

## Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime

A report by Point Carbon for CAN Europe  
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## Executive Summary

CAN Europe has commissioned this report from Point Carbon to enhance the transparency of bilateral or multilateral Assigned Amount Unit (AAU) deals between governments and/or between governments and private sector entities.

The report gives an overview of governments and private-sector entities that are buying or selling AAUs and the quantities that are involved. An additional objective is to look at the potential magnitude of AAU sell-offs before 2012 and the impact on banking existing AAUs towards 2020 targets. We go on to consider how the issue of the surplus AAUs and banking is playing out in the Copenhagen negotiations.

The targets set by the Kyoto Protocol for Annex B Parties are expressed as levels of allowed emissions, or “assigned amounts,” over the 2008-2012 commitment period. The assigned amounts are denominated in “assigned amount units” (AAUs), equal to one metric tonne of CO<sub>2</sub> equivalent greenhouse gas emissions. Article 17 of the Protocol defines a “cap and trade” mechanism which allows countries to trade these units to meet their targets, a practice known as international emissions trading (IET).

Countries in Central and Eastern Europe and the former Soviet Union, so-called ‘economies in transition’, hold a surplus of AAUs in the Kyoto commitment period (2008-2012). Because their AAU surplus has resulted from economic decline in the 1990s rather than from an effort to reduce emissions, it is sometimes referred to as “hot air” – a term that is vehemently opposed by the seller countries, who instead emphasise the huge social and economic costs of the transition from planned to market economy which has enabled these reductions.

Many Annex B countries have procured, or are in the process of procuring AAUs, mostly through a green investment scheme where the revenues are invested by the seller in projects that reduce emissions (“hard greening”) or at least capacity building such as emissions inventory development in the seller country (“soft greening”). There are private sector entities and intermediaries that also engage in the trading of AAUs. It is these deals in particular that have attracted controversy for their lack of transparency and little attention to the greening of the AAUs.

We understand that 147 million AAUs have been contracted in the AAU market so far, with a further 50-60 million AAUs reported to be under negotiation. The largest sellers have been the Czech Republic and Ukraine, having sold 68,5 and 44 million AAUs respectively. The Japanese government and private companies appear to be the largest buyers, having bought most of the volume transacted by Ukraine and the Czech Republic. Latvia and the Czech Republic have concluded the most transactions, at four each. Individual transactions are listed in annex to this report.

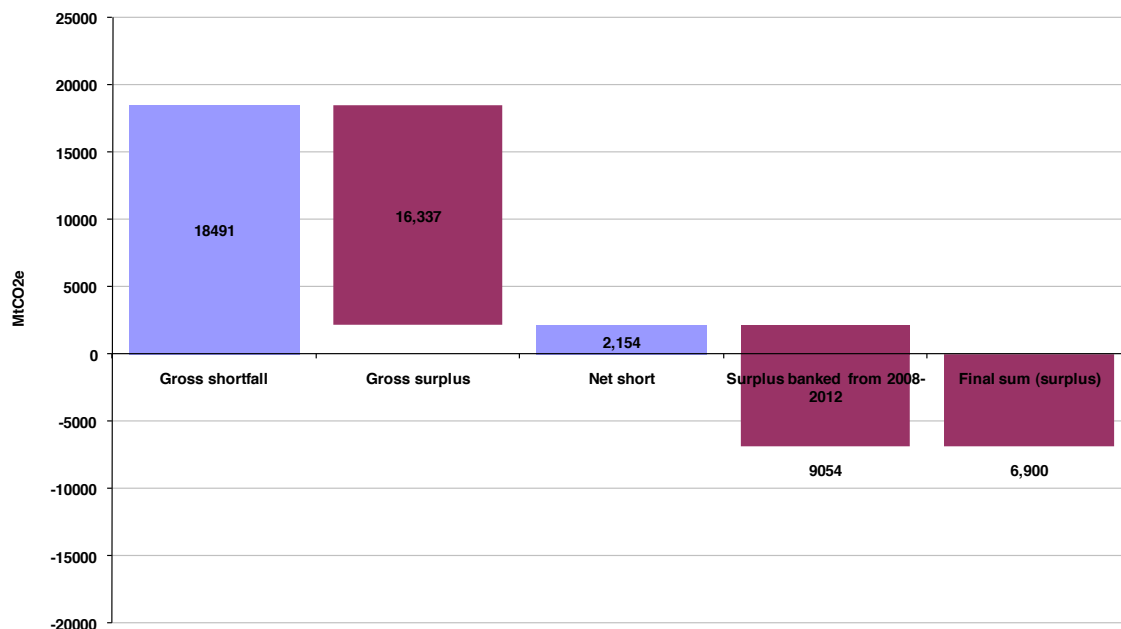
We expect that the transactions in AAUs may begin to tail off up to 2012. However, the scale of the surplus in the Kyoto period and the ability for them to be banked has implications for the effectiveness of the targets to reduce emissions by 2020 currently under negotiation.

We find that, taking the IMF's most recent global GDP growth outlook that takes into account the current economic downturn, the Kyoto period 2008-2012 could be oversupplied by 9 billion AAUs. There are no restrictions on the banking or carry-over of AAUs between compliance periods. We model business-as-usual emissions to 2020 and assume two sets of caps in scenarios A and B to determine the effect of the surplus.

In Scenario A, we apply the targets already offered by Annex B countries in the course of the negotiations, and assuming that the targets are linear, from the 2012 level through to 2020. Taking the period 2013-2020 in isolation, we find that there is a net shortfall of 2.2 GtCO<sub>2</sub> over the eight years. This corresponds to a reduction target of a 12% cut on 1990 levels by 2020, well below the IPCC's recommended 25-40% target range.

However, still in Scenario A, when one assumes that the net surplus from the period up to 2012 (9 GtCO<sub>2</sub>) is carried forward into the 2013-2020 period, we see that again the market is oversupplied, this time by 6.9 GtCO<sub>2</sub>. In other words, the oversupply in the system is enough to meet demand through to 2020, still with 7 billion AAUs to spare. If the surplus is spread evenly over the period and used for compliance, the targets' effectiveness is reduced to a 6% cut on 1990 levels by 2020.

## Scenario A, supply and demand for AAUs 2013-2020



In Scenario B, we assume that every country in Annex B takes on a target at 25% below 1990 by 2020, in line with the least ambitious end of the IPCC recommended targets. This is far higher than in Scenario A, illustrating the gap between what targets are on the table in the negotiations to date, and the IPCC recommendation. Scenario B results in a net system short of 13,615 MtCO<sub>2</sub>, taking 2013-2020 in isolation. In this case, if the full

surplus from up to 2012 were carried forward into the 2013-2020 period, the net short would be reduced to 4,561 MtCO<sub>2</sub>. The effectiveness of the cap is reduced from 25% to 19%.

## Scenario B, supply and demand for AAUs 2013-2020



There are many proposals on the table for dealing with the surplus. We find that all of them have their faults and may be rejected by one party or another. A politically-negotiated outcome may well be beyond the Parties unless there is considerable movement on the issue by the key Parties.

We also consider that the trade in AAUs is likely to diminish, as most Parties look set to turn their back on them after 2013, with the notable exception of Japan and possibly Australia or New Zealand so far.

None of the options considered for surplus AAUs satisfy all economic, environmental and political concerns. While no solution is perfect, any option or combination of options chosen must safeguard the environmental integrity of the post-2012 agreement. To quote the report from the Finnish Institute of International Affairs<sup>1</sup>, *“the surplus issue is politically extremely sensitive, and could potentially collapse the Copenhagen negotiations”*, thus the issue of the surplus AAUs could become a stumbling block in the final rounds of negotiations. As this is considered a crucial issue for Russian participation, we doubt that restrictions on AAU banking will materialize within a future international agreement.

<sup>1</sup> Anna Korppoo, Thomas Spencer. The Dead Souls: How to deal with the Russian surplus? The Finnish Institute of International Affairs, 4 September 2009. Available at <http://www.upi-fia.fi/en/publication/84/>

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## 1 Introduction

CAN Europe has commissioned this report from Point Carbon to enhance the transparency of bilateral or multilateral Assigned Amount Unit (AAU) deals between governments and/or between governments and private sector entities.

The report gives an overview of governments and private-sector entities that are buying or selling AAUs and the quantities are involved. An additional objective is to look at the potential magnitude of AAU sell-offs before 2012 and the impact on banking existing AAUs towards 2020 targets.

We consider how the issue of the surplus AAUs and banking is playing out in the Copenhagen negotiations, before offering recommendations on how the issue may be resolved.

**Chapter 2** is an introduction to AAU and AAU trading. It includes explanation of the relevant legislation in the Kyoto Protocol and the Marrakesh Accords, banking and reserves, the legal issues concerning private sector ownership and the political barriers.

**Chapter 3** explains the concept of Green Investment Schemes (GIS), elaborates on the difference between “hard greened” and “soft greened” AAUs. It also includes a description of a “typical” GIS, covering the steps involved in the greening of AAUs.

**Chapter 4** goes into the current market situation for AAU trading, and gives an overview over the AAU/GIS transactions to date. The overview includes information on sellers, buyers, volumes and prices to the extent that information is available. We will also include a view on potential new deals that might come through in the run-up to Copenhagen.

