

# **THE PHANTOM MENACE**

## **An introduction to the Kyoto Protocol Allowances surplus**

**POLICY BRIEF**

July 2012

*Courtesy zwali/flickr*

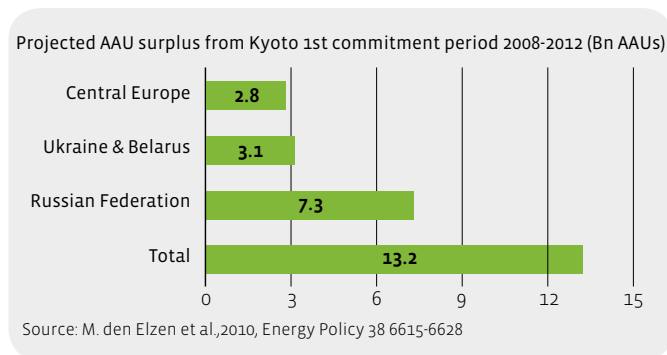
## Executive Summary

With less than six months left of the first commitment period of the international climate regime, the Kyoto Protocol, there still is no agreement between Parties on the 'AAU surplus issue'. We explain why resolving this issue - which is currently being negotiated under the United Nations Framework Convention on Climate Change (UNFCCC) - is vital to the viability of any future climate regime.

Assigned Amount Units (AAUs) were introduced under the Kyoto Protocol. One AAU allows a country to emit 1 tonne of CO<sub>2</sub>e. Each country with an emissions reduction commitment under the Kyoto Protocol's first commitment period received AAUs equivalent to the number of tonnes it is allowed to emit during that first 5-year commitment period.

Kyoto Protocol rules allow countries to carry over unused AAUs into the next commitment period. A number of countries, such as Russia, Ukraine and Poland, have very large amounts of surplus AAUs. By the end of 2012, up to 13 billion surplus AAUs could be carried over into the Kyoto Protocol's next commitment period. This is almost three times the annual emissions of the European Union or more than twice those of the United States.

This surplus threatens the viability and effectiveness of international climate policy regimes. If no restrictions are placed on the AAUs surplus, these pledges could lead to no additional emissions reductions compared to business-as-usual emissions projections by 2020. This holds true even if the Russian surplus is excluded.<sup>1</sup> Allowing the full AAU surplus to be carried over could eliminate the chances of avoiding dangerous climate change by overshooting the +2°C limit.<sup>2</sup>



Parties are also allowed to carry over emission reduction credits from the Clean Development Mechanism (CDM) and Joint Implementation (JI). The carry-over of CDM credits (CERs) and JI credits (ERUs) is limited to up to 2.5% each of the total amount of AAUs a country received for the first commitment period. Carry-over from these offsetting mechanisms could lower actual emission reductions by 2020 by roughly 6%.

If a solution to these surpluses is not found, it will significantly weaken the environmental integrity of a second commitment period under the Kyoto Protocol. A new climate deal will likely build on parts of the Kyoto Protocol's framework. Having a second Kyoto commitment period that is significantly weakened by low targets and participation, and large loopholes such as a massive AAU surplus carry-over would not bode

well for the new global climate deal called for by the Durban Platform. This new climate regime is supposed to come into effect in 2020 and needs to be agreed on by 2015.

It is therefore essential to find and then agree on a solution that addresses the surplus at the 18th Conference of the Parties (COP) in Qatar at the end of 2012.

Solutions that would eliminate or greatly reduce the impact of the surplus include:

- not allowing any carry over, or allow a limited carry-over of AAU surplus and offset credits between the first and second commitment periods
- allowing the carry-over of surplus but severely restricting the use of the carried-over AAUs and offset credits
- excluding Parties not committing to binding targets beyond 2012 from trading AAUs.

Various proposals have been tabled at the UNFCCC climate negotiations. The proposals by the Africa Group and AOSIS in particular are promising with regard to safeguarding the environmental integrity of the Kyoto Protocol post 2012.

Key players in this debate such as the G77, the EU and Russia need to act now, to successfully resolve the surplus issue at COP 18 in December:

### G77

A joint G77 supported proposal that builds on the elements of the AOSIS and Africa Group proposal would add significant political weight and as a consequence put more pressure on Parties such as the EU and Russia to engage more constructively and urgently in this debate. We recommend that the G77 decide on a proposal by the next UNFCCC inter-sessional which takes place in Bangkok at the end of August 2012.

## The Russian Federation

The Russian Federation has not signed up to a binding target under the second commitment period of the Kyoto Protocol. Nonetheless, it expects to be able to sell its surplus. But with the vast AAU surplus it owns, it seems unlikely that other Parties would allow Russia to do so without committing to a target under the second commitment period. Russia should commit to meaningful and binding emissions cuts and also accept a significant discount on AAUs.<sup>3</sup> Such policy choices would likely lead to financial benefits for Russia because creating more scarcity in a heavily over-supplied AAU trading market would increase the value of each AAU. Whereas, the business-as-usual scenario, in which the full surplus is carried over and relatively weak targets remain for the second commitment period of the Kyoto Protocol would likely lead to a AAU price collapse after 2012, rendering surpluses almost worthless.

## The European Union

The EU has a contradictory stance on the AAU surplus: on the one hand, the European Union has been very vocal in calling for meaningful mitigation actions. The EU has also made its participation under a second Kyoto commitment period conditional on improving the environmental integrity of the Kyoto Protocol. This includes solving the surplus issue. At the UNFCCC negotiations on the other hand, the EU has remained

<sup>1</sup> den Elzen M., Meinshausen M., Hof A. (2012). The impact of surplus units from the first Kyoto period on achieving the reduction pledges of the Cancún Agreements Climatic Change. DOI: 10.1007/s10584-012-0530-5

<sup>2</sup> UNEP, November 2011, "Bridging the Emissions Gap - The Emissions Gap - an update"

<sup>3</sup> Furthermore, it is paramount to ensure that those AAUs are not "laundered" in a way that a substantial amount of AAUs would be swapped into non-additional ERU credits and then weaken second commitment period ambitions indirectly



silent due to internal disagreement among EU Member States on how to address the surplus. If the EU ratified a second commitment period without addressing the surplus issue it could be considered to be passively complicit in damaging the environmental integrity of future climate regimes.

The EU needs to find an intra-European solution so it is able to take a clear position at the UNFCCC negotiations. However, debates on this issue within the EU are difficult due to the position of some Eastern European Member States, namely Poland, who prefer the default ('i.e. full carry-over') outcome. An internal solution must be found and agreed on by the next Environmental Minister's Council in October of 2012. The potential inconsistencies between the EU's domestic legislation (in particular the EU-ETS) and restrictions on the surplus carry-over could be resolved by committing to a higher reduction target for 2020.

The EU has shown in Durban that it can still leverage positive outcomes at the UNFCCC negotiations by being the driving force behind the agreement for a new climate accord by 2015. If the EU wants to maintain its constructive and proactive role in the climate mitigation arena it needs to follow up with clear and strong positions on elements that could threaten the environmental integrity of a future global climate regime.

