

## ÖSTERREICHISCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG



### **ICPIA – Coping with Complexity in the Evolving International Climate Policy Institutional Architecture**

### **Synthesis: Searching for a Global Architecture**

**Angela Köppl, Claudia Kettner (WIFO),  
Andreas Türk (Climate Strategies),  
Michael Mehling (Ecologic Institute)**

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### Abstract

The outcome of the Durban Climate Conference in December 2011 will lead to a more fragmented climate regime after 2012. While a few countries may continue with the Kyoto Protocol, its governance and its rules, the majority of countries will proceed with the bottom-up approach of voluntarily proposing and reviewing reduction targets at least until 2020 when a new global treaty may come into force. Designing this transition period will be a major challenge. This ICPIA synthesis paper includes lessons from other ICPIA work packages in order to draw conclusions for improving the design of the climate regime for the time after 2012 and after 2020. The paper concludes that finding a common ground on important design features, such as accounting or new market mechanisms, in the short term will impact the ability to create a comprehensive agreement in the long term.

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# Synthesis: Searching for a Global Architecture

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**December 2011**

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**Keywords:** Climate architecture, post 2012, Kyoto Protocol, accounting, effort sharing

**JEL codes:** Q52, E61



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## Abbreviations

MRV: Monitoring, Reporting and Verification

AWG LCA: Ad Hoc Working Group on Long-term Cooperative Action under the Convention

UNFCCC: United Framework Convention on Climate Change

AAUs: Assigned Amount Units under the Kyoto Protocol



## 1 Introduction

Following two decades of international engagement on climate change, the highly anticipated Copenhagen Summit held in December 2009 revealed the full extent of political divisions between states, causing many to doubt the suitability of traditional approaches to cooperation. As its main outcome, the Copenhagen Climate Summit resulted in a document of uncertain legal status, the “Copenhagen Accord”, elaborated by the heads of state and governments of a narrow group of countries and merely “taken note of” by the parties to the current climate regime (Mehling, 2011). Although a vast majority of states have since indicated their support for the Accord and all major emitters have provided information on their emissions reduction targets and other mitigation actions, this departure from the conventions of international climate diplomacy has nonetheless raised many questions about the shape of the future climate regime. The negotiations since the Copenhagen Summit have seen progress on a number of technical issues, and the Cancún Conference (2010) was able to integrate major elements of the Copenhagen Accord into the United Nations (UN) climate process. The political differences on questions of a future climate regime remain significant as ever as was visible at the 2011 Climate Conference in Durban. Politically important nations and groups of countries have come up with widely divergent proposals on their favored institutional trajectory for the future climate regime. The “consensus” reached in Durban can be seen only as small step toward more convergence of positions, major differences will remain.

The outcome of the Durban Conference paves the way for a continuation of the Kyoto Protocol, but only a small group of countries including the EU are likely to continue with a second commitment period, while for the other countries the Copenhagen Accord will remain valid until 2020 when a new comprehensive climate treaty may be implemented and pledges may become more ambitious. However, it is open how a new international treaty will be designed, even if a large number of countries indicated to participate. Possibly up to 2020 the international climate regime may see a high degree of fragmentation. However also in the absence of a comprehensive international regime a certain degree of convergence of policies can be achieved from the bottom-up. Including lessons from the ICPIA project this paper discusses and analyzes policy options for the period up to 2020 and beyond.

## 2 Changing paradigms for climate cooperation: From top-down and bottom-up to hybrid architectures

In many ways, the Copenhagen Summit of December 2009 marked an important departure from the practice of multilateral climate cooperation over the previous two decades (Mehling, 2011). The Copenhagen Accord, driven by the US, is characterized by a voluntary pledge and review system for emission reductions, and therefore a fundamental change of the current UN based multilateral approach (Schleicher et al., 2010). The Copenhagen



Accord reflects the US vision for international climate architecture and is not in line with the EU approach of the continuation of a Kyoto-style top-down climate architecture after 2012.

A “top-down” approach (an approach based on internationally agreed targets) would be based on formal engagement between sovereign actors, usually states, along traditional channels of multilateral diplomacy (see Tuerk et al., 2009). Such negotiations tend to result in binding international commitments adopted through an international treaty, often complemented by centrally integrated processes and hierarchical institutions, which in turn shape and drive domestic implementation efforts (Mehling, 2011). Under a “bottom-up” approach, such as the Copenhagen Accord, by contrast, countries retain the ability to define both the nature and scope of their climate efforts; while they may cooperate with other partners by coordinating their activities and defining common aspirations, decision making remains decentralized and focused on the national level, rather than being assigned to any international institution (Mehling, 2011).