In **chapter 5** we consider the surplus AAUs in the Kyoto system, what they do to the market balance in the 2008 to 2012 period and what happens if that surplus is banked into the post-2012 era. We analyse the situation in two different scenarios, the first applying 2020 targets that have already been pledged in the negotiations and the second where developed countries take on deeper targets to meet the IPCC’s recommendation that emissions are cut to 25-40% below 1990 levels by 2020.

Rules on banking of AAUs are under consideration in the international negotiations over a new climate treaty. **Chapter 6** looks at how changing the rules on banking might affect the system balance through to 2020.

Status of the AAU surplus issue in the negotiations towards Copenhagen in December is presented in **chapter 7**. Positions, if unveiled by the Parties, and suggestions for possible solutions being discussed are also presented in this chapter.

A table of known AAU transactions to date and Point Carbon’s glossary of emissions trading terms are contained in the **annexes**.

## 2 AAU trading - the background

The targets set by the Kyoto Protocol for Annex B Parties are expressed as levels of allowed emissions, or “assigned amounts,” over the 2008-2012 commitment period. The assigned amounts are denominated in “assigned amount units” (AAUs), equal to one metric tonne of CO<sub>2</sub> equivalent greenhouse gas emissions. Article 17 of the Protocol defines a “cap and trade” mechanism which allows countries to trade these units to meet their targets, a practice known as international emissions trading (IET). Only countries that have targets can set assigned amounts and be allocated assigned amount units, hence only countries listed in the Kyoto Protocol’s Annex B are eligible for participation in IET.

Typically, AAU trading envisages that countries that have outperformed their targets and have spare units they will not need for compliance can sell them to countries that face difficulties in meeting their targets. The Kyoto Protocol regulates trading between sovereigns but leaves freedom of choice to individual countries to authorise private entities to buy or sell AAUs. Some countries (e.g. Japan and New Zealand) allow or are considering allowing domestic companies to use AAUs procured overseas for domestic compliance purposes. Other countries have explicitly excluded the possibility of using government units for domestic compliance. Most notably, AAUs cannot be used for compliance in European Emissions Trading Scheme (EU ETS) and from 2013 onwards, AAUs cannot be used for compliance by EU governments<sup>2</sup>.

The majority of the AAU surplus is held by the countries in Central and Eastern Europe and the former Soviet Union, so-called ‘economies in transition’ which suffered massive economic decline in the 1990s as a result of the collapse of the communist regimes. Because their AAU surplus has resulted from economic decline rather than from an effort to reduce emissions, it is sometimes referred to as “hot air” – a term that is vehemently opposed by the seller countries, who instead emphasise the huge social and economic costs of the transition from planned to market economy which has enabled these reductions.

The Kyoto Protocol places few restrictions on the trading of AAUs. Under the Marrakech Accords – a series of decisions known as the ‘rule book’ for the Kyoto Protocol – the only rule that countries have to abide by in trading AAUs is the “commitment period reserve” rule, which requires countries to maintain a certain number of units in their registries at all times and thus prevents overselling that could lead to non-compliance. The “commitment period reserve” rule mandates that the number of Kyoto units (ERUs, CERs, AAUs and/or RMUs) held in a national registry should not drop below 90 per cent of the country’s assigned amount in case of a short country or 100 per cent of the amount required for compliance (based on most recent emission data) in case of a long country.

There are no restrictions on the banking or carry-over of AAUs between compliance periods. Article 3.13 of the Protocol explicitly stipulates that “if the emissions of a Party included in Annex I in a commitment period are less than its assigned amount... this difference shall, on request of that Party, be added to the assigned amount for that Party for subsequent commitment periods”.

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<sup>2</sup> Following the effort-sharing decision in the 2008 EU climate and energy package

Because of the fungibility of units under the Kyoto regime, it has been argued that the lack of restrictions on banking of AAUs in practice invalidates the restrictions on the banking of other units.

Restrictions on carry-over of units other than AAUs are imposed in the Marrakesh Accords:

- Banking of RMUs for future commitment periods is prohibited (Decision 19/CP.7, para 16)
- Banking of CER/ERUs up to 2.5% of a party's assigned amount (Decision 19/CP.7, Annex, Section F)

In practice, an Annex 1 Party could use all of the CERs/ERUs/RMUs it holds for compliance purposes. This would free up AAUs which can then be banked into the next phase instead.

## 3 AAU trading with “greening”

By the time the Kyoto Protocol had entered into force, it was apparent that most buyer countries would not touch the ‘hot air’. The idea of enriching the coffers of eastern European and former Soviet states in exchange for emissions reductions that had taken place anyway was understandably shunned by many potential sovereign buyers. To minimise concerns over the legitimacy of the surplus and so effectively to rehabilitate the AAUs, it was proposed that the proceeds generated from the sales of AAUs should be reinvested by the seller countries into activities that benefit the environment.

The idea, which became known as the ‘greening’ of AAUs, was originally proposed by Russia at COP6 in the Hague in 2000 and was later taken up by Bulgaria in 2004. It was finally implemented in 2008 when Hungary and Latvia became the first East European countries to establish greening frameworks and conclude pilot transactions.

### 3.1 Degrees of Greening

There are no rules or procedures governing such Green Investment Schemes (GIS) under the Kyoto Protocol, but certain general approaches have been developed through numerous studies and stakeholder surveys. One such approach is the distinction between “hard” and “soft” greening in accordance to the relevance of the greening activities to the purposes and objectives of the UNFCCC. Thus “hard” greening could involve activities that lead to direct or indirect reductions of greenhouse gas emissions, while “soft” greening could involve public awareness campaigns, adaptation activities, or projects reducing emissions of other pollutants.

As GIS transactions began to occur, the understanding of what constitutes “hard” and “soft” greening evolved. Both buyer and seller governments tended to favour greening approaches that were closest to the goals of UNFCCC and hence the distinction between “hard” and “soft” greening shifted towards the degree of measurability of emission reductions.

Hard greening thus came to represent activities aimed at direct greenhouse gases emission reductions (e.g. renewable energy projects, energy efficiency projects), where the seller would commit to cut one tonne of CO<sub>2</sub> for each AAU it sold.

Soft greening implied activities aimed at building up the necessary framework and enabling environment for the “hard” greening to occur (e.g. management and administrative cost of GIS, capacity building).

### 3.2 Greening efficiency

Yet another subset of the greening discussion is the degree with which the emission reduction under the hard greening approach can be matched to the traded AAUs. In an ideal “gold standard” case, one AAU sold is tied to one tonne of CO<sub>2</sub>e reductions – a greening ratio of 1:1. This ideal case however has been firmly rejected by potential sellers as unrealistic. The reasons for this are two-fold: firstly, carbon finance typically contributes only a fraction of emission reduction project costs; secondly, in the majority of AAU seller countries the remaining emission reduction potential available for greening is relatively modest.

Particularly in the new EU member states, the scope for GIS is severely restricted, as much of the CO<sub>2</sub> reduction potential is already covered by a combination of JI, EU ETS, EU state aid regulations, and on-going domestic subsidy programs. The remaining GHG

reduction potential mainly exists in energy efficiency in residential and public buildings, small renewable energy sources, and GHG emission reductions from transport. In practice the new EU member states tended to favour projects involving retrofitting of buildings and housing stock for their GIS schemes due to their social significance, high potential for GHG reductions, and the fact that such projects are difficult to implement under other flexible mechanisms, particularly JI.

Russia and Ukraine, on the other hand, are not constrained by the EU ETS or EU state aid rules, and are theoretically free to choose any type of greening the buyers could accept. Furthermore, the carbon intensity of production in Central and Eastern Europe is much lower than, for example, in Russia and Ukraine. Both so far have stated their commitment to focus their GIS schemes on greenhouse gas emission reduction projects. Ukraine is open to follow the preferences of the buyers in selecting activities suitable for GIS, and has identified heat pumps and wind power projects as a priority on the basis of one completed and one pending transaction.

### 3.3 A typical GIS

Based on the experience of countries implementing and preparing to implement GIS programmes we have synthesised below a 'typical' GIS scheme.

As a rule a GIS starts with a political decision: to sell or not to sell, what to sell, and how much to sell. Such a decision might or might not be public, however typically the government agencies implementing GIS would need a clear and specific authorisation from the government to proceed. The next step is the preparation of the legal and institutional base. In most of the countries implementing GIS targeted laws were enacted describing the scheme, setting the responsibilities of government bodies, prescribing procedures for the greening, handling of funds, etc. The only exception is Ukraine where the legal framework was set by a series of government decrees rather than laws. If GIS is ever to be implemented in Russia, it would also be likely to follow a similar route due to difficulties of law-making in these post-Soviet states.

The government nominates an appropriate agency as the operational focal point for GIS to be responsible for the implementation and oversight of actual projects. Some countries already have institutions that are a natural match for implementing GIS, e.g. national environmental funds responsible for implementing government-funded environmental projects, while some countries have to seek out new arrangements. The possibility of using third-party greening agents, e.g. multilateral financial institutions, has also been discussed. The responsibility for negotiating transactions and setting GIS policies and priorities tends to remain separated in a different unit or institution.