If the EU and the G77 put their diplomatic weight behind a joint position, it would greatly increase the chances of addressing the AAU surplus to strengthen the environmental integrity of a second commitment period and a new climate treaty to be agreed by 2015.

## Introduction

This policy briefing explains the 'AAU surplus issue' currently negotiated by Parties under the United Nations Framework Convention on Climate Change (UNFCCC). It explains the technical and political intricacies of this issue and discusses the most promising policy solutions with the aim of contributing to the constructive dialogue necessary to resolve this issue in 2012. The European Union is an important party in the UNFCCC negotiations but does not have a consistent position on the AAU surplus problem. This paper gives an international overview and also examines EU policy and its complex relationship to the AAU surplus.

Assigned Amount Units (AAUs) are emission rights that were introduced under the Kyoto Protocol. One AAU allows a country to emit 1 tonne of CO<sub>2</sub>e. Each country with an emissions reduction commitment received AAUs that were equivalent to the number of tonnes it was allowed to emit during the Kyoto Protocol's first 5-year commitment period.

Kyoto Protocol rules allow countries to carry over any unused (i.e. surplus) AAUs into the next commitment period. A number of countries, such as Russia, Ukraine and Poland, have very large surpluses of AAUs. By the end of 2012, up to 13 billion AAUs, could be carried over into the Kyoto Protocol's second commitment period.

Parties are also allowed to carry over emission reduction credits from the Clean Development mechanism (CDM) and Joint Implementation (JI). The carry-over of CDM credits (CERs)

and JI credits (ERUs) is limited to up to 2.5% each of the total amount of AAUs a country received for the first commitment period.<sup>4</sup> Carry-over from these offsetting mechanisms could lower actual emission reduction levels by 2020 by roughly 6%.<sup>5</sup>

This surplus threatens the viability of future climate policy regimes. Developed countries need to reduce their emissions by 25-40% below 1990 levels by 2020 to be consistent with a 450 parts per million CO<sub>2</sub>e concentration stabilisation scenario<sup>6</sup>. However, current pledges are well below this goal and if the full AAU surplus is carried over, actual emissions reductions by 2020 will only be about 6% below 1990 levels. The carry over of CDM and JI offset credits could further weaken the targets. In other words, carrying over the full surplus will threaten the chances of avoiding dangerous climate change by overshooting the +2°C limit.

The issue has to be addressed by the end of 2012 to make a second commitment period under the Kyoto protocol viable and to avoid stifling progress on a new global climate deal called for by the Durban Platform. The new climate regime is supposed to come into effect in 2020 and needs to be agreed on by 2015. Different proposals have been tabled by countries to reduce the impact of the surplus on future commitment periods.

This paper is structured as follows:

- Chapter 2 explains AAUs, CERs, ERUs and emissions trading under the Kyoto Protocol
- Chapter 3 explains the origins of the AAU surplus and explains why it is a problem if carried over into a second Kyoto Protocol commitment period
- Chapter 4 explains carry-over rules ('banking') and why it can compromise environmental integrity
- Chapter 5 discusses solutions that would minimise a surplus carry-over and explains specific proposals currently being discussed at UNFCCC negotiations
- Chapter 6 introduces how EU climate policies will interact with the AAU surplus post-2012
- Chapter 7 concludes with recommendations for different stakeholders and Parties.

<sup>4</sup> Decision 13/CMP.1 Annex paragraph 15 "Carry Over" <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=17> [...] the Party may carry over to the subsequent commitment period:

(a) Any ERUs held in its national registry, which have not been converted from RMUs and have not been retired for that commitment period or cancelled, to a maximum of 2.5 per cent of the assigned amount pursuant to Article 3, paragraphs 7 and 8, of that Party.

(b) Any CERs held in its national registry, which have not been retired for that commitment period or cancelled, to a maximum of 2.5 per cent of the assigned amount pursuant to Article 3, paragraphs 7 and 8, of that Party

<sup>5</sup> Effective 2020 targets could be weakened by up to 6.25% if CERs and ERUs were carried over up to the full extent allowed under the 2.5% limits. This is because the 2x2.5%=5% credits over a potential 8-year commitment period, and under a "wedge" assumption (i.e., that emissions change linearly from current levels to incorporate the change in allowances over the full 8-year period) would result in 6.25% = 5%\*5/8\*2 weaker effective 2020 targets. For example, the EU target could effectively be reduced from -20% to -13.75% if the EU carried over the maximum allowable amount of CDM and JI offsets.

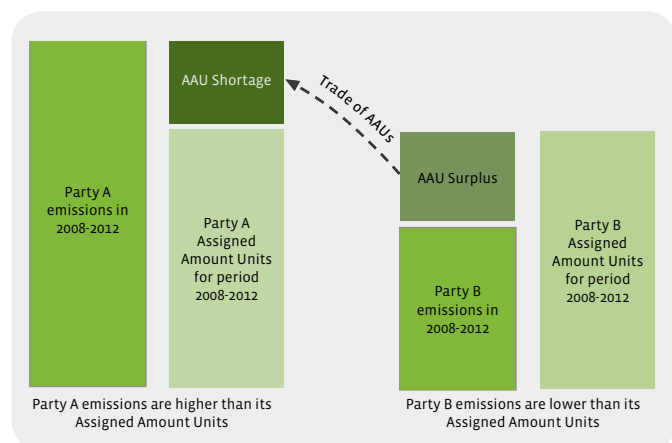
<sup>6</sup> IPCC's 2007 Fourth Assessment Report Working Group III report, in Box 13.7 on page 776

## What are Assigned Amount Units (AAUs)?

An Assigned Amount Unit<sup>7</sup> or AAU is an entitlement of a Party to the Kyoto Protocol with an emission reduction obligation to emit 1 tonne of CO<sub>2</sub>e.

Each Party with a reduction commitment under the Kyoto Protocol received AAUs equivalent to the number of emissions it is allowed to emit in the first commitment period of the Kyoto Protocol 2008-2012. The AAUs a country receives is calculated by taking the base year (1990) emissions of the country minus their reduction target and multiplying this number by 5 (i.e. the length of the commitment period). For example, if a hypothetical country had 1990 emissions of 100,000 tonnes and an emission reduction target of -10% (or 90%) of its 1990 emissions (i.e. 90,000 tonnes), it would have received 450,000 AAUs (i.e. 5 times 90,000).

The Kyoto Protocol allows Parties to trade AAUs. Countries whose emissions are above their Kyoto target can purchase AAUs from countries which have a surplus to help them meet their reduction obligations, see the graph below. The trading of AAUs has occurred multiple times with countries like Poland and Ukraine selling AAUs and countries such as Japan and Spain buying them.



Under the Kyoto Protocol's emissions trading scheme, it is not just AAUs that can be traded. Offset credits created under the Clean Development Mechanism (CDM) and Joint Implementation (JI) can also be traded and used for compliance.<sup>8</sup> Unlike AAUs these offsets are not initially assigned to a country under a cap-and-trade scheme. Offset credits are generated by individual climate mitigation projects. Over 1 billion offsets have been issued so far under these two mechanisms.<sup>9</sup>

<sup>7</sup> The term Assigned Amount was first introduced through article 3 paragraph 1 of the Kyoto Protocol: "The Parties included in Annex I shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012."