Proponents of “bottom-up” approaches highlight the importance of flexibility, which they believe will allow each actor to define activities that are technically, economically, and politically acceptable in light of local or regional conditions (Keohane and Victor, 2010). As a direct corollary, however, “bottom-up” approaches will generally not provide the same degree of certainty and reciprocal confidence afforded by a formal “top down” agreement, potentially deterring some actors from adopting commitments without assurance that others will engage in similar efforts. From an institutional point of view bottom-up approaches may be characterized by informal cooperation between institutions (Mehling, 2011). The Cancun decisions of December 2010 complemented the bottom-up approach by top-down elements as the Copenhagen Accord was included into an UN framework, however without binding targets but political commitments. The UN however may be responsible for an international review of targets. The future international climate regime is likely to be characterized by a hybrid architecture with top-down and bottom-up elements or a stronger role of top-down elements for some countries and more bottom-up elements for others. The climate regime, at least in the short and mid-term therefore may not be characterized by one single hybrid approach, but by different coexisting approaches. In fact this was already the case under the Kyoto Protocol as it was not ratified by the US. The last years also saw a diversification of institutional venues. Initiatives outside the UN, such as bilateral or plurilateral initiatives have become increasingly important and accompany initiatives under the UN. Dealing with this complexity is a major challenge for the future international climate policy.

### **3 The post-2012 period: a fragmented regime**

The outcomes of the Durban Climate Conference in December 2010 pave the way for a fragmented climate regime up to 2020. Only a few countries, including the EU, may continue to participate in the Kyoto Protocol. Details regarding a second commitment period, such as its length, still have to be negotiated (UNFCCC, 2011a).



The degree of fragmentation of the post-2012 regime is open as it is unclear if countries that do not participate in a second commitment period find common ground, e.g. on accounting or new market mechanisms, and thus achieve a certain degree of convergence. While countries were not able to agree on ambitious targets within a comprehensive international agreement, several important emitters however continue with implementing domestic policies e.g. emissions trading schemes. Australia's new regulations will impose a carbon tax on 500 of the country's biggest polluters starting in July 2012, before becoming an emissions trading program in 2015. In the US, even if federal legislation is slow, California is going ahead starting with an emissions trading scheme from 2013 on, and in Japan regional initiatives are emerging. But also in developing countries and economies in transition actions and policies are being implemented. In China and Brazil for example emissions trading schemes are being discussed at the regional level (Sterk and Mersmann, 2011). Also Kazakhstan and Ukraine are discussing emissions trading schemes, and a large number of developing countries have submitted plans for domestic reduction activities under the Copenhagen Accord<sup>1</sup>. The proposed absolute reduction targets under the Copenhagen Accord however are in total not sufficient to meet the 2° target and will lead to different carbon prices around the globe.

The fragmentation of rules and policies is accompanied by an increasingly diverse institutional framework, as initiatives under the UN are being accompanied by those outside the UN, either international or bilateral initiatives. These comprise technology agreements, including sectoral approaches that were discussed for several years (Wooders et al., 2011). One avenue for such schemes may still be the UNFCCC, but many years of discussions and considerations of sectoral approaches have not led to any detailed discussions or the proposal of any detailed scheme. Agreements would thus be most likely to come from outside the UNFCCC (Wooders et al., 2011).

This chapter discusses the impacts of a decentralized system, options for new market mechanisms and accounting under a decentralized system and ways to achieve more convergence as well as the bottom-up linkages of trading schemes to reduce fragmentation.

### **3.1 From international to plurinational and bilateral cooperation**

The future international climate regime is likely to be a complex regime of international (e.g. the UN), plurilateral or bilateral initiatives.

#### *3.1.1 The emergence of Climate Clubs outside the UN*

The last years saw the emergence of "climate clubs" outside of the UN, a process that was in particular advanced by the US as an alternative to the Kyoto Protocol. Some of these climate clubs are new; others build on existing institutions (Keohane and Victor, 2010). Climate clubs

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<sup>1</sup> See for example: <http://www.cfr.org/climate-change/pledges-copenhagen-accord-country/p21373>





include the Major Economies Forum on Energy and Climate (MEF), that was launched in 2009 by Barak Obama, or – with a lower degree of commitment to targets – the Group of the Eight (G8) or the Group of the Twenty (G20). The increasing role of climate clubs outside the UNFCCC became visible when the Copenhagen Accord was agreed. It was brokered by the US and the BASIC countries, a group of high emitting developed and developing countries. Given the difficulties to find consensus regarding a new international climate agreement under the UN it can be expected that climate clubs will gain additional importance in the future. These approaches and the UNFCCC's role are not mutually exclusive (Keohane and Victor, 2010). Rather, each approach and engagement strategy may complement a more centralized UNFCCC approach by focusing on different drivers of action to achieve adequacy through positive incentives or sanctions (Keohane and Victor, 2010).

### 3.1.2 *Technology initiatives and agreements*

Within energy-intensive sectors there have been, and are currently, a number of technology initiatives and agreements. A major multinational effort was made by the Asia Pacific Partnership on Clean Development and Climate (APP) of countries, whose membership includes China, India, Japan and the US and whose production is the majority of the world's production of both cement and iron and steel. The APP has recently been wound down and replaced by the Global Superior Energy Performance Partnership (GSEP) (Wooders et al., 2011). A full review of the programs can be seen in Wooders and Beaton (2011). The programs adopted a pragmatic approach and the major achievements were a handbook of good practice on technology, the exchange of information and the increase of trust to allow the countries to more easily invest in each other's economies. Specific targets on technology implementation or emissions reductions were not part of any agreements, and enforcement was voluntary (Wooders et al., 2011).

