Bi-monthly report

International Climate Policy & Carbon Markets

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International Climate Policy and Carbon Markets is a bi-monthly report aimed at providing a clear analysis of the worldwide evolution of the carbon market, and the international and domestic climate policies.

The report is organized in **four sections** focused on i) international negotiations and national policies, ii) European and international energy policy, iii) flexible mechanisms and developing countries, and finally, iv) evaluation of the carbon price in the hypothetical global market.

The information and data presented in each section are not only an update of recent events but also an extrapolation of the **quantitative implications** of recent events, based on a detailed analysis of **academic papers** and recently **published reports** (i.e. how the carbon price will be impacted by changes in the energy demand, etc). Every two months for each section we will briefly introduce and analyse the most important policies (proposed or applied) and actions. Each article will include boxes, figures and graphs in order to provide in-depth examinations and data exemplifications; all papers and reports used for the analysis will be cited in the final reference section.

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FEATURING

INTERNATIONAL NEGOTIATIONS AND NATIONAL POLICIES

What we shall (not) expect from Durban

The 17th Conference of the Parties to the UNFCCC (COP-17) started at the end of November in Durban, South Africa, and will run until December 9, 2011. In Panama, where the last round of preparatory talks took place, **some progress** has been made on technical issues, such as adaptation and technology transfer. The outcome for most of the informal groups has been a "form of text" which includes **submissions and options** to be discussed in South Africa. Just some days before the conference started, the UNFCCC Secretariat published a Scenario Note, which provides an overview of the progress achieved under the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) **[1]**. The document also includes some proposals by the Chair to address **outstanding issues**, in which efforts might best be addressed (**Box 1**). The challenge for the AWG-KP in Durban is to achieve a decisive outcome that **completes its work**. However, despite the text has been refined and streamlined, some issues do not appear achievable in the short-term. Indeed, especially on the central issue concerning the **second commitment period**, countries' positions appear to be more **distant** than ever. On one side, Brazil, South Africa, India and China - the so-called **BASIC** group - continue to maintain the negotiating position held in Copenhagen and Cancún. They ask to agree on a second phase of the Kyoto Protocol, in accordance to the principles of **equity** and common but differentiated responsibilities. The group of countries, thus, aims to accomplish the Bali Action Plan and achieve a comprehensive, fair and balanced outcome, in which developed nations commit to ambitious emission reduction targets **[2]**. On the other side, industrialised countries are more concerned by the lack of binding actions from emerging economies. The EU is the only developed country **open**

BOX 1. OUTSTANDING ISSUES UNDER THE AWG-KP [1]

- Finding consensus on the **form and content** of the second commitment period;
- Clarifying Annex I commitments and the level of ambition, including **conversion of mitigation targets** to quantified emission limitation or reduction objectives (**QELROs**);
- Ensuring **continuity on the rules** that will apply after 2012;
- Ensuring **continuation** of the market-based mechanisms, especially the (**CDM**);
- Addressing concerns about **environmental integrity**, especially relating to LULUCF rules, market mechanisms and carry-over of assigned amount units;
- Addressing the **implications** of the decision by some Annex I Parties that will not take commitments under the KP in a second commitment period.

to discuss a possible extension of the Kyoto Protocol, even if it continues to prefer a global and comprehensive legally-binding instrument consistent with the 2°C objective. However, the EU clarified that this option should be part of a **transition path** towards a wider legally-binding framework which includes commitments from all major economies. In any case its duration should last **no longer than 2020**. Moreover, the EU asks to address the issue concerning the surplus of Kyoto Assigned Amount Units (AAUs) that would be carried forward into a post-2012 climate regime **[3]**. On the contrary, other developed countries, such as U.S., Japan Russia, and Australia clearly declared their intention **not to participate** to a second commitment period **[4]**. This issue is strictly connected with the survival of the project–based mechanisms established under the Kyoto Protocol. The text streamlined by AWG-KP's Chair in Panama, contains two main options, currently under debate in Durban: to permit the use of the mechanisms even **without an agreement** on the second period or to allow the trading of credits only to those Parties that **have ratified** the second commitment period **[5].** On this regard, the ALBA group (composed of eight Latin American countries) and the African Group **threatened to block** the continuation of the CDM unless developed countries will not agree to a post-2012 commitment, pointing specifically to the EU, which strongly relies on CDM credits.