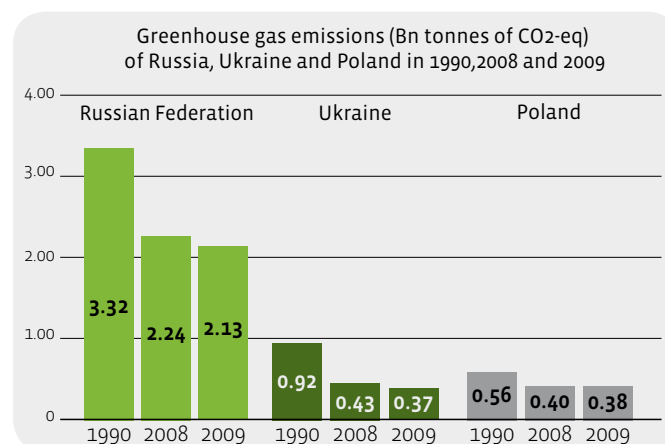
<sup>8</sup> JI projects are implemented in developed countries (Annex B), while CDM projects are located in developing countries (non-Annex 1).

<sup>9</sup> <http://www.cdmpipeline.org>, accessed 17 July 2012.

## The origins and size of the AAU surplus

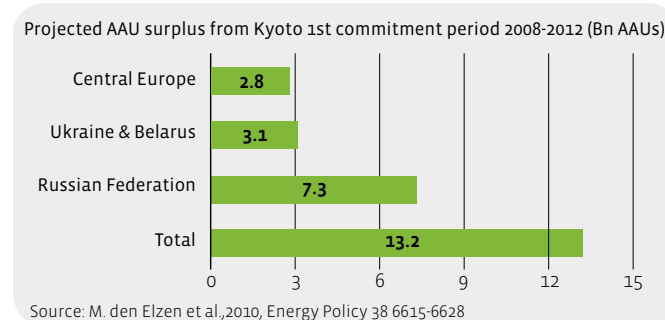
In 1997, when the rules for the Kyoto protocol were negotiated, base year emission levels used for calculating Kyoto targets were set at 1990 levels period. This is despite the fact that in Russia, Ukraine and most Central and Eastern European countries that are part of the EU, emissions had already dropped significantly after 1990.

Following the collapse of communism in these countries, large numbers of old industrial installations were shut down, creating a dramatic decline in emissions. Even with the economic transition and recovery of the last decade, all of these countries have much lower current greenhouse gas emissions compared to 1990.



When policymakers negotiated the Kyoto Protocol back in 1997, they were well aware of the AAU surplus they were creating. The AAU surplus was further increased by several events. Firstly, in 2000 the US government declined to ratify the Kyoto Protocol. The United States, which had signed the Kyoto Protocol, would have been an important buyer of AAUs and therefore could have used a significant proportion of it. Secondly, the global economic crisis of the last years has further increased the AAU 'hot air' bubble because emissions decreased in many countries due to a decrease in economic output. Therefore the need to purchase AAUs has also further decreased. Ireland and Spain, for example will require fewer AAUs to meet their emission targets.

According to a recent UNEP report<sup>10</sup>, 9 to 13 billion tonnes CO<sub>2</sub>e of surplus AAUs will remain at the end of the first Kyoto commitment period. This is equivalent to the combined annual greenhouse gas emissions of the United States and the EU.



Source: M. den Elzen et al., 2010, Energy Policy 38 6615-6628

<sup>10</sup> UNEP, November 2011, "Bridging the Emissions Gap - The Emissions Gap - an update", pg. 16

The exact size of the AAU surplus will only be known in 2015. This is because Parties will only know whether they have met their Kyoto targets once the emissions report of the last year (2012) has been submitted to the UNFCCC Secretariat, at the end of 2013. After that Parties have one more year to balance their emissions from 2008-2012 with the corresponding AAUs (and/or credits coming from CDM or JI projects). This is called the true-up period. Previous estimates such as the one by Pointcarbon<sup>11</sup> dating from 2009 did not fully take into account the global crisis, and in particular, the Eurozone crisis. As EU Member States have been the main compliance buyers of AAUs under the first commitment period and this demand now reducing due to the crisis, we expect the final AAU surplus to be at the high end of the estimated ranges.

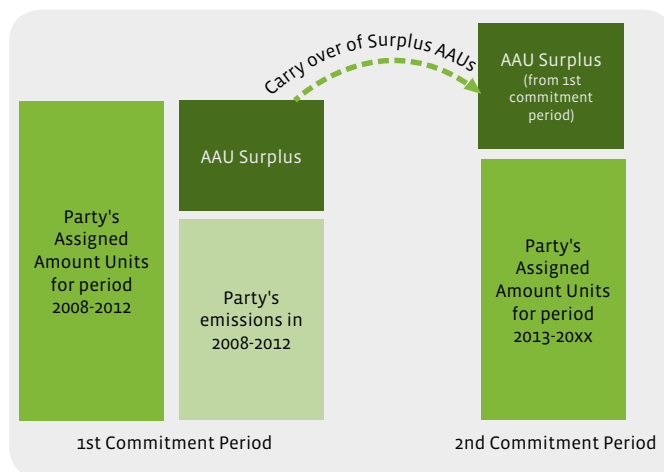


Courtesy zwali/flickr

<sup>11</sup> Point Carbon, 2009, "Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime"

## Banking: or, why this surplus is a problem

Under current Kyoto Protocol rules, surplus AAUs can be fully carried over<sup>12</sup> or 'banked' into the next commitment period<sup>13</sup>. In principle, banking of AAUs would allow Parties that over-achieve their reduction targets to benefit from this early action in the next commitment period. Banking should encourage longer-term investments in emission reductions since it can offer a long-term and more stable carbon price over different commitment periods.



However, the unrestricted use of surplus AAUs could paralyse AAU trading. The current size of the surplus is very large and reduction commitments are low. In other words, the supply of AAUs is much larger than the expected demand. Major developed country emitters such as Japan, Canada and the US have indicated that they will not commit to binding reductions under a second commitment period of the Kyoto Protocol. The EU and Norway have already stated that they will not use AAUs for compliance in the next commitment period, which will further limit the demand for AAUs. It is therefore likely that a full carry-over of the AAU surplus could lead to a collapse of AAU prices.

More significantly, the impact of a full carry-over of the current AAU surplus on actual emission reductions achieved in the next eight years could be considerable.

The IPCC's 4th assessment report in 2007 estimated that emissions in developed countries need to be reduced by 25-40% by 2020 to be consistent with a 450 parts per million CO<sub>2</sub>e concentration stabilisation scenario.<sup>14</sup> The current emission reduction pledges by developed countries are estimated to reduce emissions in those countries, on an aggregate level by 12-18% in 2020 compared to 1990 levels.