### 3.1.3 *The increasing role of bilateral cooperation*

In addition to emerging clubs bilateral cooperation is becoming increasingly important. As Moncel et al. (2011) state an agreement between a small number of pioneer countries can lay the groundwork to promote adequacy in the future by a larger group. Several industrialized countries have started to engage in bilateral partnerships with China (Keohane and Victor, 2010). The US has created a bilateral partnership with China to test advanced coal combustion. The UK and Australia have bilateral partnerships with China on coal. Also the EU has begun to discuss bilateral arrangements with a number of key strategic partners. These include a number of OECD countries, such as the US, Canada, Japan and Australia, plus other UNFCCC Annex I countries such as the Russian Federation and Ukraine<sup>2</sup>. From the European point of view, however, a multilateral climate agreement is still the most important option to be pursued. In particular Japan currently advocates bilateral agreements. Japan

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<sup>2</sup> [http://ec.europa.eu/clima/policies/international/cooperation/index\\_en.htm](http://ec.europa.eu/clima/policies/international/cooperation/index_en.htm)



for example proposes a bilateral credit mechanism for offsetting emissions which would be complementary to a reformed CDM (Japanese Ministry of the Environment, 2011). Japan favors a more decentralized governance structure than for the current Kyoto Protocol mechanisms but would still like to involve the UNFCCC to guarantee a certain degree of environmental integrity. Host countries would be responsible for designing, implementing and securing the transparency of the mechanisms, following basic guidelines set out by the COP (Japanese Ministry of the Environment, 2011). This position mirrors the general trend toward more bilateral approaches assigning the UN only a supervisory role.

### 3.2 Post-2012 accounting options

Under the Kyoto Protocol developed country Parties<sup>3</sup> are subject to the common accounting framework. They have operationalized the mitigation targets set by the Kyoto Protocol by establishing a uniform international accounting system to assess and track the emission reductions of developed countries and to create a common unit for emissions reductions.

No detailed accounting framework has been elaborated so far for the pledges “taken note of” by Parties in the Cancun Accords under the AWG-LCA<sup>4</sup> (De Sepibus and Tuerk, 2011). Among the divisive issues that neither were solved in Cancun nor in Durban was the set up of international accounting rules for post-2012. The Copenhagen Accord states in relation to developed country targets that the accounting should be rigorous, robust and transparent, but these requirements were not reproduced in the Cancun Accords. Current negotiations do hence so far not provide any guidance relating to a robust accounting system for the assessment and tracking of the emission reductions resulting from the pledges made (De Sepibus and Tuerk, 2011). The absence of a clear GHG accounting framework for the post-2012 period has far-reaching consequences for the ability to compare targets as well as target compliance.

In the UN AWG-LCA discussions, no consensus has so far emerged as to whether developed countries should abide by some or all of the accounting provisions of the Kyoto Protocol for emission reductions, or develop similar harmonized accounting provisions. A number of developed countries, including, but not limited to the United States, are privileging a post-2012 framework that enables them to use their own “performance” accounting frameworks. This model involves no common allowance units for developed countries (De Sepibus and Tuerk, 2011).

The Cancun Agreements (UNFCCC, 2010) however create a new standard for transparency in which all major economies will report on progress towards achieving their climate targets

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<sup>3</sup> Annex B Parties. The United States have not ratified the KP and thus are not subject to these rules.

<sup>4</sup> The Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) is a subsidiary body under the Convention to conduct a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome to be presented to the Conference of the Parties (COP) for adoption.



and actions, and will submit their progress to a review. Both developed and developing countries, however, will submit information through the same tool – biennial update reports. For developing countries there will be a review of the domestic measurement, reporting, and verification (MRV) of unsupported actions and their effects and the international MRV of their actions which receive international support. Biennial reports are subject to international consultations and analysis by the Subsidiary Body for Implementation (UNFCCC, 2010). These transparency provisions build extensively on existing provisions from the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. The new transparency mandates could open up important new information on efforts to reduce greenhouse gas emissions in developing countries, which would be an important basis for the establishment of new market mechanisms.

### 3.2.1 Accounting under the Kyoto Protocol

Under the Kyoto Protocol developed countries have to account for their emissions and emission reductions in accordance with a set of common rules that apply inter alia to the coverage of sectors and gases, the use of common metrics, land use, land-use change and forestry (LULUCF) accounting, mechanisms and carry-over of units to a next commitment period. They are required to translate limitation or reduction commitments into absolute quantified emissions units to ensure accurate tracking of emissions levels and demonstrate compliance. A common unit allowance system as it has been established by the Kyoto Protocol has clear advantages compared to a fragmented system with different types of units that may not be compatible (Prag et al., 2011). It allows trust and demonstration of mitigation in Annex I countries by backing-up domestic compliance systems by international compliance units. Moreover, domestic emissions trading systems such as the EU ETS may be linked more easily thanks to the existing trust in the international compliance framework. Finally, it provides an anchor for the value of units that helps to prevent the differentiation of standards and facilitates the tracking of unit transactions, as all units belong to the same registry system.