An actual transaction is preceded by months, sometimes years, of negotiations over the quality of greening, degree of buyer control over allocation of funds, types of GIS projects, possibility of technology transfer from the buyer country, monitoring and verification procedures, actions in event of default on greening, etc. Financial arrangements might differ depending on the contract. Funds can be transferred directly to the treasury of the seller country, or to a custodian or escrow accounts, they can be released in tranches or as a whole. A model for a AAU purchase agreement can be accessed on the website of the European Bank for Reconstruction and Development (EBRD)<sup>3</sup>.

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<sup>3</sup> <http://www.ebrd.com/country/sector/energyef/carbon/mccf/index.htm#gis>

The types of the greening activities are selected based on the country's priorities as well as further emission reduction potential. In the new EU member states the constraints of EU ETS rules, state aid rules, and on-going government subsidy programs have limited the scope of activities suitable for greening. On the basis of these constraints, energy efficiency of municipal and residential buildings has been favored as a priority for GIS schemes in the EU. Ukraine allows buyers to select suitable greening areas. Up to 5% of the proceeds are typically reserved for 'soft' greening such as administration, management and auditing of the GIS.

The process of the selection of specific greening projects is typically set in the greening schedule annexed to the AAU purchase contract. Latvia and the Czech Republic carry out project selection through tender processes, while Ukraine invites buyers to participate in the selection process directly by sitting in a selection committee.

Given that a majority of the buyers are procuring AAUs with public money, monitoring, reporting, and verification (MRV) of the GIS has been an important aspect of AAU contract negotiations. To a certain degree the same is also true for corporate compliance buyers who fear similar reputational risks from investing into uncertain projects or schemes. In a GIS scheme several distinctly separate areas have been identified as potentially requiring monitoring, reporting, and verification: the allocation and distribution of GIS proceeds; the utilisation of the funds by the recipients (project hosts), and the greening effect of the project activities (measurement of actual greenhouse gas reductions). While the need for administrative and financial reporting of the implementation of the GIS is universally accepted, reporting and verification of actual emission reductions is seen as somewhat excessive by the majority of the sellers, who believe that it would unjustifiably raise the costs of GIS implementation and would not offer any advantages in comparison with more 'traditional' mechanisms such as JI.

The exact shape of the GIS depends on the approaches chosen by the seller country. The early pioneers, such as Latvia, Hungary and the Czech Republic have made their GIS schemes country-driven, emphasizing the steps they have taken to protect the integrity of the schemes. Their schemes are marketed as "ready-made" and the buyer can either take it or leave it. Ukraine and other late-comers are offering more flexibility and are positioning their schemes as more buyer-driven in order to win over the buyers. There are too few transactions to date to show a trend, so far it seems buyers have not shown a preference in which approach is chosen as long as the scheme is robust and transparent.

## 4 AAU transactions so far

We understand that 147 million AAUs have been contracted in the AAU market so far, with a further 50-60 million AAUs reported to be under negotiation. Five seller countries and five buyer countries have been active on the market; in the private sector several Japanese companies and one US-registered company have acted as buyers.

The international legal framework leaves the decision to governments whether to allow private-sector entities to own AAUs. Several governments have conferred on their companies to the ability to hold AAUs, notably including Japan.

The largest sellers have been the Czech Republic and Ukraine, having sold 68,5 and 44 million AAUs respectively. The Japanese government and private companies appear to be the largest buyers, having bought most of the volume transacted by Ukraine and the Czech Republic. Latvia and the Czech Republic have concluded the most transactions, at four each.

### 4.1 Transactions to date

The first known AAU transaction was completed in September 2008 between Hungary and the Belgian government, followed shortly by a transaction between Hungary and Spain. In total 8 million AAUs changes hands: 2 million were bought by Belgium and 6 million by Spain.

After several years of negotiation Latvia closed a €100 million (10 million AAUs)<sup>4</sup> multilateral contract involving the Netherlands (3 million), Austria (2 million), and Spain (5 million). The last part of the contract (with Spain) was closed in September 2009. Following successful closure of contracts for the first 10 million AAUs, the Latvian authorities received a mandate to continue negotiations on the sale of a further 30 million AAUs. The first sale from this amount was announced in early October 2009, and involves the transfer of 1.5 million AAUs from Latvia to Japan.

Ukraine closed its first and currently only transaction in March 2009. Out of 50 million AAUs offered, 30 million were bought by the government of Japan and 14 million by private Japanese companies, mostly compliance buyers under Keidanren's voluntary emission reduction system. The contract with the Japanese government is reported to be worth €300 million<sup>5</sup>.

The Czech Republic, although a relative late comer, closed the most deals and have sold the largest volume of AAUs among all seller countries. Its first deal was inked in March 2009 when a 40 million AAU contract was signed with Japan. In September 2009, Prague inked its third contract with the Japanese trading house Mitsui for 20 million AAUs. The counterparties have not disclosed the contract price. However, according to the recent statements of the Czech Ministry of the Environment, it is unlikely the credit

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<sup>4</sup> Point Carbon News Services: Glut of AAU deals due in September. Published: 11 Aug 2009 17:16 CET. <http://www.pointcarbon.com/news/1.1185913>

<sup>5</sup> Point Carbon News Services: Ukraine stalls spending AAU cash on green projects. Published 21 Jul 2009. <http://www.pointcarbon.com/news/1.1167145>

price has evolved much since the transaction with Japan in March 2009, reported at €10.<sup>6</sup>

In October 2009 the Czech Republic announced two new contracts: with Austria for 3.5 million AAUs and Spain for 5 million AAUs. It has also considered auctioning 10 million AAUs, however this plan appears to be postponed following the successful closure of several contracts and further on-going negotiations.

## 4.2 Transactions in the pipeline

Currently, there are a number of contracts under negotiation (see Annex 1 for a detailed list). Most recently Portugal has announced that it will buy 4 million AAUs from Latvia in a deal that is expected to be signed in late October 2009.

Having already committed 72.5 million AAUs to contract, the Czech Republic aims to sell the rest of its 100 million AAUs surplus - by the end of 2009. The Government has recently allocated a further 10 million AAUs to the upcoming deals and is involved in extensive negotiation processes with potential buyers, among them the World Bank and private Japanese companies.

Japan was looking to buy another 5 million AAUs to complete its procurement target of 100 MtCO<sub>2</sub> in 2008-12. Following the closure of the transactions with Latvia (1.5 Mt), it will need another 3.5 Mt. Previously Japan said it planned to purchase the remaining volume from Poland.

Two letters of intent have been signed between Poland, the World Bank and Ireland. Warsaw reports that ten million AAUs are to be sold to Spain and Japan in the near future.

Ukraine has signed MoUs with the World Bank, Spain and Italy, which could result in the sale of further 16 million AAUs.

The annex to this report includes a table of upcoming transactions that Point Carbon understands are being considered. The list may not be exhaustive, however, particularly as private-sector buyers tend to maintain confidentiality.

Following restructuring of the government departments dealing with Kyoto issues, Russia has become the latest addition to the list of countries carrying out negotiations on the sale of surplus AAUs. A high-level decision has authorized the government to seek potential deals in this area. Agreements to the tune of 80-100 million AAUs are reportedly being negotiated by the Russian government.

We expect that once the transactions that are under negotiation are completed, the AAU market will cool down significantly. There are several reasons for this. Firstly, the largest 'shopper' on the AAU market – Japan – has practically completed its procurement program. Secondly, the talks in Copenhagen will give an indication of the future of the east european surplus, which very likely will lose its value rapidly approaching 2012. Overall we do not see significant further demand for the AAUs on the market. A possible new source of demand could come after the revision of the Japanese Kyoto compliance policy which might show that additional government procurement of international offsets is needed to insure the country's compliance. Underutilization of the AAU surplus in the

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<sup>6</sup> Point Carbon News Services: Czechs to sell 20m AAUs. Published 03 Sep 2009. <http://www.pointcarbon.com/news/1.1207931>

majority of the long countries still presents a difficulty in the negotiations as it would still have implications for their targets in the next period. It remains to be seen whether a mechanism could be developed to tackle this issue effectively.

### 4.3 Controversial deals

Despite the confidential nature of the bilateral negotiations, which limits public control over the deals, greening remains the critical prerequisite in the majority of AAU transactions on the market to date. However, the AAU trading is not regulated to prevent ungreened or 'hot-air' deals and a few questionable transactions have taken place or are being prepared to be carried out.

#### 4.3.1 THE SLOVAKIA CASE

In the most notorious case, Slovakia signed a contract to sell 35 million AAUs to a US-registered company Interblue in November 2008. The low price of transaction – around €5 against the market average of €10 – as well as the involvement of an obscure private company registered a few months before the transaction was completed triggered a wave of criticism towards the government. More specifically, it was aimed at the former Minister of the Environment, Jan Chrbet, who was the signatory on the contract. The five-page contract missed many important legal details, most importantly any indication of a GIS framework, which Slovakia does not have.

An investigation by Slovak media showed that a garage in the U.S. town of Snohomish was located under the commercial register of the Interblue Group and that the company no longer had an operating licence.<sup>7</sup>

Two successive ministers of environment have resigned over the transaction. The Prime Minister has clarified that the country would not sell any AAUs and cancelled option agreements that would have allowed Interblue to buy the credits in the future. Due to the rolling scandal around the AAU sale Slovakia has also postponed AAU negotiations with other potential buyers.