However, the debate also exacerbated the political gaps within the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA). In particular, the nature of the **financial flows** promised to support developing countries' actions dominates the debate. The BASIC group pushes for the capitalisation of the Green Climate Fund from **public resources** provided by the developed countries, while the U.S. affirms that each country is free to determine the **mode and source** of its climate finance contributions **[6]**.

With this premises, the most likely scenario for Durban is that current uncertainties will continue and **nothing will be agreed** about a second commitment period by the end of 2012. Some minimal progress in operationalising the Cancún Agreements maybe will be achieved but without commitments on the long-term direction of the regime. This will lead to a period during which the U.N. climate regime will not impose any legally-binding quantitative limits on countries' emissions. This way, only provisions that are **not strictly connected** to the existence of commitment periods and do not depend on emissions targets are expected to survive. The battle over policy gaps will likely continue at the 18th climate conference scheduled in **Qatar** next year and beyond **[4]**.

M.D.

Water: a key factor in the Green Economy

In 2002, at the Johannesburg World Summit for Sustainable Development, water was recognised a fundamental prerequisite for meeting the **Millennium Development Goals** (MDG). In 2003, the UN General Assembly Resolution A/RES/58/217 proclaimed the period 2005-2015 as the "Water for Life" Decade. UN-Water, an inter-agency mechanism, has the responsibility to coordinate the Decade and to implement the Johannesburg Plan **water-related provisions** and the MDG concerning freshwater. UN-Water is working towards **Rio+20**, the next UN Conference on Sustainable Development that will be held from 20 to 22 June 2012 in Rio de Janeiro , in order to stimulate countries to give water a role in their own internal **development agenda**. On 3-5 October 2011, Zaragoza, Spain, hosted the conference "Water in the Green Economy in practice: towards Rio+20", where participants from all over the world shared their experiences in **practical solutions** to develop a green economy with a good water management.

TABLE 1. WATER-RELATED CHALLENGES TOWARDS A "GREEN ECONOMY" [7]

SECTORS	CHALLENGES
Agriculture	• Water scarcity and water quality degradation trends; • Rising food prices; • Vulnerability of small-scale farmers; • Growing population, food production and dietary habits; • Inefficient use of water; • Non-point source pollution of water, land and coastal areas.
Industry	• Excessive use and contamination of freshwater; • Low labour productivity and a limited capacity for innovation in developing countries; • Inefficient and unsustainable production and promotion of unnecessary consumption.
Cities	• Adequate water and sanitation facilities for growing urban population; • Meeting basic needs in slum areas; • Water pollution; • Water loss in supply systems; • Water price.
Watershed	• Environmental degradation and loss of freshwater ecosystems; • Overexploitation of water resources; • Climate change; • Lack of information and monitoring; • Weak participatory processes.

BOX 2. KEY MESSAGES FROM THE UN-WATER CONFERENCE ON GREEN ECONOMY [7]

1. Ensuring everyone has **access** to basic water and sanitation services.
2. Shifting from current practices and behaviours to new **green tools**, such as investments in biodiversity and green jobs.
3. Creating incentives for **improving efficiency** where basic water and sanitation services are already being provided.
4. Improving the role of **social dialogue** and communities in the provision of water services, especially in places where government action does not reach.
5. Mobilising more funds and increasing efficiencies to make better use of the limited **financial resources** available.
6. Investing in the improvement of biodiversity to **sustain or restore** the water-related services provided by ecosystems.
7. Facilitating innovation and adoption of greener water provision and water use **technologies**.
8. Using water planning as a powerful social tool for identifying the best way to use water resources to meet the **competing needs** of users.

The output of the conference was "A water toolbox or **best practice guide** of actions" **[7]**. The UN-Water conference has identified four sectors - agriculture, industry, cities, and watershed - where challenges have to be faced towards a "green economy in the context of sustainable development and poverty eradication" (**Table 1**). The toolbox proposes **six categories of tools** (i) economic instruments, (ii) sustainable financing, (iii) investments in natural capital, (iv) technology, (v) green jobs, and (vi) water planning. For each tool, participants chose three practical cases. For instance, in Indonesia a project called "Rewards for Use of, and shared investment in Pro-poor Environmental Services" (RUPES) **directly pays** local people working in the coffee production **for soil erosion control** and sediment reduction. The project aims to reduce the impacts of coffee farming, whilst in the meanwhile increment the household incomes of the locals.