Under the Kyoto Protocol the total amount of greenhouse gases a developed country may emit during the first commitment period is called the 'assigned amount'. By using the market mechanisms, it can exceed the assigned amount without violating the emission target. While International Emissions Trading (IET)<sup>5</sup> allows the trade of assigned amount units (AAUs) between developed countries, JI allows developed countries to acquire Emission Reduction Units (ERUs) resulting from specific project-based emissions reductions within another developed country. Certified Emission Reductions (CERs) from CDM projects are added to existing AAUs and thereby contribute to increase the amount of allowance units in the international system. To be eligible to transfer units under the mechanisms, Kyoto Parties must fulfil certain requirements. In particular, they have to put in place a national system for the

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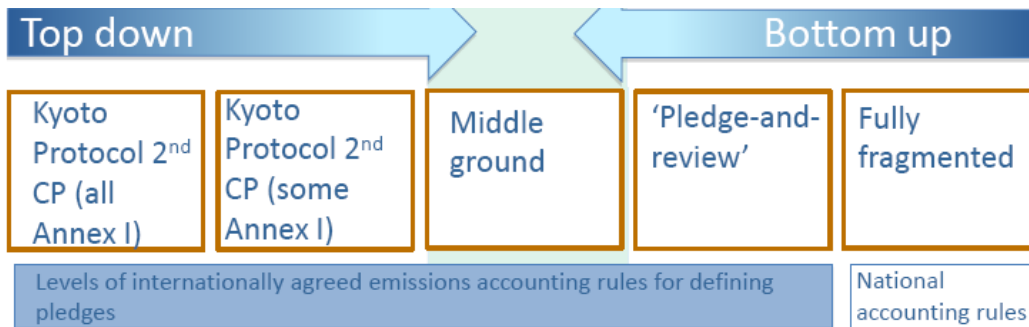
<sup>5</sup> Art. 17 Kyoto Protocol.

estimation of emissions as well as a national registry. Moreover, they must submit a yearly inventory and calculate and record AAUs.<sup>6</sup> AAUs are held in national registries hosted by each Party to the Kyoto Protocol.

### 3.2.2 Options for post-2012 accounting

For the time being, it is difficult to predict what the future post-2012 accounting framework will be. As a new commitment period was agreed in Durban some Parties will maintain the current GHG accounting rules under the Kyoto Protocol, probably with certain amendments e.g. regarding the account of land-use emissions. The main question is which accounting system is accepted by countries that do not sign up to a second commitment period of the Kyoto Protocol and to which extent it builds on the existing Kyoto Protocol rules.

Figure 1: top-down and bottom-up accounting approaches



Source: Adapted from Hood (2011)

Figure 1 shows the range of accounting options for the post-2012 period from the continuation of Kyoto Protocol accounting to a fully fragmented accounting system that relies on national accounting rules. In between these extremes countries could take over some of the Kyoto Protocol rules and find a common accounting approach outside of the Kyoto Protocol ("middle ground"). Such an option could balance national flexibility with a sufficient level of international transparency (Prag et al., 2011). Although the post-2012 accounting framework may take shape as a newly implemented system, procedures developed for the Kyoto Protocol constitute a rich resource of guidance for how to effectively operate a system of tradable units (Prag et al., 2011). Some elements of the Kyoto Protocol "rulebook" could therefore be relevant after 2012 even for Parties not taking on commitments under the Kyoto Protocol: parties that do not continue with the Kyoto Protocol may agree to take over all or a substantial part of its accounting rules under the LCA track (De Sepibus and Tuerk, 2011).

<sup>6</sup> The concept of assigned amount units provides a means to rationalise the percentage reduction pledges made by Parties, in addition to providing the basis of a tradable GHG allowance unit. See Prag et al. (2011).



### 3.3 New market-based mechanisms

The Kyoto Protocol has established three flexible mechanisms: Through Joint Implementation (JI) any industrialized country or economy in transition (countries with binding emission targets under the Kyoto Protocol) can invest in emission reduction projects in any other industrialized country or economy in transition as an alternative to reducing emissions domestically. Through the Clean Development Mechanism (CDM) industrialized countries and economies in transition can meet their domestic emission reduction targets by purchasing greenhouse gas emission rights resulting from projects in developing countries. Both, JI and CDM are mainly private market-based mechanisms. The International Emissions Trading (IET) mechanism allows parties to the Kyoto Protocol to buy governmental emission permits (assigned amount units, AAUs) from other countries to help meet their domestic emission reduction targets.