However, Slovakia is not likely to get back the 15 million AAUs already transferred. Transfers of AAUs from one country to another are recorded on the International Transaction Log, the official AAU registry. The registry only offers information on AAU transfers between country registries, it does not specify the account holders within the country registries and does not gather data on transactions or contracts. There are two effects; firstly, the identity of the parties involved in the transactions is not public information; secondly, the registry only logs a transfer, not a transaction that may include forward delivery or options. This adds to the opacity of the AAU market and means that the destination of Slovak AAUs is not confirmed. The registry data does however suggest possible transfer paths.

To give an example of the information available, the registry data, taken from the UN Framework Convention on Climate Change website, show that Slovakia transferred 15.249 million AAUs to the Danish registry, where Interblue has an account. The data also reveal Denmark importing 5 million AAUs and transferring 20 million (a net flow of

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<sup>7</sup> TV Markíza: Interblue Group už nemá platnú licenciu na podnikanie. Published 2 July 2009. [http://spravy.pravda.sk/tv-markiza-interblue-group-uz-nema-platnu-licenciu-na-podnikanie-phn-/sk\\_domace.asp?c=A090702\\_214104\\_sk\\_domace\\_p12](http://spravy.pravda.sk/tv-markiza-interblue-group-uz-nema-platnu-licenciu-na-podnikanie-phn-/sk_domace.asp?c=A090702_214104_sk_domace_p12)

15 million) to Switzerland during 2008 and Japan importing exactly 15 million AAUs from the Swiss registry. Thus 15 million credits could have been transferred from the Slovakian to the Japanese registry via the Danish and Swiss registries. As there are no confirmed data available, these are only assumptions. It also remains unconfirmed which or whether any Japanese compliance buyer was the final consumer of the AAUs.

#### 4.3.2 *THE UKRAINE CASE*

Other examples of questionable deals can be observed in Ukraine. A Government Decree signed on 20 May 2009 gave a mandate to the Ukrainian National Environment Investment Agency - the institution responsible for GIS in Ukraine - to contract with two private companies, Switzerland-based Dighton Carbon and New Zealand-based Tawhaki International. The decree foresaw a sale of 100 million and 50 million AAUs respectively.

Both Dighton Carbon and Tawhaki International were established shortly before the transactions. The deals were described by the Ukrainian government as “promotion of investments for funding GHG emissions reduction projects”, but no details are disclosed about the nature of these projects.

Another deal reported to originate in Ukraine saw the sale of up to 300 million AAUs to the London branch of the Japanese investment bank Nomura. We currently do not see demand for 300 million AAUs brokered by a private entity on the market as the majority of demand is from sovereigns who prefer direct bilateral contracts.

Public response to these two deals in Ukraine has been much weaker than in Slovakia. Although it appears negotiations with Dighton Carbon and Tawhaki International have since been dropped, or postponed indefinitely, the large 300 million AAU deal with Nomura is still being discussed.

The Slovak deal and Ukrainian interim agreements highlight the imperative for sovereign buyers to insist on transparency in the market and a well-organized greening system in the seller countries. If anything, Slovakia and Ukraine have created case studies of ‘no go’ deals, which serve to warn other market players against engaging in similarly opaque deals with no clear monitoring or verification of emissions reductions, or any associated Green Investment Scheme at all.

## 5 The scale of the AAU surplus in the Kyoto period and beyond

In this section we consider the surplus AAUs in the Kyoto system, its impact on the market balance in the 2008 to 2012 period and what happens to a new round of targets if the surplus is banked into the post-2012 era.

As the purpose is to quantify the surplus of AAUs and compare it to the shortfall in the system, we assume that AAUs are used for compliance by parties before domestic reductions and before acquiring credits from other mechanisms. This is not evidenced in the real world, where AAU trading has only just begun in 2008-9 and tends to be linked to green investment schemes in most cases (see chapter 3).

The data is drawn from official sources (UNFCCC and KP reporting by Parties) and modelled using Point Carbon's macro-economic, equilibrium model Global Carbon Price Model<sup>8</sup>. This section concerns itself with the sum of forecast emissions minus the cap. The market implications are discussed in Chapter 6.

### 5.1 Quantifying AAU surplus to end 2012

The first point is to establish how many surplus AAUs there are in the system. We do this by calculating the business-as-usual emissions for those countries with a cap under the Kyoto Protocol. Our BAU emissions projections take into account the IMF's global GDP growth forecasts for the period, which takes the current economic downturn into account.

We then minus the cap as listed in Annex B of the protocol. We exclude the US and Canada, as the US did not ratify Kyoto and Canada's government has said it would not participate in international emissions trading and was likely to overshoot its cap. We then aggregate all the shortages presented by those countries that face a shortfall. Similarly, we then aggregate the surplus for all those countries with emissions below the cap. The total shortfall of credits is compared to the total surplus to give a final market balance figure for the Kyoto Protocol's first commitment period, 2008-2012.

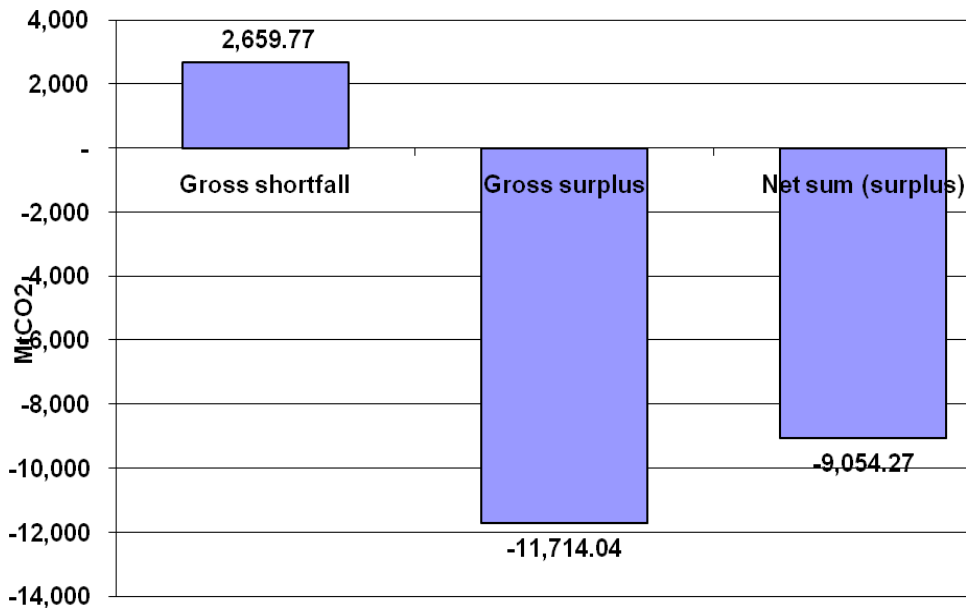
The shortfalls faced by those countries with emissions higher than their caps over the first commitment period (the gross shortfall) adds up to 2,660 MtCO<sub>2</sub>, an annual average of 532 MtCO<sub>2</sub>. The gross surplus over the period is 11,714 MtCO<sub>2</sub> (annual average = 2,343 MtCO<sub>2</sub>), indicating a net surplus of 9,054 MtCO<sub>2</sub>.

In other words, the emissions market created by the Kyoto Protocol has a surplus of AAUs to the tune of 9 billion tonnes, taking the economic downturn into account.

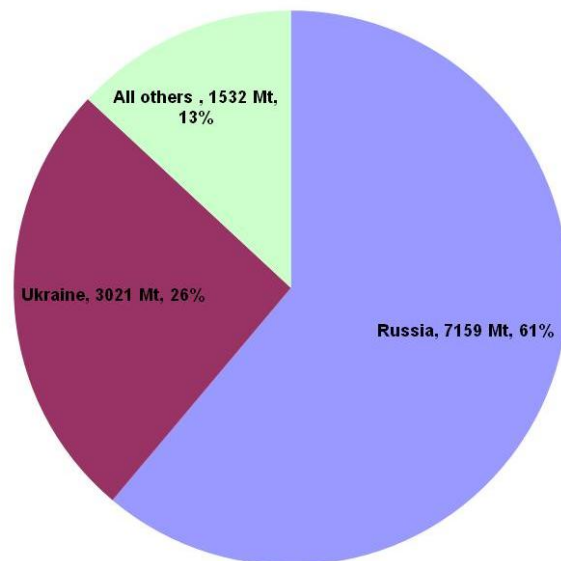
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<sup>8</sup> The Global Carbon Price Model is a framework with various (fully consistent) elements. It is flexible in design and applicable to a wide range of questions. Outputs include BAU emissions forecasts by country (150+ countries), carbon caps by country (as input or output), demand for credits, supply of credits, EU ETS prices, offset prices, EU power prices. Time range is 2013-2040. For more information please contact [London@pointcarbon.com](mailto:London@pointcarbon.com)

**Figure 5-1 AAU surplus created by the Kyoto Protocol**



**Figure 5-2 Gross AAU surplus created by the Kyoto Protocol divided by countries**



## 5.2 The effect of the surplus on 2020 targets

The oversupply of AAUs in the Kyoto period is on a scale that it casts a shadow into the period currently under negotiation. With countries working towards a new range of commitments to limit emissions, the Kyoto period surplus theoretically has the potential to undermine the environmental effectiveness of those commitments.