If no restrictions are placed on the AAUs surplus, these pledges could lead to no emissions reductions compared to business-as-usual emissions projections by 2020. This holds true even if the Russian surplus is excluded.<sup>15</sup>

<sup>12</sup> Decision 13/CMP.1 Annex paragraph 15 "Carry Over" <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=17>  
[...] the Party may carry over to the subsequent commitment period:  
[...] (c) Any AAUs held in its national registry, which have not been retired for that commitment period or cancelled.

<sup>13</sup> The Kyoto Protocol's first commitment period ends on 31 December 2012. The second commitment period is supposed to start January 1st 2013. It is at this time not certain whether this period will be 5 years long and end in 2017 or 8 years long and end in 2020.

<sup>14</sup> IPCC's 2007 Fourth Assessment Report Working Group III report, in Box 13.7 on page 776

<sup>15</sup> den Elzen M, Meinshausen M, Hof A. (2012). The impact of surplus units from the first Kyoto period on achieving the reduction pledges of the Cancún Agreements Climatic Change. DOI: 10.1007/s10584-012-0530-5



Parties are also allowed to carry-over CDM and JI offset credits. CDM and JI offsets are fungible with AAUs. In other words, they are interchangeable which means that a country can use any kind of emission allowance or offset to meet its targets in the first commitment period. The carry-over of such offsets further increases the size of the surplus. Therefore solutions have to address all carry-over emissions reduction credits.

Allowing the full AAU surplus to be carried over could eliminate the chances of avoiding dangerous climate change by overshooting the +2°C limit. According to UNEP weak pledges (such as Europe's -20% reductions by 2020) and lenient rules<sup>16</sup> (such as allowing the full carry-over of the AAU surplus) could lead to a scenario in which the global average temperature increases by +5°C by the end of the century.<sup>17</sup>



*Courtesy zwali/flickr*

<sup>16</sup> The AAU surplus carry over is not the only loophole which allows parties to lower the actual ambition level of emission reductions after 2012. The CER and ERU surplus carry over, weak accounting rules on Land Use Land Use Change and Forestry (LULUCF), non-additional offsetting and double counting of off-setting and domestic emission reductions, all further weaken pledges.

<sup>17</sup> UNEP, November 2011, "Bridging the Emissions Gap - The Emissions Gap - an update"

## Solutions for dealing with the AAU surplus

Most countries are well aware of the potential risk related to an unrestricted carry-over of the AAU surplus. Since 2009 Parties have tried to find an acceptable solution under the UNFCCC. In particular the ad hoc UNFCCC working group responsible for preparing the post 2012 Kyoto Protocol has debated the issue. So far these negotiations have not come to a conclusion. The main reason for this are related to the vested interests Parties have, such as Russia, Ukraine, Poland and New Zealand, in keeping their AAU surpluses. The Kyoto Protocol ad hoc working group has to come to a close by the end of 2012, so the pressure to find an agreement is increasing. By COP18 in Qatar a solution must be found, otherwise the existing Kyoto rule which allows full carry-over will be applied by default. This in turn, would threaten the viability of the second commitment period.

There has been no shortage of possible solutions and compromises that deal with the surplus. A few important Parties and stakeholders in the UNFCCC climate debate have tabled proposals that would eliminate the imminent threat of a full AAU surplus carry-over. Below we explain a few possible concepts to reduce the volume and impact of the carried-over surplus. Most of these concepts could be combined into comprehensive solutions. Then, we discuss the most important proposals that have been made by Parties recently.

### a) No carry-over between the first and second commitment period

The most stringent option which would permanently remove the surplus would be to change the implementation rules of the Kyoto Protocol so that the surplus is not allowed to be carried over between the first and the second commitment periods of the Kyoto Protocol. This could be a temporary rule applied only between the first and second commitment periods. Preferably, it would be a permanent rule which excludes the banking of AAUs or all emissions credits (AAUs, CERs and ERUs) regardless of commitment periods.

The political viability of a full and permanent elimination of surplus carry-over is low due to the strong opposition by Parties who have significant surpluses.

### b) Limit the amount of carried-over surplus

Similar to the currently existing rule on the carry-over of CDM and JI offset credits, the carry-over of AAUs, could be limited. If the same rule (2.5%) was also applied to the AAU surplus, roughly estimated, around 80% of the AAU surplus would be cancelled. In practice, this would however make little difference, given that the demand for extra emission allowances in the second commitment period is likely to be much lower than the combined amount of 7.5% carry-over from AAUs and CDM and JI credits. An overall limit on carry over of 1% would be more effective.

This option is quite controversial because Parties with a large surplus are reluctant to give up part of their surplus AAUs. However, a partial carry over may be more lucrative than full carry over. As full carry over will likely lead to very low or a collapse of AAU prices. A restricted carry over would create more scarcity and therefore ensure higher AAU prices. In other words, Parties may earn more revenue from selling fewer AAUs at a higher price, compared to having more AAUs that are worth very little or nothing.

### **c) Allow carry over but only for domestic compliance use in the second commitment period**

A similar option would be to not restrict the carry-over but to limit the use of any carried-over surplus. This would allow all Parties to keep their surpluses from the first commitment period and therefore not change their 'entitlement' to carry over their surpluses.

If use is restricted to domestic compliance, the AAUs would only be able to be used within the countries with a surplus. Hence the surplus AAUs would not be tradable and therefore not weaken the climate action in countries with more ambitious climate targets.

Although this approach is politically more feasible than limiting the carry over, it is considerably more risky. It does not resolve the question of what would happen to the surplus after the end of the second commitment period. They could be cancelled at that time or carried over again which would result in the surplus continuing to exist decades from now.

The current limited emission reduction targets of the EU, Russia and Ukraine risk generating a further AAU surplus within the second commitment period of the Kyoto Protocol, on top of the existing surplus AAUs from the first commitment period. To address this issue, the amount of AAUs that can be used for the second commitment period could depend on the stringency of the emission reduction target of a country in the second commitment period. Hence, Parties with higher reduction targets would be allowed to use a larger number of AAUs.

### **d) Turn the AAU surplus into a strategic reserve to be used beyond the second commitment period**

This option would allow for the full carry over of AAUs but side-step the problems that this would cause for the second commitment period under the Kyoto Protocol by only allowing their use for compliance after the second phase of the Kyoto Protocol. This would create a strategic reserve after the second commitment period for countries with a big surplus such as Russia and Ukraine. This option could be combined with the domestic-use-only restriction.

This solution is dangerous because as mentioned in option c) above, it does not permanently address the surplus problem. The use of this strategic reserve for compliance might cause Russia and Ukraine to abandon climate policies in the next decades and may create an entitlement for surplus beyond 2020. It is inconsistent with the deep emission reductions which are required on a global scale up to 2050.