The Durban decisions have set the basis for the continuing availability of market mechanisms to assist developed countries in meeting their mitigation commitments in a post-2012 climate regime. According to the decisions agreed upon in Durban a new market-based mechanism (NMM) is defined under the guidance and authority of the COP (UNFCCC, 2010b). By the next COP in December 2012 a concrete decision on the design on a new market-based mechanism could be taken.

NMMs refer, in particular, to sector-based crediting. This term is used to refer to a mechanism under which credits are issued for the difference between actual emissions of a defined sector and a pre-established baseline. However there are widely diverging views on how such a new mechanism should be governed (De Sepibus and Tuerk, 2011).

#### 3.3.1 From centralized governance to bilateral mechanisms

Several governance options for NMMs are currently being discussed in the negotiations, ranging from centralized models, similar to the current CDM, with a strong role for the UN to more decentralized and hybrid ones, where only minimal requirements are set at the UNFCCC level. While some countries including Japan and Australia favour more decentralised governance models with only minimum criteria defined by the UN and a strong role for bilateral cooperation, the EU still has a preference for more centralised UN-based governance (UNFCCC, 2011b). A completely 'bottom-up' vision with no international oversight at all seems to be supported by the US. For instance, California intends to establish a purely domestic-based procedure for the recognition of sector-based credits. Japan is strongly advocating a more decentralised model of governance within the UN framework with only minimum standards and guidance from UNFCCC institutions (De Sepibus and Tuerk, 2011).

- A centralised governance model would have the advantages that it would be easier to compare the levels of ambition between all Parties across the establishment of baselines than it would be with a decentralised model. Furthermore the establishment



of a global carbon market would be easier as the units are of comparable environmental integrity. However such a model may offer less flexibility to take into account specific host country circumstances.

- A hybrid governance model would only set minimum criteria, e.g. for MRV, or on tracking of units to avoid double counting and reporting of use of credits under the UNFCCC. Details would be part of a bilateral agreement between the host and the investor country. Based on more or less standardised UNFCCC principles, the host country would keep a strong role in designing, implementing and securing the transparency of the mechanisms. One of the main advantages of bilateral agreements within a hybrid model is that they are easier to establish and can be built upon the existing cooperation between countries. Less uniform international credits make it difficult to compare targets and pledges and may lead to more fragmented accounting post-2012. If the differences in environmental integrity of the units created are too large, international trading will be limited.

### 3.3.2 *The role of bilateral agreements to reduce leakage from the EU*

Wooders et al. (2011) showed that competitiveness and leakage are not problems for the EU at present, however they could be in the future. The threat of them may be sufficient to affect investment and production decisions within energy-intensive industries. In the opinion of certain industries within the EU, such decisions are already being made. Wooders et al. (2011) offers a solution for near neighbours of the EU: Russia, Turkey and Ukraine. Similar to Japan's plans for bilateral agreements the EU could institute a bilateral scheme or equivalent with its neighbour countries. The EU ETS allows linking to other carbon regimes judged similarly stringent. The EU has also chosen to impose constraints on the provenance (geographic and by type of project) of allowances (CERs) generated under the CDM. An EU bilateral scheme could be focused on near neighbors and energy-intensive sectors. The major benefit of a sectoral approach may be the leverage it generates to bring countries towards accession to the EU, and to its ETS (Wooders et al., 2011). The same criticisms that Japan has made of the CDM however might apply to a bilateral EU scheme: It could assist other countries to become more competitive technologically, whilst also transferring money to them (and away from domestic producers). In this respect, the impacts on competitiveness and leakage could be low or even negative (Wooders et al., 2011).

The EU however was focused over the last years on negotiating an international treaty; bilateral agreements were not all too high on the agenda. However this could change after the Durban Conference. The prospect to link to the EU ETS and sell certificates could be an incentive for the EU's neighbour countries, such as Ukraine, to stronger engage in climate policy. The Ukraine is already discussing the introduction of an emissions trading scheme.





### 3.4 Emissions trading as preferred policy instrument

#### 3.4.1 *The EU ETS as model for emerging trading schemes?*

A growing number of countries are integrating cap-and-trade schemes into their national climate policies. The European Emission Trading Scheme (EU ETS), operational since 2005, is the frontrunner in this development. In addition, a number of other national and sub national emissions trading systems are emerging around the world. In the United States federal legislation is stagnant; however initiatives have been launched at the state level: the Regional Greenhouse Gas Initiative (RGGI) on the East Coast, and the Western Climate Initiative (WCI) among states on the West Coast as well as other US states and Canadian provinces. In Australia, detailed provisions for a scheme to start in 2012 have been tabled, and also in New Zealand and Japan emissions trading systems are emerging. Also a number of emerging economies, including China, India, Mexico, and South Korea, have recently announced their intention to develop market-based mechanisms for domestic climate policy. This development offers opportunities for early cooperation and exchange on the design of policy frameworks. New emerging trading schemes can build on significant experiences made with the EU ETS. Evidence from the EU ETS so far however shows a mixed record. The EU ETS has no mechanism to prevent over allocation in case of unexpected events, such as the financial crisis or excess price volatility. The analyses of the ICPIA project (Kettner et al., 2011a) shows a higher overall stringency of the 2008 allocation caps compared to the first trading period reflecting the stronger role of the European Commission. In 2009, however, the effects of the economic crisis became visible: Emissions plumped and hence the cap was not binding. While in the first trading phase regional differences in the stringency of the cap prevailed – i.e. New Member States generally exhibited higher net long positions than the EU-15 – the analysis does not confirm this for the second trading phase. This can be attributed to the stronger caps ensured by the European Commission for Phase 2 of the EU ETS (Kettner et al., 2011a). Regarding price volatility the evidence on EUA prices shows so far high variability that gives a cause for concern: On the one hand market prices may lose their credibility in terms of providing signals for long-term decisions. On the other hand this may lead to wrong investment decisions – in some cases with long term consequences – which create excessive costs. One option discussed within the ICPIA project was the introduction of a regulatory authority that can intervene in the market (Kettner et al., 2011b).