To illustrate the potential for weakening 2020 targets, we use historical data to forecast business-as-usual emissions using Point Carbon's Long Term Carbon Price model<sup>9</sup> and determine the shortfall of AAUs 2013-2020 in two different scenarios, taking into account the volume of AAUs that could be banked from 2008-2012.

### **5.3 Scenario A: Targets that have already been pledged**

Several countries with targets in the current commitment period have already offered targets in the months preceding the landmark climate summit in Copenhagen in December 2009. In the main, the parties offer their targets in submissions to the UN. These provide the starting point for final negotiations on a new round of caps to 2020.

In our first scenario, termed Scenario A, we assume that the Parties stick to these targets and the talks fail to yield further commitments. Where a Party offers a range of targets we take the average, for example, where the EU has offered a target at 20% or up to 30% below 1990 levels by 2020; we use a cap of 25%.

The targets and their base years that have been offered so far are as follows:

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<sup>9</sup> For more information on methodology, contact [advisory@pointcarbon.com](mailto:advisory@pointcarbon.com)

**Table 5-1** Information relating to possible quantified emission limitation and reduction objectives submitted by Annex I Parties that are also Parties to the Kyoto Protocol

Party	Information relating to possible QELROs		Inclusion of LULUCF	Inclusion of mechanisms	Status
	Range or single value by 2020	Reference year			
Australia	-5 to -15%; or -25%	2000	Yes	Yes	Officially announced
Belarus	-5 to -10%	1990	TBD	Yes	Under consideration
Canada	-20%	2006	TBD	TBD	Officially announced
European Community (EU-27)	-20 to -30%	1990	No for -20%; Yes for -30%	Yes <sup>a</sup>	Adopted by legislation
Iceland	-15%	1990	Yes	TBD	Officially announced
Japan	-25%	2005	No	Yes	Officially announced
Liechtenstein	-20 to -30%	1990	No	Yes	Officially announced
Monaco	-20%	1990	TBD	TBD	Officially announced
New Zealand	-10 to -20%	1990	Yes	Yes	Officially announced
Norway	-40%	1990	Yes <sup>b</sup>	Yes	Officially announced
Russian Federation	-10 to -15%	1990	TBD	TBD	Officially announced
Switzerland	-20 to -30%	1990	Yes	Yes	Consultations in progress
Ukraine	-20%	1990	TBD	Yes	Under consideration

*Abbreviations:* LULUCF = land use, land-use change and forestry, TBD = to be determined.

<sup>a</sup> The European Community envisages a restricted use of the mechanisms for the range of possible QELROs.

<sup>b</sup> The LULUCF sector is included following the existing rules under the Kyoto Protocol. If the rules change, Norway's national goal will change accordingly.

We also assume the following countries take on targets in relation to 1990:

**Table 5-2 Country targets assumed in scenario A**

Party	Proposed targets in Scenario 'A'		Status
	Cap by 2020	Reference year	
Kazakhstan	-16%	1990	Scenario assumption
Mexico	+15%	1990	Scenario assumption
South Korea	+32%	1990	Scenario assumption
Turkey	+100%	1990	Scenario assumption
US	-7%	1990	Scenario assumption

In the case of the US, we assume that the target suggested in the Waxman-Markey bill holds for the US at international level as well, i.e. a reduction of 7% on 1990 levels.

Kazakhstan has already requested to join Annex B with a target that would return its emissions to 1992 levels as an average over 2008-12. We assume that in order to join the list of countries with an assigned amount from 2013, it would have to commit to cut its emissions to 16% below 1990 levels.

Mexico and Korea have both suggested they would take on a commitment of some sort after 2012, so we assume targets for them that allow growth in emissions compared to 1990, but in relation to business-as-usual emissions their targets are in line with other Annex B countries. We also apply a target to Turkey, seeing it as a prerequisite for EU candidacy.

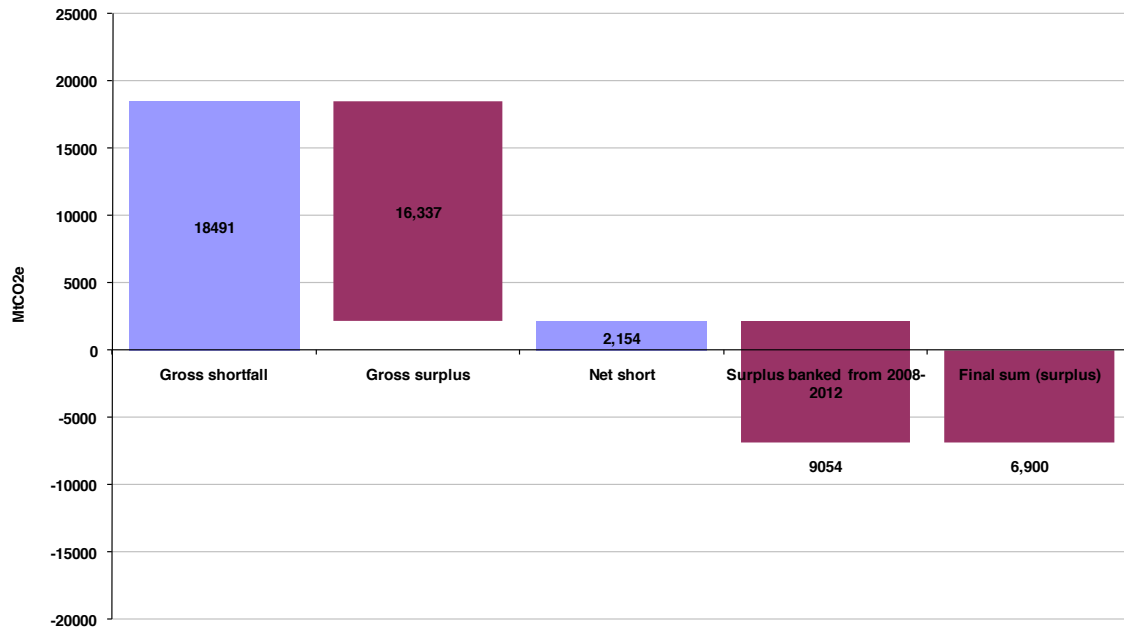
The targets are assumed to be applied in a linear fashion, from the 2012 level through to 2020.

Taking the period 2013-2020 in isolation, we find that the gross shortfall in Scenario A is 18.5 GtCO<sub>2</sub>. The gross surplus is 16.3 GtCO<sub>2</sub><sup>10</sup>. This leaves a net shortfall of 2.2 GtCO<sub>2</sub> over the eight years.

However, still in Scenario A, when one assumes that the net surplus from the period up to 2012 (9 GtCO<sub>2</sub>) is carried forward into the 2013-2020 period, we see that again the market is oversupplied, this time by 6.9 GtCO<sub>2</sub>. In other words, the oversupply in the system is enough to meet demand through to 2020, still with 7 billion AAUs to spare.

<sup>10</sup> This figure is derived from the Long Term Carbon Price Model using the latest global GDP forecast from the IMF, which results in lower BAU than previous estimates by Point Carbon.

**Figure 5-3 Scenario A, supply and demand for AAUs 2013-2020**



The round of targets applied to Scenario A here above result in a reduction of 12% on 1990 levels in the first place. Assuming the banked AAUs are used for compliance evenly each year across the 2013-2020 period, the effectiveness of the 2020 targets is halved, to a 6% cut on 1990 levels by 2020.

#### 5.4 Scenario B: Where developed countries pledge to cut emissions by 25% on 1990 levels

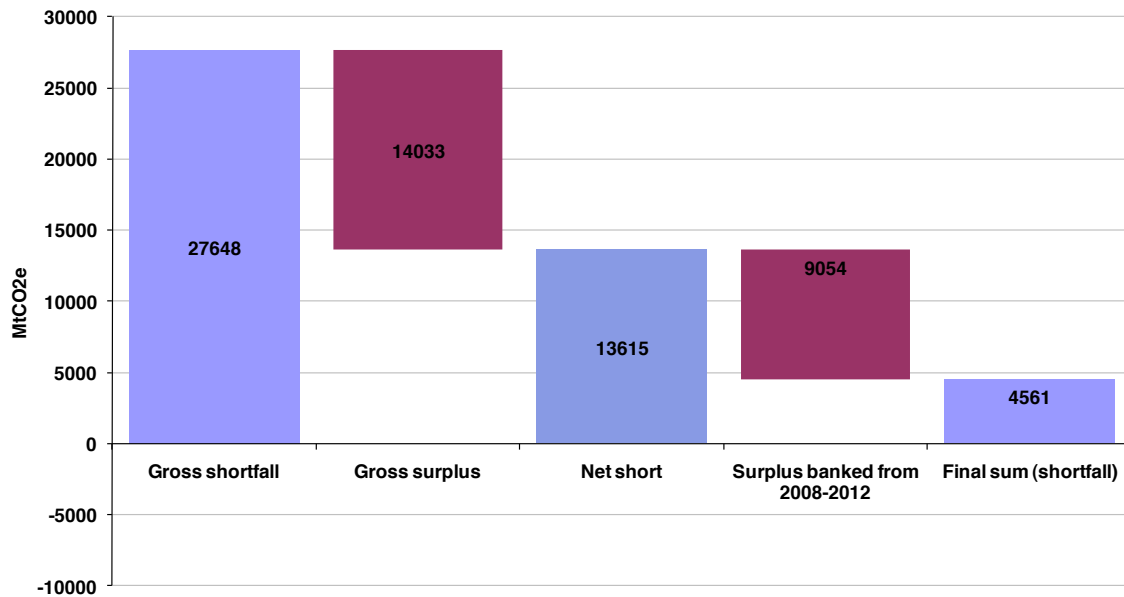
One could assert that the targets used in Scenario A reflect only some of the targets that may be assumed in the next round, plus, once the negotiations are complete, the final targets may be stricter. A more ambitious range of targets could absorb the surplus inherent in the system.