### **e) Use revenue of AAU surplus sales for Green Investments**

A proposal that would not stand on its own but operate in combination with restriction of the carry-over, is the introduction of a Green Investment Scheme Mechanism under the Kyoto Protocol. This mechanism would oblige Parties that sell AAUs to channel the revenues of these sales into 'green investments' in their own country and hence create structural investments in emission reductions on their territory. This funding might also alleviate the urgent need for capital investments in the modernisation and greening of the power and building sectors. However, unrestricted carry-over would likely lead to very low or even a collapse of AAU prices, removing the financial incentive for green investments. This option would therefore only work if it is combined with a restriction on the amount of AAUs carried over or a significant increase in demand through higher pledges, leading to higher AAU prices.

### **g) Exclude Parties, not committing to binding targets beyond 2012 from trading AAUs**

Russia, the holder of the largest AAU surplus, has indicated that it does not intend to commit to binding targets under a second commitment period of the Kyoto Protocol. Under current rules it is unclear whether that would disqualify Russia from selling their AAU surplus from the first commitment period. The Kyoto Protocol and its Registry rules could specifically forbid any trade of AAUs from Parties who have not committed to binding targets under a second commitment period of the Kyoto Protocol. There are several Parties, such as the EU that are in favour of such a solution. The political viability of this kind of exclusion is therefore possible but nevertheless uncertain.

### **h) Introduce (voluntary) agreement by Parties to not purchase AAUs in the next commitment period**

If a political decision at the UNFCCC proves to be impossible, the surplus issue could be addressed in a more informal way, without the need for changing the Kyoto Protocol. This could be done through a broad a voluntary agreement between Parties who would be potential AAU buyers in the second commitment period, to refrain from buying AAUs from the surplus or to not buy AAUs at all. This comes close to what the EU's current post-2012 legislation does. From 2013 AAUs are ineligible for use to achieve compliance under Europe's post-2012 climate legislation. A detailed description of the post-2012 EU legislation follows in the next chapter. Besides the EU, Norway has also indicated that it will refrain from using AAUs to meet its 2020 reduction target. This solution may be politically more feasible but has the drawback of being voluntary, therefore adding risk and uncertainty and also sending the wrong signal to developing countries who are expected to take on binding targets by 2020.

### **i) Abandon the Kyoto Protocol AAU trading system**

One could argue that AAU trading has become superfluous or damaging to the overall goals of the Kyoto Protocol and therefore should be abandoned. In practice, with an important list of Parties not committing to binding targets under a second commitment period and the EU and Norway forsaking the use of AAUs for compliance after 2012, this has already happened. As such, more than 95% of the Kyoto Parties emissions are currently falling out of the scope of AAU trading. Ukraine is the only Party with significant emissions who is still willing to participate in AAU trading with a target under the second commitment period.

### **j) Significantly raise second commitment period emissions reduction targets and participation in the Kyoto Protocol**

This option addresses the surplus issue from a different angle: instead of limiting the use of the surplus, Parties would substantially increase the reduction commitments for the second commitment period under the Kyoto Protocol. This would increase the demand for surplus AAUs and offset credits. This option would work most effectively if combined with one of the above proposals to limit the use of the surplus. According to UNEP a combination of stronger reduction targets with stricter Kyoto rules (such as the reduction of the surplus) is needed to keep the global average temperature increase below +2°C.<sup>18</sup>

<sup>18</sup> UNEP, November 2011, "Bridging the Emissions Gap - The Emissions Gap - an update"

## Specific proposals at the UNFCCC negotiations

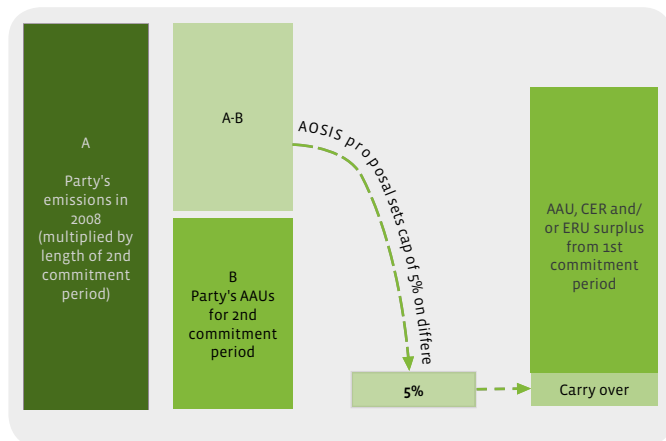
While most of the above-mentioned proposals would offer a solution for the AAU surplus, at the UNFCCC negotiations only a few options have been discussed or are politically viable. The default outcome, if no amendments are made to the implementing provisions of the Kyoto Protocol, is the unrestricted carry-over of AAUs between the first and second commitment periods and the carry-over of CERs and ERUs of up to 2.5% each (measured against first commitment period AAUs).

### The Alliance of Small Island States<sup>19</sup> (AOSIS) proposal

The AOSIS proposal for dealing with the first commitment period surplus is an interesting combination of some of the options explained above. To be eligible to use any surplus AAUs, CERs and/or ERUs at all a Party must have a reduction target for the second commitment period that is lower than its 2008 emissions. This eligibility clause would exclude Russia and Ukraine from carrying over any surplus. Both countries' 2020 targets are higher than their respective 2008 emissions.

If Parties are eligible to carry over AAUs, CERs and/or ERUs, the actual amount of carry over will be equal to 5% of the difference between the Party's inventory emissions in 2008 multiplied by the length of the second commitment period, and its AAUs for the second commitment period. This approach would incentivise Parties with a significant surplus to enhance their reduction targets for the second commitment period.

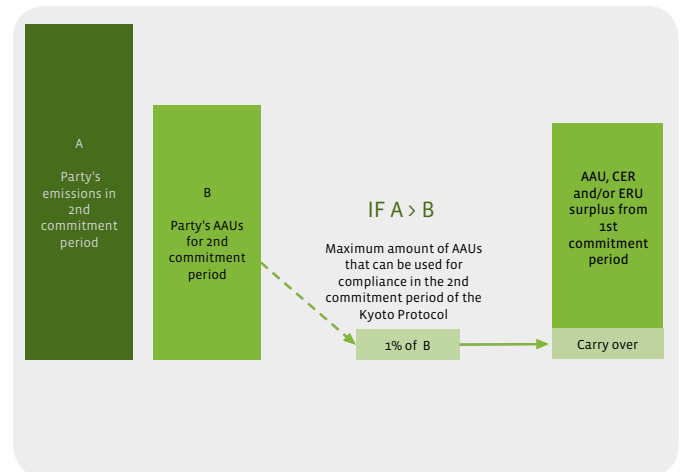
This proposal could eliminate more than 95% of the surplus allowances under the current reduction pledges and therefore contribute significantly to safeguarding the environmental integrity of the second commitment period of the Kyoto Protocol.