As reaction to the experiences the EU made with price volatility, other emerging schemes plan to introduce price control mechanism. The Australian scheme, set to start in 2013 for example, will introduce a price floor and a price cap.

#### 3.4.2 *Reducing fragmentation bottom-up: linking trading schemes*

The EU ETS as well as most emerging schemes aim to link to other trading schemes. Most importantly, countries aim to increase the cost efficiency of meeting a certain emissions target while also reducing competitiveness distortions and the ensuing threat of leakage



arising from different carbon price levels. Small schemes aim to increase liquidity by linking, and overall, a joint market reduces the chances of market abuse by dominant players (Tuerk et al., 2009).

Aside from these mainly economic reasons, there is also a strong political dimension. Currently, international climate negotiations are almost exclusively being held under the umbrella of the UNFCCC. These negotiations are characterized by near universal participation and consensus-based decision making; parties bring a range of highly divergent national circumstances and priorities to the negotiations, however, raising the threat of diplomatic stalemate over future commitments as seen since the Copenhagen Climate Conference (Mehling, 2011). However, bilateral talks focusing on integrating national trading schemes may establish an additional and potentially synergistic arena for negotiations. This second arena could be gradually and purposefully expanded in order to include more actors (Mehling, 2011). The EU has always seen the linkage of emissions trading schemes as fallback option in case no international treaty is agreed on (Tuerk et al., 2009). This is the case now at least until 2020. Linking trading schemes could gain importance leading to a convergence of national climate policies, and enhancing cooperation between countries from the bottom up.

### 3.4.3 *The importance of the Accounting and MRV framework for linking schemes*

There are several preconditions for linking emissions trading schemes (ETSs). To support linking, each linked scheme for example must have credible MRV standards. However, different MRV systems should not present barriers to linking as long as the schemes are robust and ensure integrity. Since the Kyoto Protocol is underpinned by robust MRV requirements, concerns regarding MRV are unlikely to inhibit trade of permits to emit between schemes whose trading units are backed by the Protocol (Tuerk et al., 2009). With regard to offset credits, comparable stringency of MRV and additionality in their creation is likely to be a precondition for linking. The degree to which different MRV and additionality rules will form a barrier to linking depends on whether linking occurs under a widely accepted framework governing emissions limitations or not.

As the Kyoto MRV and accounting framework will be applied after 2012 only by a few countries, the framework other countries adopt will be of crucial importance for the ability to link. In case the frameworks are significantly different the question arises as to how international flows of units might be recognized as eligible units to directly count towards demonstration of country level pledges or targets. In case two schemes are linked and the countries take the same approach to accounting, there would not be any double counting of emission reductions (Prag et al., 2011). Under this approach, the parameters of the ETSs themselves are of no concern for international accounting: what matters from an international accounting perspective is that pledges take flows of ETS units into account by increasing or decreasing the pledge position according to the net flow (Prag et al., 2011).



However, in a more complex post-2012 framework, countries implementing ETSs may have a variety of types of pledge, with some more precisely quantified than others, and potentially of a different legal character. The linking of ETSs internationally could then transfer emissions units between countries and therefore between these different types of pledge. This raises a number of issues about how to accurately account for these units. A key question is how to ensure that units used directly as a contribution to meeting a national pledge are of adequate quality, while not placing barriers to development and linking of ETSs (Prag et al., 2011).

Figure 2: Accounting for domestic emissions trading schemes: overview of options

<u>Option A:</u> Unit flows linked to pledged emissions	<u>Option B:</u> Approval process	<u>Option C:</u> Transparency approach
<p>Participating countries account for flows of ETS units (traded internationally or banked in time) when demonstrating delivery of pledges.</p> <p>For example a net flow of units into the country would count toward pledge attainment, and vice-versa.</p>	<p>Through COP process, countries agree standards and minimum requirements for ETS units that are traded internationally (or banked) and used toward pledge achievement.</p> <p>ETS units would be certified by a UNFCCC body or accredited agent, allowing units to be used toward pledges</p>	<p>Through COP process, countries agree general principles for ETS units that are traded or banked for pledge achievement, plus minimum standards for information disclosure and transparency.</p> <p>Units would be recognised if the relevant information is provided, without further international assessment of unit quality.</p>

Source: Hood (2011).