To test how deep they would have to be, we created another scenario – Scenario B – where developed countries take on targets that would meet the IPCC’s recommendation that emissions are cut to 25-40% below 1990 levels by 2020.

Taking the least ambitious end of the range, we assume that every country in Annex B takes on a target at 25% below 1990 by 2020. In this scenario, the gross shortfall is up at 27,648 MtCO<sub>2</sub>. It is worth noting that this is considerably higher than in Scenario A, an increase of 9 billion tonnes of CO<sub>2</sub>. Those countries that faced a shortfall in Scenario A for the most part now face a far deeper cut in their emissions than they had proposed; also, more countries now face a shortfall whereas before their targets left them with a surplus.

As a result, the gross surplus is 14,033 MtCO<sub>2</sub>, leaving a net system short of 13,615 MtCO<sub>2</sub>. In this case, if the full surplus from up to 2012 were carried forward into the 2013-2020 period, the net short would be reduced to 4,561 MtCO<sub>2</sub>.

**Figure 5-4 Scenario B, supply and demand for AAUs 2013-2020**



In scenario B, the targets are set at a 25% reduction on 1990 levels by 2020. Assuming the banked surplus is used for compliance evenly across the 2013-2020 period, this cap is softened to a 19% reduction on 1990 levels by 2020.

## 5.5 Quantifying the effect of restrictions on banking AAUs

The scenarios modelled in this section are based the following assumptions with regard to the banking or trading of AAUs:

- In the 2008-12 period, all gross surplus AAUs are used to meet gross demand, without limit
- All net surplus AAUs are then banked into the next phase without limit (2013-2020)
- In the 2013-2020 phase, all banked AAUs are added to the in-phase supply and used to meet gross demand.

The rules on banking are under consideration in the international climate negotiations. How could changing the rules on banking affect the system balance through to 2020? There are several options, the default being unlimited banking as represented above. The options are discussed in relation to the Copenhagen negotiations in more detail in the next chapter. In order to quantify the effect of limiting banking, here we consider three scenarios for the treatment of the surplus:

1) To discount the amount of AAUs to be banked, for example they would lose 50% of their value. This would simply lower the extra supply from banking by half, in both charts above the result would be the same; Scenario A would still be oversupplied by over 2 GtCO<sub>2</sub> to 2020, and Scenario B would be 9 GtCO<sub>2</sub> short to 2020.

2) To disallow all banking and cancel any surplus AAUs at the end of 2012. In Scenario A, this would leave the period 2013-2020 with a net shortfall of 2 GtCO<sub>2</sub> in the absence of banking, in contrast to being oversupplied with banking. As with the first option above, Scenario B would be short by 14 GtCO<sub>2</sub>.

3) To allow banking but no trading of AAUs. In this case, those countries with a shortfall in Scenario A would have to meet their shortfall either by acquiring other credits or by making reductions in greenhouse gas emissions domestically. The total shortfall they would face is 18 GtCO<sub>2</sub>. In Scenario B, the total shortfall from those countries that are short would be higher still at 28 GtCO<sub>2</sub>.

## 5.6 Key observations

We find in this modelling exercise that Scenario A represents -12% on 1990 levels by 2020, as a whole for all countries with a target. Assuming that all the surplus AAUs from before 2013 is banked and used evenly through to 2020, the effectiveness of this target is reduced to 6%.

In scenario A, new surplus is created in the cases notably of Ukraine and Russia, where targets are still above business-as-usual emissions projection. Elzen<sup>11</sup> puts this new surplus AAUs from Russia and Ukraine's targets for the period 2013-2020 at between 1 Gt and 1.1 Gt CO<sub>2</sub>.

In Scenario B, the reduction target is set at -25% on 1990 levels by 2020, the bottom end of the range recommended by the IPCC. This is more than double Scenario A in numerical terms and highlights the gap between the pledges made so far by Annex B countries and the range of cuts recommended by the IPCC. We note that in Scenario B, after banking, the effect of banking is to reduce the target from 25% cut to 19%.

Similarly, under a developed country reduction target of -30% on 1990 levels by 2020, even though not modelled specifically in this report, the effect of banking of AAU surplus would reduce the target to 24%.

Even greened AAUs have implications for the wider carbon market. They represent an offset, and in cases where the seller commits to cut less than one tonne of CO<sub>2</sub> for each AAU, they are an imperfect offset that would result in higher emissions globally. Therefore the sale of AAUs is *at best* climate-neutral and does not represent an absolute cut in greenhouse emissions globally.

It is also argued that greened AAUs compete with other offsets, such as CERs from the Clean Development Mechanism. The scale of the AAU surplus means that if it were greened and offered to market, it would satisfy much of the demand for offset credits.

Bearing this in mind for Scenario A, if one assumes that AAUs are used for compliance by governments before any other types of offset credit, such as CERs, and before extra domestic reductions are made, then there would be minimal demand for internal reductions or for other offset credits in Scenario A through to 2020.

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<sup>11</sup> Elzen et al: Pledges and Actions. A scenario analysis of mitigation costs and carbon market impacts for developed and developing countries. 7. October 2009. Available at <http://www.pbl.nl/en/publications/2009/Pledges-and-actions.html>

However, we believe the demand for green AAUs is unlikely to continue and most Annex I parties including the EU and the US have decided, or look set to decide, not to use AAUs for compliance from 2013. This leaves Japan as the major potential buyer that has not rejected the use of AAUs. These market implications are explored further in the following section. This section has demonstrated that, even without the development of a market in AAUs, their bankability still has implications for the effectiveness of the targets adopted for the 2013-2020 period, at least for those countries holding the surplus.

## 6 AAU surplus in the climate negotiations to Copenhagen

To the degree that Parties use the right to carry-over AAUs to the second commitment period, the “hot air”- issue from the Kyoto Period will be carried over to the second commitment period. An issue is to what degree carry-over of AAUs should be taken into account when establishing new targets. This section looks at how the surplus issue is addressed in the negotiations towards COP15 in December

### 6.1 Impact on target discussions

An option, at least in theory, to address the surplus issue, would be through amendment of the Kyoto Protocol Article 3.13 which allows unlimited banking of AAUs from the first to the second commitment period. However, the deadline for Parties to propose such amendments expired in June, and no such proposals were put forward before that date.

No real changes to the carry-over provisions in the Kyoto protocol are proposed in the current negotiating text. The current negotiating text for the Bangkok negotiation round on KP Article 3.13 merely includes a proposal to update the wording of the article in order to make it more precise:

*“Replace Article 3, paragraph 13, with:*

*27. If the aggregate anthropogenic carbon dioxide equivalent emissions by sources and removals by sinks of a Party included in Annex I in a commitment period are less than its assigned amount under this Article, this difference shall, on request of that Party, be added to the assigned amount for that Party for subsequent commitment periods.”<sup>12</sup>*

Over the past few months, a number of Annex 1 Parties have announced their possible targets, known as quantified emissions limitation and reduction objectives (QELROs), towards 2020 (see Table 5-1).

Parties are discussing issues concerning assigned amounts and calculation of QELROs, the main issues including:

- Establishment of Assigned amounts: Should countries have flexibility in establishment of commitments either as QELROs or absolute emissions reductions?
- Base years: Should parties be allowed to use several base years?
- LULUCF rules: Discussion on the need for clarity on LULUCF rules for the second commitment period. Most of the QELROs that have been announced do not include LULUCF. Those Parties that includes LULUCF base their target on current rules, but reserves the right to revisit the targets following changes in LULUCF rules.
- Offsets through carbon market: Discussion on limits on using the benefits of the flexibility mechanism to achieve national targets.

There has been limited discussion on the surplus-issue in the negotiations up till now. This is a highly political issue, as claiming that the potential surplus of AAUs that a Party brings into the second period should influence the level of its new target, is seen as some as implying a “punishment” for those countries.

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<sup>12</sup> FCCC/KP/AWG/2009/10/Add.2

In rare interventions on the issue, at the early rounds of the latest negotiation rounds in Bangkok (28 September – 9 October 2009), the EU raised the issues of overachievement in the first commitment period through a presentation to the AWG-KP contact group on Annex I emissions reduction. While focusing on the internal surplus issue within the European Union, the EU pointed out that the treatment of AAUs in the second commitment period impacts the scale of the emissions reductions that must be achieved. In the continuation of this argument, the EU suggested comparing targets as submitted by parties with targets identified by the IPCC<sup>13</sup>. Russia's response has been that the issue of surplus AAUs should not be linked to the discussion of targets and should only be considered after 2012, when the results of the first commitment period are known<sup>14</sup>.

The Swedish Presidency of the EU and the European Commission are eager to further strengthen the EU position on this issue, and have proposed that developed countries' post-2012 targets should reflect how many AAUs they have in reserve. Most of the eastern European states are opposing this, and the Environment Council of Ministers failed to agree on a common EU position at its meeting on the 21 October 2009<sup>15</sup>.