### The Africa Group<sup>20</sup> Proposal

The Africa Group's proposal also builds on several of the options explained above and introduces a new concept. Only Parties that commit to a binding target under the second commitment period of the Kyoto Protocol would be entitled to (part of) a carried-over AAU, CER and/or ERU surplus, this would exclude Russia. If a Party's emissions in the second commitment period

are higher than its AAUs for that period, that Party can use an amount of carried-over allowances to achieve compliance - up to 1% of its AAUs for the second commitment period - obtained through emissions trading or from its carried-over surplus from the first commitment period. The Africa Group's proposal would reduce the carried-over surplus by almost 95%. The Africa Group also proposes to earmark 50% of the traded surplus for supporting the most vulnerable countries to adapt to the effects of climate change. No specific proposals clarify how this earmarking would work. Although a good idea in theory, it is unclear how earmarking is actually feasible in practice.



## The EU's complicated relationship to the surplus

### Europe at the UNFCCC negotiations

The EU has a contradictory stance on AAUs. On the one hand, the EU has been very vocal internationally calling for meaningful mitigation actions. The EU has also made its participation under a second Kyoto commitment period conditional on improving the environmental integrity of the Kyoto Protocol. On the other hand, in the international negotiations, the EU has remained silent and has not, therefore, contributed to solutions. The EU has not put a specific proposal on the table nor taken an official position on the proposals by either AOSIS or the Africa Group.

The absence of an EU proposal or a position on addressing the AAU surplus is the consequence of a lack of internal agreement among EU Member States. Several Member States have a significant potential AAU surplus, up to 3 billion tonnes in total. Most of this surplus will be generated in Central and Eastern European Member States - Poland has the third-largest surplus (after Russia and Ukraine) - however, the UK and Germany will also contribute to the overall EU surplus. In particular, Poland is opposed to cancelling surplus AAUs and has blocked any move to resolve the issue.

The EU's relationship with AAUs has become more complex following its new post-2012 climate legislation. It is important to look at this in more detail, since that context influences Europe's stance on the surplus carry-over.

<sup>19</sup> "The Alliance of Small Island States (AOSIS) is a coalition of some 43 low-lying and small island countries, most of which are members of the G-77, that are particularly vulnerable to sea-level rise. AOSIS countries are united by the threat that climate change poses to their survival and frequently adopt a common stance in negotiations." Source, UNFCCC: [http://unfccc.int/parties\\_and\\_observers/parties/negotiating\\_groups/items/2714.php](http://unfccc.int/parties_and_observers/parties/negotiating_groups/items/2714.php)

<sup>20</sup> At the UN Parties are traditionally organised into five regional groups: African States, Asian States, Eastern European States, Latin American and Caribbean States, Western European States and Other States



## EU Climate commitments under the first Kyoto commitment period

Under the first commitment period of the Kyoto Protocol, the European Union committed to an overall -8% emission reduction below 1990 emissions, with each member state taking on its own emissions reduction target, adding up to a total of -8%.<sup>21</sup>

An important element of the EU's strategy for meeting its Kyoto commitment is the EU Emissions Trading System (EU-ETS). The EU-ETS places a cap on emissions from the power sector and heavy industries, which constitutes about 50% of total EU emissions. To comply with the EU-ETS, each year, covered entities (power and industrial companies) must surrender sufficient EU allowances (EUA), or offset credits from the Clean Development Mechanism (CDM) or Joint Implementation (JI), to match their annual reported emissions.

EU governments issue EUAs and distribute (or auction) them to covered entities, and these EUAs can then be traded among companies. To ensure consistency with the Kyoto Protocol, each EUA is equivalent to, and is shadowed by, a corresponding AAU in EU government national registries. In other words, each time a company in one Member State sells an EUA to a company in another Member State, the country of the seller has to transfer an AAU to the Member State of the company which has purchased the EUA. The relevance of this to the AAU surplus discussion is explained below.

Each Member State has the final responsibility to meet its overall national emissions reduction targets, as laid out in the EU Effort Sharing Directive. It has the responsibility to manage the other approximately 50% of its emissions not covered under the EU-ETS, most notably, in the agriculture, transport and domestic sectors. If the EU-ETS and domestic emission reduction strategies in these other sectors are insufficient, a Member State can use the JI and CDM, as well as the purchase of AAUs (not available to ETS entities), to meet its reduction targets. Member States with a possible shortfall of their reduction commitments such as Spain, the Netherlands and Belgium have already done so by purchasing a combination of AAUs and credits from the CDM and JI.

## EU Climate commitments under the second Kyoto commitment period

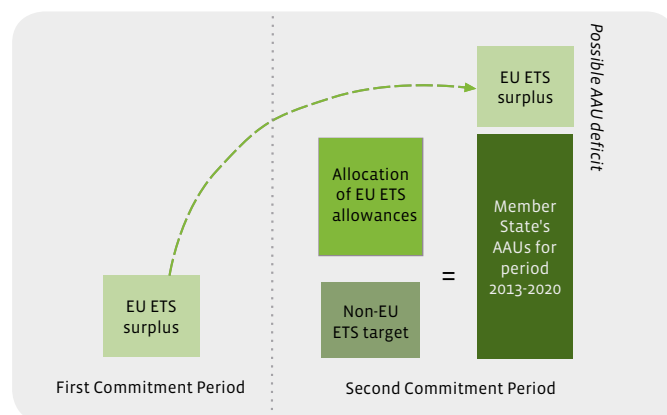
In 2008 the EU adopted its climate policy regime for the period 2013-2020, as part of the Climate and Energy Package. As part of this regime, the EU outlined an overall emissions reduction goal of 20% below 1990 levels by 2020.

### European Emissions Trading System 2013-2020

Under the EU-ETS, covered entities can purchase or hold EUAs, but not AAUs. According to the EU-ETS carry-over rules, all allowances that are not used for compliance before 2013 can be carried over to the next commitment period. Because of the economic recession, the EU-ETS is severely over-supplied. The European Commission expects up to 1.4 billion EUAs to be carried over between 2012 and 2013. In practice this means that an additional 1.4 billion EUAs have to be allocated after 2013. The problem is that those additional EUAs are not reflected in Europe's post-2012 Quantified Emission Reduction, which stands at -20% by 2020 compared to 1990.

In the second commitment period of the Kyoto Protocol, Europe's quantified emission reduction will be turned into AAUs. The AAUs for the EU's second commitment period will not include the carried over EUAs. If all things remain equal, the EU's EUA surplus carry-over would be shadowed by the carry-over of Europe's AAU surplus from the first commitment period. As we explained above, the EU's registry system works as such until the end of 2012 that EUA transfers are shadowed by AAU transfers. So, in principle, the carried EUA surplus would be matched with an equivalent AAU surplus carry-over. However, if AAU carry-over were to be restricted or eliminated, the EU faces the problem that according to domestic legislation, EU-ETS surplus allowances from 2008-2012 can be carried over but these would not be shadowed by an equivalent amount of AAUs carried over from the first commitment period. This does not in any way hamper the functioning of the EU-ETS. However, EU governments could face a shortage of AAUs to match all the EUAs for the period after 2012. In other words, the EU may face additional financial obligations to meet additional demand for AAUs to match the carry-over of EU-ETS surplus allowances.

