by each Party without any agreed types or elements, these contributions are expected to comprise a whole spectrum of diverse types of targets. For that reason, up-front information is necessary to make them transparent, comparable and quantifiable related to the progress needed to achieve the 2°C objective. Additionally, it promotes mutual understanding and trust among the Parties and it will point to the level of ambition implied by countries' proposed targets. Explanation of equity and fairness considerations should also be addressed by up-front or *ex-ante* information by countries when setting their contributions.

International Carbon Action Partnership (ICAP), 2014. Emissions Trading Worldwide – Status Report 2014, C. Haug, M. Frerk, A. Kachi, C. Serre and K. Wilkening (eds.) <<https://icapcarbonaction.com/news-archive/209-emissions-trading-worldwide-icap-status-report-2014>>

This report presents an overview of and other insights about the status and working of GHG emissions trading around the world. The report further offers practitioner insights, infographics, and factsheets on emission trading systems.

Lazarus, M., P. Erickson and L. Schneider, 2013. Potential for International Offsets to Provide a Net Decrease of GHG Emissions, SEI <<http://www.sei-international.org/publications?pid=2366>>

This paper explores how new market mechanisms could “achieve a net decrease and/or avoidance of greenhouse gas emissions”, as envisioned by the Parties at COP17 in Durban. The authors explore what a net decrease might mean in practice, how it might be achieved, and the potential scale of the net atmospheric benefit that could be attained in 2020. They find that achieving a net decrease in global GHG emissions hinges on:

- a) the ability to generate offset units for which additionality is relatively certain;
- b) measures (such as shortened crediting periods or pre-issuance discounts) that lead to more GHG abatement than credited, *i.e.* surplus reductions; and
- c) a means to account for any surplus reduction in a way that it does not simply contribute to meeting an existing GHG reduction pledge.

The paper also draws lessons from the CDM about challenges in attaining a net decrease, and examines the potential for existing CDM project types to produce surplus credits.

Lazarus, M., A. Kollmuss and L. Schneider, 2014. Single-year mitigation targets: Uncharted territory for emissions trading and unit transfers, SEI <<http://www.sei-international.org/publications?pid=2487>>

This paper explores the implications of the “time frame” of countries' mitigation pledges for the generation and use of tradable emissions units. Under UNFCCC agreements, some countries have adopted continuous or multiple-year emissions targets, while others have taken on discontinuous or single-year targets, most notably for the year 2020. Countries relying solely on single-year targets present greater uncertainty with regard to their emissions pathways, and as examined here, raise concerns regarding both ambition and comparability with other targets. The use of tradable units to meet a single-year target or the issuance of units in years prior to the single-target year could reduce the cumulative mitigation outcome compared with single-year targets without using tradable units, and multi-year targets (with or without using units). Single-year targets may also limit the ability to use domestic carbon market instruments, such as emissions trading schemes.

Phillips, G.B., 2014. The European Commission is taking a big gamble with the CDM, Sindicatum Sustainable Resources <<http://www.sindicatum.com/the-european-commission-is-taking-a-big-gamble-with-the-cdm/>>

This blog article argues that the EU kicked off investment in the CDM by allowing ETS-captured entities and not just Governments to import CDM credits to meet compliance obligations. This opened the door to investment and triggered demand for infrastructure, in particular the DOEs who validate and verify projects and DNAs in Non-Annex 1 countries who approve projects. It also spawned much of the work of the UNFCCC Secretariat. Without a steady stream of projects, this infrastructure will disappear, and in fact much of it already has. The industry has been on life support hoping for a positive signal. The EC proposal is neutral to negative for the CDM, even for CDM in least developed countries. Without a definite and quantified role in the future there is no interest in maintaining the CDM and our efforts to combat human induced climate change will be significantly worse off without the CDM.

Purdon, M., 2014. Ex-post Evaluation of the Additivity of a Clean Development Mechanism Cogeneration Project in Uganda: the significance of changes in project financing and background economic conditions, Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science (LSE), UK <<http://www.lse.ac.uk/GranthamInstitute/publications/Working->

Papers/Abstracts/150-159/Ex-post-evaluation-of-additionality-of-clean-development-cogeneration-project-Uganda.aspx>

This paper evaluates the additionality of a CDM bagasse cogeneration project at Kakira Sugar Works (KSW) in Uganda using an ex-post comparative baseline approach that accounts for how background economic conditions and project financing evolved over the project's 7-year crediting period from 2008-2014. The CDM project claims that CDM financing was necessary for the project. Evaluation of the conditions of background additionality led to the identification of important changing incentives for cogeneration which has led to the conclusion that the CDM is found to have accelerated the capacity of KSW to reduce emissions associated with Uganda's national grid, but not at the rate claimed in the CDM project documents (only about one-third of carbon credits claimed under the CDM were found genuine). The conditions of additionality can change significantly over the course of a CDM project in a way that undermines project environmental integrity because the CDM rules do not accommodate changing baseline conditions. The author recommends that a reformed CDM, NAMA or other new market mechanism adopt some of the elements of the approach used here, including use of comparative performance benchmarks, an additionality risk management tool and engaging donors in the development of "ODA-baselines" for climate mitigation projects which combine carbon finance and development assistance.