It is also worth noting that there are also discussions regarding banking restrictions on Kyoto units from the second commitment period onto subsequent periods<sup>16</sup>. This will thus *not affect the rules already in place for banking* from the first to the second commitment period. From initial discussions it is no surprise that Russia, Ukraine and others that hold significant surplus assigned amounts units, prefer no restrictions on the carry-over of assigned amounts to subsequent periods.<sup>17</sup>

## 6.2 Options for restricting banking of surplus AAUs

A wide range of options can be devised on how the issue of banking between the first and second commitment periods can be dealt with. Below we try to list the possible options and analyze their acceptability to the negotiating parties:

1. *Banking of AAUs is allowed.*
  - AAUs are banked without any restrictions;
  - AAUs are banked with limited restrictions as stipulated currently by the Kyoto Protocol and Marrakesh Accords.
2. *Banking is allowed but its effects on the post-Kyoto supply and demand balance are mitigated.*
  - Banking of AAUs is allowed but 2020 targets of individual countries or of Annex 1 as a whole are adjusted to absorb surplus AAU banking.
  - Banking of AAUs is allowed but targets of individual parties in Annex I are adjusted accordingly.
3. *The use of banked AAUs is restricted.*
  - A discounting rule is introduced (e.g. AAUs lose 50% of their value).

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<sup>13</sup> <http://www.iisd.ca/download/pdf/enb12431e.pdf>

<sup>14</sup> <http://www.iisd.ca/download/pdf/enb12439e.pdf>

<sup>15</sup> Point Carbon news "AAU banking divides EU states", 22 October 2009  
<http://www.pointcarbon.com/news/1.1261663>

<sup>16</sup> FCCC/KP/AWG/2009/10/Add.3/Rev.1, para 38-39

<sup>17</sup> <http://www.iisd.ca/climate/ccwgi/compilation.pdf>

- The banked AAUs can only be used for compliance by the banking country and cannot be traded.
  - A formal greening requirement is introduced, e.g. AAUs sold must be accompanied by domestic greening reductions.
  - The short countries of Annex I voluntarily abstain from buying the banked surplus AAUs.
4. *The banked AAUs are taken out of circulation*<sup>18</sup>:
- All or a portion of the banked AAUs are kept for periods beyond 2020 ('Store and Save' approach).
  - Banked AAUs are 'contributed' by surplus holders to finance adaptation and mitigation in developing countries.
  - The surplus is bought from the long countries and cancelled to remove it from the market ('Buy and Cancel' approach).
5. *There is no banking of AAUs.*
- Banking of AAUs is barred on the basis of an amendment of the Kyoto Protocol.
  - The Post-2012 regime moves away from AAU-based system.
  - A new Protocol is adopted automatically eliminating the surpluses.

The various options for limiting the banking of AAUs and restricting their use can also be mixed and applied as a 'basket' of measures. Theoretically, the specific measures chosen is not so important provided the final balance of AAUs available for compliance within a given period corresponds to the desired emission cap. From the point of view of the negotiations, however, the choice of banking restrictions is much more complex. It involves entrenched negotiating positions of a number of large Annex I emitters, first and foremost Russia.

A recent briefing paper by the Finnish Institute of International Affairs (FIIA)<sup>19</sup> highlights one of the most important issues with regards to Russian AAU surplus: "Russia views its AAU surplus as a rightful and strategic asset." At the same time Russia is not necessarily seeking to monetize its post-2012 surplus. Rather, its feeling of entitlement towards its surplus is reinforced by its "national pride"<sup>20</sup> as well as reluctance to undertake any meaningful emission reductions below the levels seen following the collapse of the Soviet Union.

### 6.3 Our recommendations

Russia's position suggests that its attachment to its surplus is strategic rather than dogmatic and that should a politically acceptable solution be found, the banking issue could be resolved.

Discounting the value of the surplus is not likely to be such a solution as it carries an undertone of moral inferiority of the Russian surplus, which Russia is not likely to accept.

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<sup>18</sup> Anna Korppoo, Thomas Spencer (2009). The Dead Souls: How to deal with the Russian surplus? The Finnish Institute of International Affairs, 4 September 2009. Available at <http://www.upi-fiia.fi/en/publication/84/>

<sup>19</sup> Korppoo and Spencer (2009).

<sup>20</sup> Anna Korppoo, The Russian debate on climate doctrine: Emerging issues on the road to Copenhagen. The Finnish Institute of International Affairs, 5 June 2009. Available at: <http://www.upi-fiia.fi/en/publication/79/>

Deepening the targets for Annex I as a whole or of individual countries in to absorb the surplus will result in dependence on surplus AAUs, giving Russia market power that other Annex I countries might not be comfortable with.

Within the framework of the international agreement Parties could look at a mix of approaches for limiting or controlling the use of AAU surpluses. This could include, among other, institutionalizing GIS as one of the mechanisms under the Kyoto Protocol, placing qualitative restrictions on AAU sales, monetizing surplus AAUs towards the costs of adaptation and mitigation in developing countries, etc.

In terms of limiting the quantity of AAUs used, simple voluntary restrictions on the use of AAUs for compliance by the buyer countries will likely be the most effective measure. It is already clear that neither EU nor the US are likely to allow the use of AAUs for compliance with their post-2012 targets. Australia and Japan – the two largest remaining potential buyers – could be persuaded to abstain from the use of banked AAUs as well, provided that a sufficient amount of international credits is available from other mechanisms.

None of the options considered above satisfy all economic, environmental and political concerns. While no solution is perfect, any option or combination of options chosen must safeguard the environmental integrity of the post-2012 agreement. To quote the FIIA report, *“the surplus issue is politically extremely sensitive, and could potentially collapse the Copenhagen negotiations”*. As this is considered a crucial issue for Russian participation, we doubt however that restrictions on AAU banking will materialize within a future international agreement.

## 7 Conclusions

The lack of transparency in some of the AAU deals that have been reported is likely to discredit the AAU market. If deals involving surplus Kyoto allowances are found to have little or no environmental benefits, and the impression one is left with is that the deals take the form of murky transactions with face-less private buyers, the public criticism towards AAU trading could lead to an increased focus on accountability for such transactions and public approbation of all forms of emissions trading indiscriminately.

To date, the question of AAU surplus carried over from the Kyoto period onto a post 2012 regime has barely been touched upon in the negotiations towards the Copenhagen summit in December, and is considered a delicate issue because of the importance for Russia. We find it quite unlikely that a negotiated solution will be found to the surplus issue, such as discounting AAUs, restrictions on banking etc, even though surplus AAUs have a theoretical potential to reduce the environmental benefit of new Annex 1 targets. The status quo is that the surplus will be banked, and it would take a political decision with widespread support from the Parties to change that.

We believe that a more probable solution to avoid these AAUs having a potential serious impact on the environmental integrity of a post-Kyoto deal will be found in the form of self-imposed restrictions on the demand side. This would be much like the current period, where most governments that have a shortfall would be expected not to procure AAUs for reputational reasons, and those that do would require guarantee of “greening” of the proceeds by the AAU seller country.

We believe that sovereign AAU buyers will continue to require that they are in fact investing in emission reductions, and that AAU sellers that are interested in remaining in the market will have to respond accordingly. In other words, pressure from buyers and the general public will lead to increased transparency.

## Annex 1: AAU transaction tables

### AAU transactions concluded to date

Seller	Buyer	Volume, AAUs	Price [€]	Estimated	Status
Hungary	Belgium	2,000,000	€13-15	Yes	greening pending
Hungary	Spain	6,000,000	€13-15	Yes	greening pending
Slovakia	Interblue Group LLC	15,000,000	€5.05	No	unclear
Latvia	The Netherlands	3,000,000	€ 10 range	No	projects selected
Ukraine	Japan	30,000,000	€ 10 range	No	projects selection underway
Latvia	Austria	2,000,000	€ 10 range	Yes	projects selected
Czech Republic	Japan	40,000,000	€ 10 range	No	projects selection underway
Ukraine	Japanese private buyers	14,000,000	€ 10 range	Yes	projects selection underway
Czech Republic	Austria	3,500,000	€ 10 range	Yes	projects selection underway
Latvia	Spain	5,000,000	€ 10 range	Yes	pending
Czech Republic	Mitsui	20,000,000	€ 10 range	Yes	projects selection underway
Latvia	Japan	1,500,000	€ 10 range	Yes	pending
Czech Republic	Spain	5,000,000	€ 10 range	Yes	projects selection underway

## Planned AAU transactions under negotiation

Seller	Buyer	Volumes (estimate)	Price €, (estimate)	Greening	Status
Poland	World Bank	10,000,000	€ 10 range	hard greening	advanced
Latvia	Portugal	4,000,000	€ 10 range	hard greening	advanced (to be signed 21 Oct 2009)
Poland	Ireland	1,800,000	€ 10 range	hard greening	advanced
Ukraine	Spain	3,000,000	€ 10 range	hard greening	advanced
Ukraine	Italy	3,000,000	€ 10 range	hard greening	advanced
Czech Republic	World Bank	5,000,000	€ 10 range	hard greening	advanced
Ukraine	World Bank	10,000,000	€ 10 range	hard greening	advanced
Hungary	Japan	-	-	-	pending
Ukraine	Dighton Carbon	100,000,000	€ 10 range	-	pending
Ukraine	Tawhaki International	50,000,000	€ 10 range	-	pending
Poland	Japan	5,000,000	€ 10 range	hard greening	-
Estonia	Finland	-	-	-	-
Poland	Spain	-	-	-	-
Estonia	Japan	-	-	-	-
Ukraine	Nomura	-	€6-7	-	pending

- Denotes "not known"

## Annex 2: Carbon glossary

### A

[AA and AAU](#), see Assigned Amount and Assigned Amount Units.