Similarly, in Panama, the "Employment Intensive Investment Programme", with the aim to involve stakeholders and raise awareness, empowered indigenous rural communities to develop **expertise**, skills and knowledge for both provision of basic water services and monitoring of the **ecological status** of water (re)sources as well as promoting sanitation.

Moreover, in the Middle East and North Africa (MENA) region, a partnership of institutions between Germany and Egypt created a web-based system for interdisciplinary water and environmental studies not only to promote **technological innovation** and to create capacity on environmental issues, but also to foster green entrepreneurship.

Through the practical cases presented in this guide, the UN-water conference demonstrated that a green economy is not only possible, but it is also an **opportunity** to "advance in social justice, economic progress and conservation of the environment" **[7].**

G.S.

Cleaner transport: not only a matter of fuels

Reducing emissions from the energy system depends significantly by the decarbonisation of the transport sector. In the attempt to define a long-term strategy that would transform Europe transport system, the European Commission launched a White Paper on Transport last March, which sets a **reduction target of 60 percent** in direct GHGs from transport by 2050, compared to 1990 level **[8]**. To achieve this objective, however, the EU has to face several challenges. The transport sector, in fact produces **24 percent** of the total emissions of the European area (**Fig 1a**). Moreover, the White Paper reports that between 1990 and 2009 EU transport's emissions increased by 27 percent. On this regard, the European Environment Agency (EEA) recently published a report that analyses a **set of indicators** in order to assess how well transport policy is performing **[9]**.

Reduction in **oil dependence** is one of the main challenges, since it currently accounts for the **96 percent** of transport energy needs. The Impact Assessment, accompanying the White Paper, estimates that achieving Europe's reduction target by 2050 will require a **68 percent** decrease in consumption of oil from 2009 levels. Greater **efficiency targets** in the use of conventional fuels, supported by **technology development**

FIG 1A. TRANSPORT CONTRIBUTION TO TOTAL GHG EMISSIONS, 2009 (EEA-32) [9]

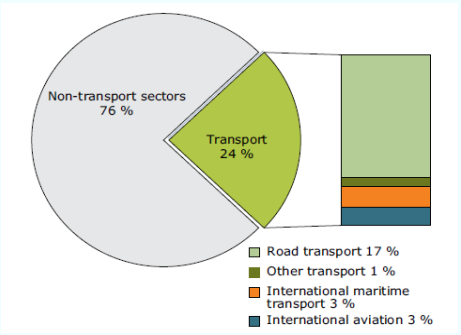
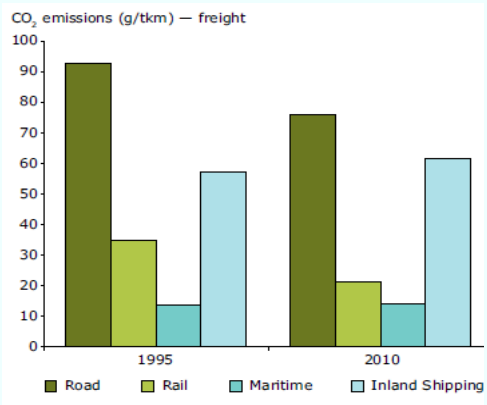


FIG 1B. ESTIMATED SPECIFIC CO2 EMISSIONS BY MODE OF TRANSPORT – FREIGHT [9]



towards low–carbon vehicles, are expected to play a major role. However, these efforts need to be supported by a **demand optimisation**, which can be very cost effective and lead to co-benefits, such as reducing both local air and noise pollution. Although the specific CO2 emissions of **road transport** decreased since 1995, it still consumes significantly more energy per tonne-kilometre (tkm) than other transport modes like **rail or ship** freight (**Fig 1b**). A policy option could be to increase charge system in order to internalise environmental costs. Charging on all modes, indeed, could decrease road freight (tkm) by 7 percent and increase rail freight (tkm) by up to 10 percent.