Schneider, L., A. Kollmuss and M. Lazarus, 2014. Addressing the risk of double counting emission reductions under the UNFCCC, SEI <<http://www.sei-international.org/publications?pid=2479>>

Avoiding double counting of emission reductions is a key policy concern to UNFCCC Parties. This paper concentrates on a systematic assessment of how double counting can occur and how it could be addressed. The conclusion is that double counting can occur not only directly, but in rather indirect ways, which can be challenging to identify. Addressing double counting effectively requires international coordination in three areas: accounting of units, design of mechanisms that issue units, and consistent tracking and reporting on units. While international agreement on principles for accounting and mechanism design is crucial to preventing double counting, the governance arrangements for implementation and international oversight could vary. The paper discusses different options and makes specific recommendations for rules to address double counting up to 2020 and in a post-2020 climate regime.

UNFCCC, 2014. Voluntary tool for describing sustainable development co-benefits (SDC) of CDM project activities or programmes of activities (SD Tool) <http://cdm.unfccc.int/Reference/tools/index.html>

The CDM of the UNFCCC has published a voluntary

online tool for highlighting the sustainable development benefits of the CDM in a "structured, consistent, comparable and robust manner." The tool's aim is to enhance the transparency of CDM projects' sustainable development benefits. Currently, under the CDM rules, it is the responsibility of a CDM host country to confirm that a project will assist it in achieving its sustainable development goals. The country does this by issuing a letter of approval confirming the project's contribution to its sustainable development. Using the CDM Sustainable Development Tool (SD Tool), CDM project developers can now elaborate, on a voluntary basis, the sustainable development benefits of their projects and programmes of activities by responding to a checklist of predefined indicators that describe impacts on the environment, society and economy of CDM host countries.

UNFCCC, 2014. Possible changes to the modalities and procedures for the Clean Development Mechanism, FCCC/TP/2014/1 <<http://unfccc.int/resource/docs/2014/tp/01.pdf>>

This document provides a technical analysis by the secretariat of possible changes to the modalities and procedures for the CDM in the areas specified in decision 4/CMP.9 and of the implications thereof, as requested by COP/MOP-9. The possible changes analysed in this document are based on the inputs from Parties, stakeholders and the Executive Board of the CDM to date on the review of the CDM modalities and procedures.

Warnecke, C., 2014. Can CDM monitoring requirements be reduced while maintaining environmental integrity?, Climate Policy <<http://www.tandfonline.com/loi/tcpo20>>

Monitoring, reporting, and verification (MRV) requirements in the CDM are perceived to be of high quality, but also complex and stringent. Only one-third of the registered projects successfully managed initial verification and already received carbon credits. The time required to achieve first issuance remains high despite considerable improvements in other CDM project cycle steps. This leads to the question of whether MRV provisions in the CDM represent barriers that could be lowered while ensuring the CDM's integrity. The CDM requirements are compared with the MRV provisions of the EU ETS. The comparison shows that CDM-MRV provisions are often stricter and less flexible compared to similar provisions in the EU ETS. Due to structural differences between the EU ETS and the CDM, some different MRV approaches are justified and reflect the CDM's disparate objectives and complexity. It is found that some CDM provisions result in barriers which seem avoidable and do not contribute to the CDM's environmental integrity. Recommendations are made for CDM-specific improvements and general structural changes to improve cost-efficiency and reduce uncertainty with relevance to policy developments around future market mechanisms.

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

AAU	Assigned Amount Unit
ADP	Ad Hoc Working Group on the Durban Platform for Enhanced Action
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 listed in Annex I to the UNFCCC. Countries not included in Annex I are called Non-Annex I Parties
Annex II Parties	OECD countries (listed in Annex II to the UNFCCC)
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
COP-MOP	COP serving as Meeting of the Kyoto Protocol Parties
DOE	Designated Operational Entity
DNA	Designated National Authority
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
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LCDS / LEDS	Low carbon (or emission) development strategy
LULUCF	Land Use, Land-Use Change and Forestry
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Programmes
PDD	Project Design Document
REDD	Reducing emissions from deforestation and forest degradation in developing countries
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

18-20 May 2014, Cairo, Egypt

International Conference on Possible Impacts of Climate Change on Africa.
 Contact: Dr Attia El-Tantawi, Cairo University, e-mail: a_eltantawi@yahoo.com

25-29 May 2014, Beijing, China

Global Conference on Global Warming 2014.
 Contact: e-mail: info@gcgw.org, <http://www.gcgw.org>

28-30 May 2014, Cologne, Germany

Carbon Expo 2014, the World Bank Group, IETA and Koelnmesse GmbH.
 Contact: Ms Isabel Hagbrink, e-mail: ihagbrink@worldbank.org

3 June 2014, Bonn, Germany

Monitoring, Reporting and Verifying GHG emissions under existing and developing carbon pricing mechanisms.
 Contact: <http://www.cdcclimat.com/June-3-2014-Conference-in-Bonn-MRV-1692.html?lang=en>

4-6 June 2014, Beijing, China

International Energy Workshop 2014
 Contact: <http://internationalenergyworkshop.org>

4-15 June 2014, Bonn, Germany

Bonn sessions of SBI (40), SBSTA (40) and ADP 3
 Contact: <http://unfccc.int>

9-11 September 2014, Washington, D.C., USA

2nd International Conference on Evaluating Climate Change and Development – "Tackling a Key 21st Century Evaluation Challenge"
 Contact: David Akana, dakana@thegef.org