Figure 2 outlines different options for accounting for domestic emissions trading schemes that are no longer under the Kyoto-system but under a pledge and review system. While, Option A does not require an approval process, Option B requires a COP approval on standards and minimum requirements for ETS and Option C at least agreement on principles and transparency.

## 4 From a post-2012 to a post-2020 regime

### 4.1 Main challenges for regime transition

There is emerging consensus on some of the building blocks of a future climate agreement, such as the institutional setting of the Green Climate Fund or the Technology Fund. However, there has been far less consensus on the overall shape of the future post-2012 global architecture. The Durban Climate Conference in December 2011 agreed that by 2015 a new



comprehensive climate treaty would be agreed upon, that will become effective from 2020 on (UNFCCC, 2011b). The design of such a new protocol, however, is open.

Since the Copenhagen Climate Conference the negotiations moved to a climate architecture with in principle a far higher geographical inclusiveness than under the Kyoto Protocol, but internationally binding targets (legally or politically) only for a small group of countries in the short term. The reduction targets proposed so far by developed countries fall short of the number requested by science. Up to 2020 most countries will face no internationally binding targets. The UN will remain the main forum for decision making possibly accompanied by fora outside the UN.

For the countries, that will not sign up to a second Kyoto commitment period the dynamic of the Copenhagen and Cancun processes will continue with a high geographical inclusiveness. Targets for Annex-I countries however are characterized by only low ambition. The compliance facilitation and control framework will be potentially strong only for those few countries that may sign up to a second commitment period. For the other countries the compliance request will very likely be low, potentially a review process without sanctions for non-compliance for their voluntary targets.

Based on the strengths of the possible post-2012 regime following the Copenhagen Accord, such as high participation and inclusiveness as well as political feasibility, a more comprehensive and ambitious international climate regime could be designed by 2015 with implementation after 2020. Such a new agreement is not likely to resemble the Kyoto Protocol, but to accommodate more decentralized elements as emerging under than current negotiations.

Within the ICPIA project strengths and weaknesses of different climate architectures were assessed with the help of several criteria (Mehling, 2011):

- **Level of Ambition**  
Understood as the ambition of objectives set out under a cooperative framework *vis-à-vis* accepted mitigation and adaptation imperatives, such as the decision endorsed by the international community in Cancún to hold the increase in global average temperature below 2°C above preindustrial levels.
- **Compliance Facilitation and Control**  
An assessment of the overall clarity and determinacy of commitments, the robustness of incentives for compliance, the mechanisms – whether facilitative or coercive – to address non-compliance, as well as the provisions set out to ensure sufficient transparency of efforts undertaken by participants.
- **Institutional Capacity**  
Defined as the provision of mechanisms to perform procedural functions and facilitate the operation of regime elements, for instance through an infrastructure with proprietary



resources and staff, technical knowledge, an institutional memory, and professional routines.

- Participation and Inclusiveness

Measured in terms of geographic scope and breadth of sectoral and stakeholder participation in cooperative efforts to address climate change.

- Systemic Coherence

Ability to address conflicts or tensions between different cooperative efforts, including measures to improve coordination between institutions, for instance through clear mandates and responsibilities, or through conflict clauses and procedures that address potential overlaps.

- Political and Economic Feasibility

A criterion integrating aspects of equity and fairness, expected economic burden and the distribution of costs and benefits as benchmarks for the acceptance of and adherence to a cooperative governance framework.

Table 1: Challenges to design a comprehensive international climate agreement

Level of Ambition		
High	Medium	<b>Low</b>
←-----→		
Compliance Facilitation and Control		
Strong	Medium	<b>Weak</b>
←-----→		
Institutional Capacity		
High	<b>Medium</b>	Low
←-----→		
Participation and Inclusiveness		
<b>High</b>	Medium	Low
Systemic Coherence		
High	Medium	<b>Low</b>
←-----→		
Political and Economic Feasibility		
<b>High</b>	Medium	Low

Source: Mehling (2011)

Table 1 shows important challenges when moving from the current voluntary pledge and review architecture to a new comprehensive and ambitious international climate treaty. A main challenge will be to raise ambition and share efforts in a way that is regarded as fair by a large number of countries.

#### 4.2 Raising ambition and sharing efforts: Lessons from the EU effort sharing process for international negotiations

Raising ambition and sharing efforts between developed countries but also between developed and developing countries will be a major challenge when negotiating a new international climate treaty that may become effective from 2020. This chapter gives insight in existing experiences with effort sharing in the EU.

The ICPIA project showed that some important lessons for target negotiation can be learned from the EU experience regarding effort sharing. Firstly, much of the EU's success has been grounded on the ability of credible, but neutral, actors to reduce the bargaining space and develop consensus on basic principles of effort sharing (Spencer et al., 2011). Regarding international negotiations such a role could only be taken by the UN, however it will be far



more complex to find consensus among a much larger number of countries, that have much more different socioeconomic and cultural back countries.