M.D.

Can countries use energy consumption to "grow" out of being vulnerable to climate extremes?

Researchers and policymakers have long understood that a **tension** exists between two important and opposing components of mankind's exposure to climate risk. On the one hand, **increased energy consumption** typically rises in step with higher rates of industrialization and higher per capita incomes, implying that as countries increase their energy consumption, they become more prosperous and acquire the **necessary wealth** with which to cope with climate extremes. On the other hand, carbon-intensive energy consumption is a key driver of increasing atmospheric greenhouse gas (GHG) concentrations, which in turn contribute to climate change and the **potential risks** it introduces, including the increased risk of extreme climate events.

Understanding this tension, policymakers — especially those of **low-income countries** which have inherently low adaptive capacity — are confronted with a dilemma: should they pursue rapid growth, thereby affording to their citizens possible protection from extreme events, or should they undertake **policy changes** — especially in the energy and industrial sectors — that could slow economic growth, but that might otherwise help **slow or reverse** the anthropogenic build-up of GHG and thereby reduce the risk posed by climate change?

Recent contributions **[10]** **[11]** have found significant evidence of a **negative relationship** between disaster mortality and country income: wealthier countries typically suffer **lower social losses** than poorer countries, due in large part to increased preventative measures and more **effective disaster responses**. But these gains do not come without a cost. These income gains and the incumbent adaptive capacity are fueled by high levels of energy consumption and, therefore, carbon emissions. As a result of this causal linkage, mitigation policies that aim to reduce carbon emissions will slow the pace of economic development, which may have further **implications** for the ability of countries to increase their **adaptive capacity** and reduce their vulnerability to future extreme climate events. This is a particularly **troubling potential** for low-income countries, which are already in a precarious position with respect to various climate-related disasters.

To address this tension, a recent study by Ward and Shively **[12]** utilizes a **vulnerability index** designed to gauge a country's current vulnerability to **future extreme climate events [13]**, and gauge how countries' vulnerability changes with incremental changes in a country's per capita energy consumption, while at the same time controlling for other factors that could exert an influence on a country's vulnerability to extreme

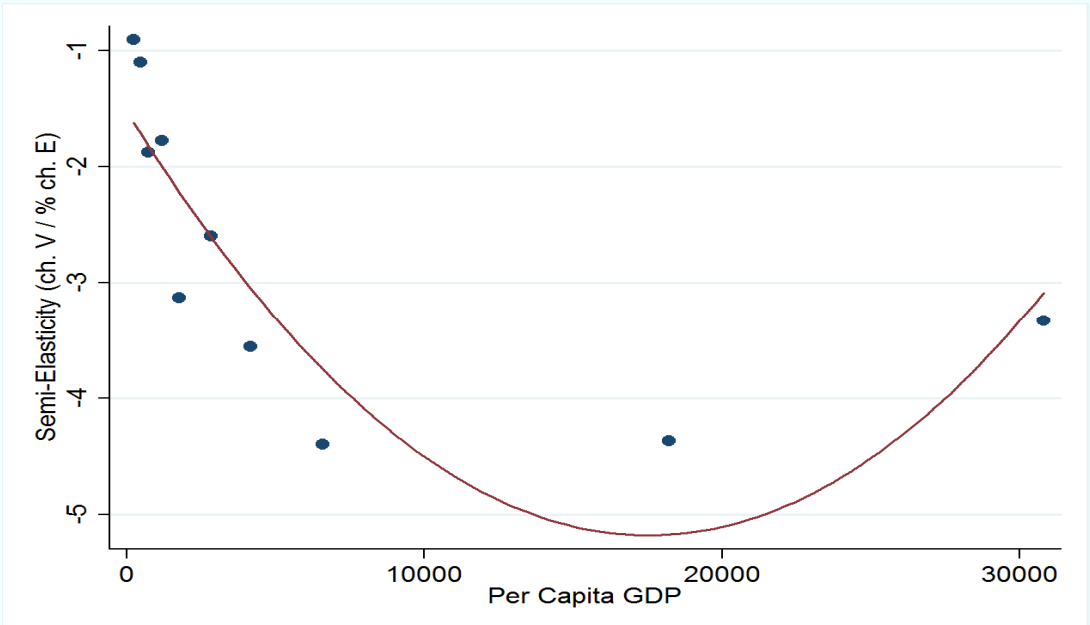
events. The results confirm that, consistent with previous findings, wealthier countries are substantially less vulnerable to climate extremes than poorer countries. This implies that economic development may be **a path out of vulnerability** for currently low-income countries.