This issue could be addressed by making the EU-ETS cap for 2013-2020 more stringent. If the EU would remove at least 1.4 billion EUAs from the EU ETS cap in 2013-2020 this would solve the necessity for EU Member States to purchase AAUs or to accept AAU banking under the Kyoto Protocol. Such a tightening of the EU-ETS cap reduction also makes sense for EU domestic policy reasons such as enhancing the EU-ETS carbon price which is currently so low that it threatens the cost-effective move to a European Low Carbon Economy of more than 80% greenhouse gas reductions by 2050.

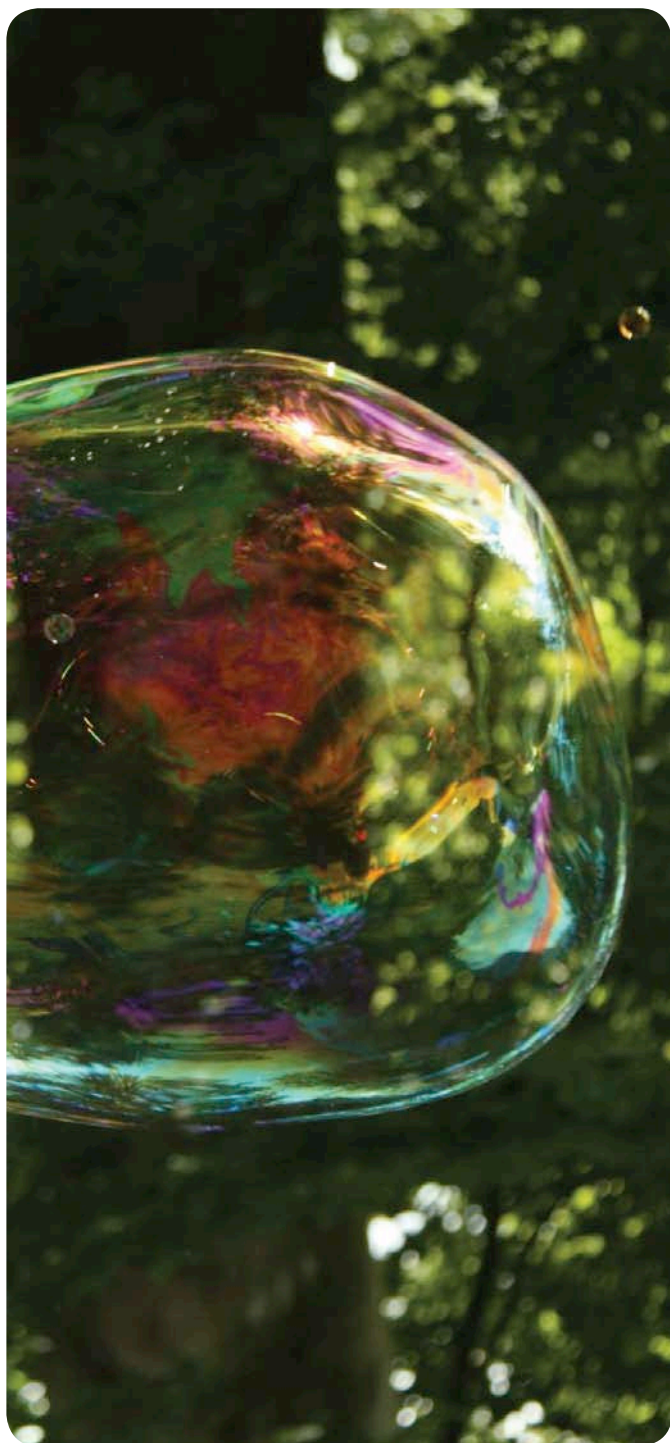


### Effort Sharing Decision 2013-2020

The Effort Sharing Decision (ESD) establishes annual binding greenhouse gas emission targets for Member States for the period 2013-2020 for the emissions from sectors not included in the EU-ETS, such as transport, buildings, agriculture and waste. Each Member State will contribute to this effort according to its relative wealth, resulting in EU-wide reductions of about 10% from the covered sectors in 2020 compared with 2005 levels. Under the ESD, Member States can no longer meet their commitment by using AAUs. Instead, an EU internal compliance unit is introduced, called an Annual Emission Allocation (AEA). The Effort Sharing Decision contains a flexible mechanism that allows Member States to purchase AEA from other Member States, however AAUs are not allowable as a compliance unit for the ESD commitment. In other words, as with the EU-ETS, surplus AAUs cannot be purchased to meet ESD commitments.

<sup>21</sup> In 1997, the then 15 Member States of the EU signed up to an -8% emission reduction in the period 2008-2012 compared to a 1990 reference level. Most of the EU Member States that joined later have the same -8% reduction target with the exception of Poland and Hungary (-6%) and Malta and Cyprus which were non-Annex I parties at that time.

If we look at the two core elements of Europe's post-2012 climate policy together (i.e. the reviewed post 2012 EU-ETS and the ESD), the picture that emerges is a climate regime that can function independently of the Kyoto Protocol and its trading of AAUs. In 2008 this was a wise choice from EU policymakers since it ensured redundancy in case no post-2012 global climate regime was established. With a second commitment period of the Kyoto Protocol now guaranteed following the UNFCCC climate summit in Durban, the EU will need to fine-tune its climate policies. In particular, Europe's domestic EU-ETS allowance surplus. To remain true to its strong climate protection rhetoric, Europe should actively support a restricted carry-over of surplus under the Kyoto Protocol and at the same time cancel its EU-ETS surplus. This would also help to stabilise CO<sub>2</sub> trading systems and therefore greatly increase their future viability.



Courtesy zwali/flickr

## Recommendations and next steps

After reviewing the current political and economic situation of the surplus of AAUs and offset credits, the argument could be made that there is little urgency to address the surplus issue, since it is unlikely that there will be demand for a significant amount of the surplus. The surplus is very large and reduction commitments are low. The supply of surplus emission credits is much larger than the expected demand. Major developed country emitters such as Japan, Canada and the US have indicated that they will not commit to binding reductions under a second commitment period of the Kyoto Protocol. The EU and Norway have already stated that they will not use traded AAUs for compliance in the next commitment period. This will further limit the demand for surplus credits. Russia, on the other hand, which holds the largest surplus, will not commit to a binding target for the second commitment period of the Kyoto Protocol. It, however, still counts on being able to see its surplus.

However, not finding a solution for the surplus is dangerous for several reasons: countries with a large surplus could then expect to be able simply carry over their surplus for use in future commitment periods.<sup>22</sup> This may stifle progress on a new global climate deal called for by the Durban Platform. The new climate regime is supposed to come into effect in 2020 and needs to be agreed on by 2015.

If a solution is not found it will significantly weaken a second commitment period under the Kyoto protocol. A new 2020 climate deal will likely build on parts of the Kyoto Protocol's framework. Having a second Kyoto commitment period that is weakened by low targets and participation, and large loopholes such as a massive AAU surplus carry-over would not bode well for the new global climate deal called for by the Durban Platform. It is therefore essential to find a solution that addresses the surplus agreed on at COP18 Qatar at the end of 2012. This would not only safeguard the environmental integrity of the Kyoto Protocol but also of any other international agreement that will succeed it.