Another conclusion of the ICPIA project is that there is a need to balance comprehensive criteria for effort sharing with simplicity and transparency. In this regard, a comparison between the allocation of Kyoto targets within the EU bubble and effort sharing in the 2008 Package is instructive. In the former, a sectoral approach was adopted. In the latter, an instrument-based approach was adopted, with the contribution of each instrument (non-ETS target, RES target etc) aggregated and presented numerically using a suite of econometric models. The efficacy of the latter approach is witnessed perhaps by the speed with which the European Energy and Climate Package was adopted. Comprehensive, simple and transparent criteria that balance interests of different parties will also be crucial for the success of international effort sharing. Currently widely accepted criteria to compare pledges do not exist.

Furthermore the European experience with the first Kyoto phase shows that differentiated targets may contribute to, but by no means guarantee, successful implementation. Indeed, it can be argued that a normative process of policy transfer can supplant the development of intrinsic domestic interests in environmental policy. The external, negotiated imposition of environmental policy perhaps needs to be complemented by a more two-way process to take into account the domestic interests of participants. Accommodating domestic interests of countries will also be of major importance for any new international climate treaty. Cooperation on implementation and the nurturing of domestic interests in climate policy may be just as important as negotiating agreed targets for the long-term stability of the policy coalition.

#### **4.3 Dealing with the institutional complexity of a long-term framework**

As mentioned above it is unlikely that a new climate treaty will emerge in 2015 with the UN again having an institutional monopoly. The development since the Copenhagen Climate Conference was characterized by a strong dynamic regarding developing countries proposing voluntary targets and actions. In the context of the bottom up architecture since the Copenhagen Conference several proposals are being advanced that favor more decentralized approaches e.g. regarding market mechanisms thereby reducing the dysfunctions of the Kyoto Protocol and enable more flexibility in implementation. A new international climate treaty will need to accommodate these approaches. A comprehensive international regime similar to the Kyoto Protocol is not likely given the diversity of problems associated with parallel diverse political patterns of interests, power, and information (see Keohane and Victor, 2010). The Durban Climate Conference paves the way for legal flexibility in the short term, a few countries may sign up to a second Kyoto Protocol commitment period while the most will adopt a variety of other approaches than binding targets and timetables. As Keohane and Victor (2010) argue comprehensive regimes lead to institutional monopolies that may lead, such as in the case of the UN, to inflexibility and inaction. A variety



of institutional approaches in contrary may have the advantages of greater flexibility and adaptability, in part, from decision-making structures offering more effective regulation when compared with comprehensive regimes. If an international agreement is well designed different institutional venues could act in a synergistic way. A broader institutional setting may be an opportunity to achieve more coherence between different policy areas of strategic importance for countries such as energy security. It is evident that there is a close link between energy policy and climate policy as fossil energy use determines to a large extent the amount of GHG emissions. The ICPIA project showed that even in the EU there is still room for improving the coherence of energy and climate policies (Kettner et al., 2011c). On the international level questions of coherence of climate policies with other policies will be of great importance for the participation of countries in a new climate agreement and thus the effectiveness of any new climate regime.

## 5 Conclusions

The Durban Conference opens the way to a new climate treaty to be implemented in 2020. In the meantime only a few countries will sign up to binding emission reduction targets, most countries will continue to pursue voluntarily proposed targets that will be reviewed under a UN system. The design of a new climate treaty by 2015 will be the main challenge for the negotiations in the next years. While countries such as the EU or many developing countries still advocate a Kyoto-style agreement, many other major emitters, such as the US are continuing to advocate a voluntary pledge and review system with a high participation of developed and developing countries.

Both approaches have important strengths and weaknesses. While a pure voluntary bottom up approach may lead to a fragmentation of accounting rules and only limited control regarding the implementation of commitments and actions, the Kyoto approach including the institutional monopoly for the UN has been characterized by a small degree of flexibility and a cumbersome decision making process. It is unlikely that one single approach towards a new climate architecture will be agreed on in the next years. Instead the diversification of approaches that has already started will continue. Such a diversification allows to better accommodate national circumstances and interests than was the case under the Kyoto Protocol. It will be of crucial importance for the design of the future climate regime that it will be able to accommodate different approaches and different institutional venues in a synergistic way. If successful this may result in a more effective regime than the Kyoto Protocol was.

As shown in this paper the UN however needs to maintain a major role e.g. in discussions about the sharing of efforts or setting standards for the governance of market mechanisms in order to prevent a complete fragmentation of the climate regime. Finding common ground on accounting or a new market mechanism furthermore would enable linking of domestic emissions trading schemes and thus a bottom-up convergence of climate policies may



constitute a critical backbone of a new climate architecture. Finding common ground will be of major importance in the short-term in order to enable the design of an effective climate regime in the long-term.



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