This is implicitly understood by many policymakers, since climate change policies such as the Kyoto Protocol incorporate non-binding emissions reduction targets for non-Annex I countries. But can countries "grow" their way out of vulnerability through energy consumption? The results suggest that, especially for very low-income countries, additional energy consumption does not have a large **income-generating effect** and, as a direct consequence, increased energy consumption will not have a significant effect on reducing a poor country's vulnerability to extreme climate events. In fact, the greatest reductions in vulnerability in response to incremental increases in energy consumption occur for **roughly middle-income countries**, and then begin to wane as countries rise to high-income status. Ironically, however, once a country reaches middle-income status, it is no longer particularly vulnerable to climate-related disasters.

The study concludes that, while increased wealth can be a **powerful tool** for insulating a country from the adverse effects of climate change, increasing energy consumption as a means for driving economic development is not likely to have a substantial effect on a country's vulnerability, particularly at very low income levels **(Fig 2)**.

P.W.

FIG 2. SENSITIVITY OF VULNERABILITY TO INCREASED ENERGY CONSUMPTION, BY INCOME DECILE



FLEXIBLE MECHANISMS AND DEVELOPING COUNTRIES

Realising REDD+ at the national level. Challenges lying ahead

After almost six years in the making, REDD+ remains a '**nascent mechanism**' in the framework of the UNFCCC, whose contours came into better focus with the Cancún Agreements in 2010. Further developments are expected at the forthcoming Conference of the Parties (COP 17), where the Subsidiary Body for Scientific and Technological Advice (SBSTA) will report on progress made on modalities for **measuring, reporting, and verifying** anthropogenic forest-related emissions and removals, as well as modalities for providing information on **safeguards (Box 3)**. In the meantime, the promotion of '**REDD-readiness**' has become a sizeable endeavour. As part of this process, a growing number of tropical forest countries have undertaken **legislative and policy reforms [14]**. Indonesia is one such country and a prominent example of controversies associated with the implementation of REDD+ activities. Brockhaus et al. provide an insightful analysis of challenges to creating a **political economy space** for REDD+ in Indonesia **[15]**. The effectiveness of REDD+ greatly depends on providing a clear answer to the question of **who owns rights** to forestland and resources, and who can make legitimate decisions regarding land use allocation and revenue distribution. The authors underscore how so far the **nature of policy formulation**, **conflicting incentives and development priorities**, as well as barriers created by **unclear institutional setups** have impeded the development of a regulatory framework enabling effective REDD+ outcomes in Indonesia. Such difficulties raise uncertainties as to whether incentives provided by REDD+ may succeed in altering the *status quo*. Far from being a concern for Indonesia alone, these challenges are likely to affect other countries intending to carry out REDD+ activities.

A.S.