Therefore we present the following recommendations:

### G77<sup>23</sup>

A number of Parties and Party groupings from developing countries have tabled interesting proposals that would solve the surplus issue and preserve the environmental integrity of a next commitment period, such as the proposals from AOSIS and the Africa Group summarised above.

A joint G77-supported proposal that builds on the elements of the AOSIS and Africa Group proposal would add significant political weight to the overall impetus to find a solution and put more pressure on Parties such as the EU and Russia to

<sup>22</sup> It is not unreasonable to assume that Parties with a significant surplus from the first commitment period of the Kyoto Protocol will want to have that surplus carried over or made eligible for use under a new climate agreement after 2020.

<sup>23</sup> "Developing countries generally work through the Group of 77 to establish common negotiating positions. The G-77 was founded in 1964 in the context of the UN Conference on Trade and Development (UNCTAD) and now functions throughout the UN system. It has over 130 members. The country holding the Chair of the G-77 in New York (which rotates every year) often speaks for the G-77 and China as a whole. However, because the G-77 and China is a diverse group with differing interests on climate change issues, individual developing countries also intervene in debates, as do groups within the G-77, such as the African UN regional Group, the Alliance of Small Island States and the group of Least Developed Countries." Source, UNFCCC: [http://unfccc.int/parties\\_and\\_observers/parties/negotiating\\_groups/items/2714.php](http://unfccc.int/parties_and_observers/parties/negotiating_groups/items/2714.php)

engage more constructively in this debate. We recommend the G77 decides on a proposal by the next UNFCCC inter-sessional which takes place in Bangkok at the end of August 2012.

## The Russian Federation

The Russian Federation has not signed up to a binding target under the second commitment period of the Kyoto Protocol. Nonetheless, it expects to be able to sell its surplus. But with the vast surplus AAUs it owns, it seems unlikely that other Parties would allow Russia to do so without committing to a target under the second commitment period. Russia should commit to meaningful and binding emissions cuts and also accept a significant discount on AAUs.<sup>24</sup>

Committing to binding targets under the Kyoto Protocol after 2012 and accepting a significant discount on the amount of AAUs carried over could benefit Russia. Creating more scarcity in a heavily over-supplied AAU trading market would increase the value of each AAU. The business-as-usual scenario, in which the full surplus is carried over and relatively weak targets remain for the second commitment period of the Kyoto Protocol would likely lead to a AAU price collapse after 2012.

## The European Union

As explained above, the EU has taken a contradictory stance in the surplus debate: on the one hand, the European Union has been very vocal in calling for meaningful mitigation actions. The EU has also made its participation under a second Kyoto commitment period conditional on improving the environmental integrity of the Kyoto Protocol. This includes solving the surplus issue. However, at the UNFCCC negotiations the EU has remained silent due to internal disagreement among EU Member States on how to address the surplus.

Only once an internal solution is found can the EU take a clear position at the UNFCCC negotiations. An internal solution, must be agreed on by the next Environmental Minister's Council in October of 2012. The potential inconsistencies between the EU's domestic legislation (in particular the EU-ETS) and restrictions on the AAU surplus carry-over could be resolved by committing to a higher reduction target for 2020. In particular, the EU has the opportunity to support a restricted carry-over of surplus under the Kyoto Protocol in combination with cancellation of its EU-ETS surplus and solve both issues at the same time.

It is essential for the EU to have a clear position on the surplus for an international solution to be found. If the EU and the G77 put their diplomatic weight behind a joint position the chances of successfully addressing the surplus to strengthen the environmental integrity of a second commitment period and increase the viability of a new climate treaty, would increase significantly. The EU has shown in Durban that it still can leverage positive outcomes at the UNFCCC negotiations by being the driving force behind the agreement for a new climate accord by 2015. If the EU wants to maintain its constructive role in the climate mitigation it needs to follow up with clear and strong positions on elements that could threaten the environmental integrity of a future global climate regime. The first commitment period of the Kyoto Protocol ends on 31 December 2012. There is less than six months left to find a solution to avoid up to 13 billion AAUs being carried over into the second commitment period of the Kyoto Protocol. Keeping

the existing Kyoto Protocol rule that allows unrestricted carry-over of AAUs is likely to seriously hamper climate protection efforts and could also contaminate the environmental integrity of a new climate regime negotiated under the Durban Platform.

Key players in this debate such as the G77, the EU and Russia need to act now, to make a successful resolution of the surplus issue possible at COP18 in December. For the G77 this means uniting behind one common proposal that protects environmental integrity and is both technically sound and politically feasible. Russia should assess the financial benefits it is able to get from the projected sale of AAUs, both under a restricted and an unrestricted carry-over scenario. A higher carbon price due to restricted carry over, may likely lead to higher financial value of the remaining AAUs. For the EU it is vital to resolve its internal political division and the possible liabilities related to miss-aligned domestic and international commitments in order to be able to come to Doha as a strong and unambiguous negotiator.

## References and recommended further reading

den Elzen M, Meinshausen M, Hof A. (2012). *The impact of surplus units from the first Kyoto period on achieving the reduction pledges of the Cancún Agreements Climatic Change*. DOI: 10.1007/s10584-012-0530-5

den Elzen M, et al. (2010). *Dealing with surplus emissions in the climate negotiations after Copenhagen: What are the options for compromise?* Energy Policy 38 6615–6628

European Commission (2009). *Towards a comprehensive climate change agreement in Copenhagen. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, SEC(2009) 101, SEC(2009) 102*

IPCC, 2007, *Fourth Assessment Report Working Group III Report*

Point Carbon, 2009, "Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime"

JIKO newsletter, 2012, "The AAU Problem: Set-aside and limitation: Preventing a domino effect in international climate change talks"

Korpoo A., Spencer T. (2009). *Briefing paper: The Dead Souls: How to Deal with the Russian Surplus? The Finnish Institute for International Affairs*

UNEP (2011). *Bridging the Emissions Gap - The Emissions Gap - an update*

<sup>24</sup> den Elzen M, Meinshausen M, Hof A. (2012). *The impact of surplus units from the first Kyoto period on achieving the reduction pledges of the Cancún Agreements Climatic Change*. DOI: 10.1007/s10584-012-0530-5





## THE PHANTOM MENACE

### An introduction to the Kyoto Protocol Allowances surplus

For more information about this document, contact:

Tomas Wyns  
[twyns@ccap.org](mailto:twyns@ccap.org)  
[www.ccap.org](http://www.ccap.org)

Anja Kollmuss  
[anja.kollmuss@cdm-watch.org](mailto:anja.kollmuss@cdm-watch.org)  
[www.cdm-watch.org](http://www.cdm-watch.org)



Non-Commercial (NC)  
<http://creativecommons.org/licenses/by-nc/2.0/>

**Attribution** — You must attribute the work in the manner specified by the authors (but not in any way that suggests that they endorse you or your use of the work).

**Noncommercial** — You may not use this work for commercial purposes.

*Courtesy zwali/flickr*