BOX 3. REDD+: THE STATE OF PLAY

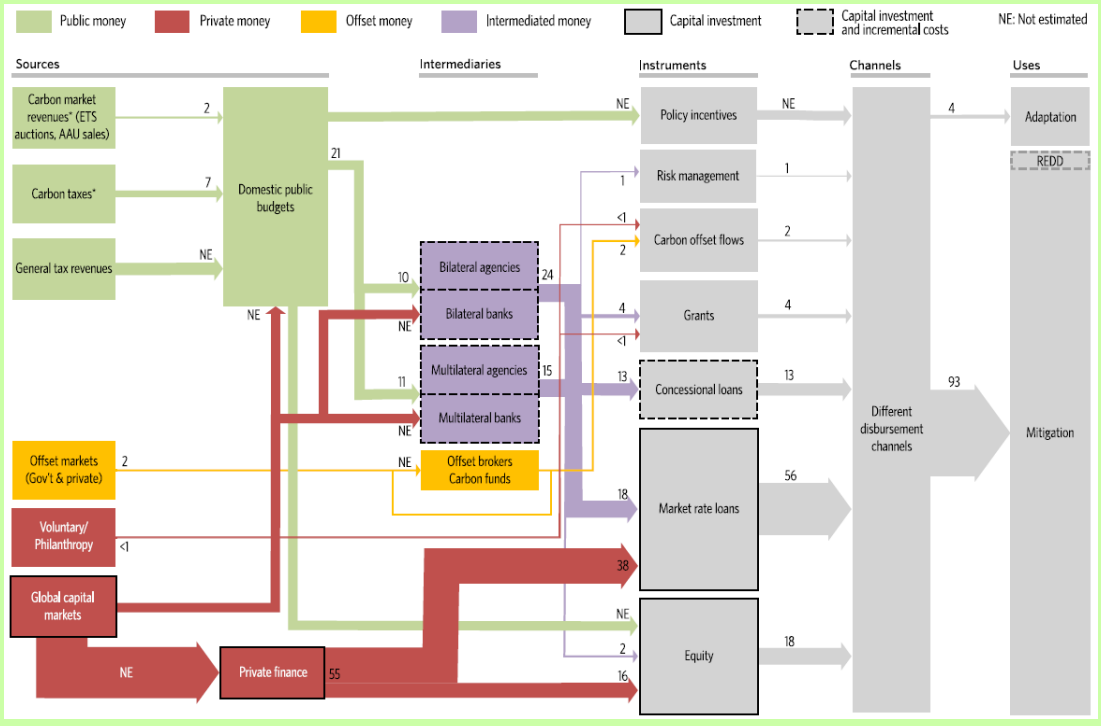
- The Cancún Agreements adopted at COP16 encourage developing country Parties to contribute to climate change mitigation by undertaking REDD+ activities.
- The Agreements request developing country Parties aiming to undertake REDD+ activities to develop national **strategies or action plans**; national forest **reference emission levels** and/or forest reference levels; and a robust and transparent national **forest monitoring** system.
- The SBSTA was requested to prepare modalities for **measuring, reporting, and verifying** anthropogenic forest-related emissions by sources as well as removals by sinks, forest carbon stocks and forest area changes resulting from the implementation of REDD+ activities.
- The SBSTA was furthermore mandated to develop guidance on systems for providing **information** on how REDD+ **safeguards** are addressed and respected.
- The SBSTA is expected to report to the forthcoming COP17 on progress made on these issues, including recommendations for draft decisions.

Private finance, what makes a difference

In Durban, the strong disagreement on the **nature and sources** of climate finance continues to dominate the debate between developed and developing countries. To shed light on this issue the Climate Policy Initiative (CPI) recently released a report which analyses the current status of the climate finance **[16]**. At the moment at least **$97 billion per year** of climate finance is being mobilised for mitigation and adaptation activities. Despite the amount being close to the **$100 billion** pledged in Copenhagen and Cancún, this flow does not come exclusively from either additional sources or developed countries. To begin with, noteworthy is the relatively **small role** played by the **carbon markets**, which provide **only $2 billion** of the annual flows**.** On average, **$55 billion** is provided by the private sector through direct equity and debt investments. This amount is almost **three times higher** than public finance, which instead, is estimated to provide **$21 billion** in the form of carbon market revenues, carbon taxes and tax revenues (**Fig 3**). In this regard, the World Bank estimates that removing a 20 percent of current **subsidies to fossil fuel** in developed countries will redirect around $10 billion per year to **public** climate finance. In addition, the implementation of **carbon taxes** or emission trading schemes with a carbon price set at $25 per tCO2 will raise around **$250 billion in 2020** at a relatively modest cost of 0.1 of GDP on average **[17]**. Finally, it is important to mention also that, the proportion of flows between mitigation and adaptation is 95:5.

M.D.

FIG 3. CURRENT CLIMATE FINANCE FLOWS (IN US$ BILLION) [16]



THE CARBON MARKET

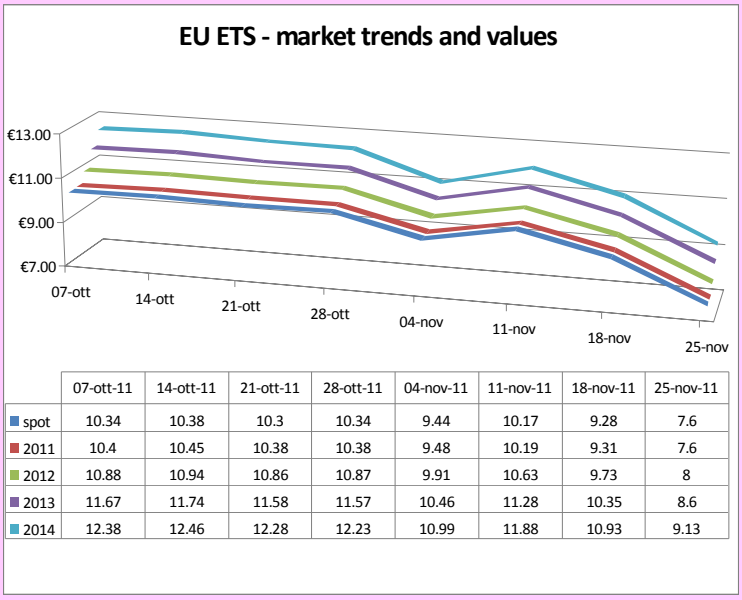
A snapshot on carbon markets

October – November 2011

October and November continued to be influenced by macroeconomic concerns. In the first part of the period the **economic crisis and political events** kept prices down**.** European Allowances (EUAs) remained anchored around €10, until the third week of November, after which a dangerous mix of faith's lack in EU recovery, growing permit supply and panic selling pushed prices at **record low**. Moreover, at the beginning of the COP17 in Durban, which could decide the **future of the project-based mechanisms**, the secondary market for Certified Emission Reductions (CERs) lost around 20 percent.

M.D.

BOX 4. A SNAPSHOT ON THE CARBON MARKET



	07-ott-11	14-ott-11	21-ott-11	28-ott-11	04-nov-11	11-nov-11	18-nov-11	25-nov-11
spot	10.34	10.38	10.3	10.34	9.44	10.17	9.28	7.6
2011	10.4	10.45	10.38	10.38	9.48	10.19	9.31	7.6
2012	10.88	10.94	10.86	10.87	9.91	10.63	9.73	8
2013	11.67	11.74	11.58	11.57	10.46	11.28	10.35	8.6
2014	12.38	12.46	12.28	12.23	10.99	11.88	10.93	9.13

BEARISH SIGNALS FOR CARBON

Worries regarding the world economic turmoil

concerns over debt crisis in Greece and Italy

Oversupply of permits

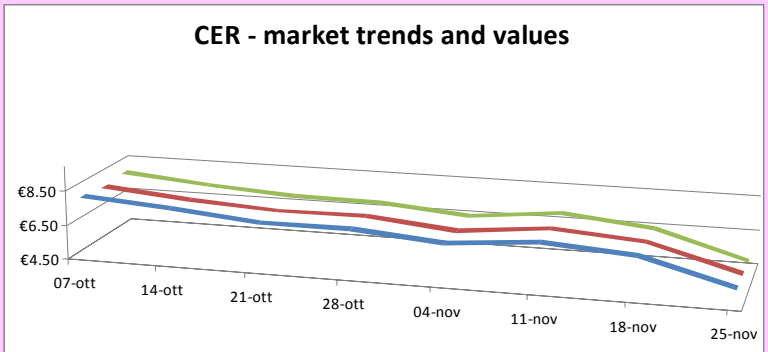
expexted fresh supply of permits

uncertainty about the future of Kyoto project-based mechanisms

BULLISH SIGNALS FOR CARBON

agreed package to save the euro-area

advisor to EU's highest Court ruled that the inclusion of airlines in the EU ETS is legal



	07-ott-11	14-ott-11	21-ott-11	28-ott-11	04-nov-11	11-nov-11	18-nov-11	25-nov-11
spot	7.91	7.51	7.03	7.05	6.6	7.04	6.68	5.3
2011	7.72	7.27	6.96	7.01	6.51	7.01	6.64	5.2
2012	7.88	7.42	7.09	7.06	6.57	7.12	6.6	5.1

SOURCE: OWN ELABORATIONS FROM POINTCARBON DATA AVAILABLE AT www.pointcarbon.com

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