#### [Abatement](#)

Reduction in the quantity or intensity of greenhouse gas emissions.

#### [Additionality principle](#)

The principle that a project should only be able to earn credits if the GHG emission reductions produced by the project are additional to what would have happened in the absence of the carbon credit component.

#### [Additionality tool](#)

Guidelines elaborated by the CDM Executive Board to help assess whether a project is additional or not.

#### [Ad-Hoc Working Group on Further Commitments \(AWG or AWG-KP\)](#)

Subsidiary body to the Kyoto Protocol, established by the COP-11/CMP-1 in 2005 to determine further commitments for Annex I countries for the period after the first round of Kyoto emission targets expire (2012). The work is required under Article 3.9 of the Kyoto Protocol. Full name is "Ad-Hoc Working Group on Further Commitments for Annex 1 parties under the Kyoto Protocol". The group includes the Annex I countries that have ratified the Kyoto Protocol.

#### [Ad-Hoc Working Group on Long-term cooperative action under the Convention \(AWG-LCA\)](#)

Subsidiary body to the UNFCCC, established by the COP-13/CMP-3 in 2007 to produce a successor to the Kyoto Protocol after 2012. The group includes all the countries that are members of the Convention.

#### [Afforestation and Reforestation \(A/R\) Projects](#)

Afforestation and reforestation (A/R) projects involve the growing of forest on land that has not been forested for a period of at least 50 years (afforestation) or on non-forested land (reforestation) through planting, seeding and/or the promotion of natural seed sources.

[Agriculture, Forestry and Other Land Use \(AFOLU\)](#), see Land Use, Land Use Change and Forestry

#### [Alliance of Small Islands States \(AOSIS\)](#)

Coalition of some 43 low-lying and small island countries that are particularly vulnerable to sea-level rise. AOSIS countries were the first to propose a draft text during the Kyoto Protocol negotiations calling for cuts in carbon dioxide emissions of 20% from 1990 levels by 2005.

#### [Allocation](#)

The distribution of allowances to participants in an emissions trading scheme or other entities. Allocation can be done for free or by selling the allowances (see auctioning). Principles for free allocation include grandfathering, benchmarking and projections.

#### [Allowance](#)

Legally defined unit (EUAs, AAUs, RGAs, NZUs and others) that entitles the holder to emit one tonne of CO<sub>2</sub>e or another quantity of greenhouse gases. Also known as emission allowance or emission permit. See also European Union Allowance (EUA).

## Annex B Countries

Annex B countries are the 39 emissions-capped countries listed in Annex B of the Kyoto Protocol. In practice, Annex I of the UNFCCC (see below) and Annex B of the Kyoto Protocol are often used interchangeably.

## Annex Z

Annex Z of the Marrakesh Accords (COP7) defines the maximum amount of forest management credits each Annex I country can use to meet its Kyoto commitments.

## Annex I Countries

Include the industrialised OECD countries and countries with economies in transition listed in Annex I of the UNFCCC. Belarus and Turkey are listed in Annex I but not in Annex B; and Croatia, Liechtenstein, Monaco and Slovenia are listed in Annex B but not in Annex I. In practice, however, Annex I of the UNFCCC and Annex B of the Kyoto Protocol are often used interchangeably.

## Annex II Countries

Annex II of the UNFCCC includes all original OECD member countries, but not the countries with economies in transition. Annex II countries are required to provide financial resources enabling developing countries to undertake emissions reductions.

## Assigned Amount (AA) and Assigned Amount Units (AAUs)

The assigned amount is the total volume of greenhouse gases that each Annex B country is allowed to emit during the first commitment period (see explanation below) of the Kyoto Protocol. An Assigned Amount Unit (AAU) is a tradable unit of 1 tonne CO<sub>2</sub>e.

## Auctioning

Common term used for the sale of allowances, as opposed to allocating them for free. See also Allocation.

## B

### Bali Action Plan

The document approved by consensus among the 187 countries at the UNFCCC COP in Bali on 15 December 2007. It sets an agenda for negotiators to find ways to reduce greenhouse gas emissions and help developing countries adapt to environmental changes by speeding up the transfer of technology and financial assistance. The negotiating process is to be concluded by 2009 and is expected to lead to a post-2012 international agreement on climate change. Also known as Bali road map.

### Banking

The transfer of allowances or credits from one compliance period to the next. Parties to the Kyoto Protocol may bank as many AAUs they wish as long as they follow commitment period reserve rules, CERs corresponding to 2,5% of their targets, and ERUs corresponding to 2,5% of their targets, to use them in subsequent commitment periods. The EU ETS allows unlimited banking from the second compliance period (2008-12) onwards, but did not permit banking from the first to later periods. Also known as carry-over or hoarding.

### Baseline and Baseline Scenario

The baseline represents forecasted emissions under a business-as-usual (BAU; see explanation below) scenario, often referred to as the 'baseline scenario', i.e. expected emissions if the emission reduction activities were not implemented.

## Benchmarking

An allocation method in which allowances are distributed based on output (e.g. one allowance per MWh generated) or on intensity standards in the industry, based on best-performing companies.

## Bubble

Entity where two or more emission sources (for example, countries) are treated as if they were a single emission source. The European Union constitutes a bubble under the Kyoto Protocol.

## Business As Usual Scenario (BAU)

A business as usual scenario is a policy neutral reference case of future emissions, i.e. projections of future emission levels in the absence of changes in current policies, economics and technology.

## Borrowing

A mechanism under a cap and trade system that allows entities to use allowances designated for a future compliance period to meet current compliance period requirements.

## C

### Cap and Trade

A design for emissions trading systems under which total emissions are limited or 'capped'. Tradable emission allowances corresponding to the total allowed emission volume are allocated to participants for free or through auctioning. Contrasts with baseline-and-credit approaches where only deviations from a baseline are tradable. Examples are the EU ETS, RGGI, international emissions trading under the Kyoto Protocol and the proposed emissions trading scheme in Australia (Carbon Pollution Reduction Scheme).

### Carbon Dioxide Equivalent (CO<sub>2</sub>e)

Measurement unit used to indicate the global warming potential (GWP) of greenhouse gases. Carbon dioxide is the reference gas against which other greenhouse gases are measured. See Global Warming Potential for conversion rates.

### Carbon leakage

Carbon leakage occurs when production of goods is moved to countries with less strict climate policy (e.g. India and China) than the original country (e.g. EU).

### Carbon Neutrality

The practice of purchasing and retiring emission credits or allowances corresponding to the amount of GHG emissions from for instance an activity, company or country.

[Carbon Trading](#), see Emission Trading.

[Carbon Offset](#), see Offsets.

### Carbon Sink

Natural or human-made systems that absorb carbon dioxide from the atmosphere and store them. Forests are the most common form of sink, in addition to soils, peat, permafrost, ocean water and carbonate deposits in the deep ocean.

### Certification

A process by which a GHG reduction project is audited by a government agency or independent authority to determine that it meets established criteria. For instance, the act of approving

emission reductions from a carbon project and issue emission reduction credits to the entity that owns the rights to the project credits.

## Countries with economies in transition (EIT)

Fourteen Annex I countries that include some Central and East European countries and former republics of the Soviet Union that are in transition from centrally-planned economies to market-based economies.

CDM, see Clean Development Mechanism.

CDM EB, Clean Development Mechanism Executive Board.

## CDM Registry

System of accounts into which the CDM EB issues CERs from registered CDM project activities (CDM Registry).

CERs, see Certified Emission Reductions.

## Certified Emission Reductions (CERs)

CERs are carbon credits generated through the CDM. It can be used to meet an Annex B Party's emission commitment or as a unit of trade in GHG emissions trading systems.

## Clean Development Mechanism (CDM)

The CDM is a mechanism for project-based emission reduction activities in developing countries (non-Annex B countries). Certified emission reductions (CERs) are generated from projects that lead to certifiable emissions reductions that would otherwise not occur.

## Clean Development Mechanism Executive Board (CDM EB)

Body that registers validated project activities as CDM projects, issues certified emission reductions (CERs) to relevant projects participants, and manages series of technical panels and working groups meetings (see Methodologies Panel). The CDM EB is accountable to the Conference of the Parties to the Kyoto Protocol. The CDM EB meets six to seven times a year.

CITL, see Community Independent Transaction Log.

## Commitment Period

The five-year Kyoto Protocol Commitment Period is scheduled to run from calendar year 2008 to calendar year-end 2012.

## Commitment Period Reserve

To avoid "over-sell" and thus non-compliance with targets, Annex B Parties to the Kyoto Protocol must hold a minimum level, corresponding to 90% of assigned amount volume, of AAUs, CERs, ERUs and/or RMUs in a commitment period reserve that cannot be traded.

## Compliance

The act, specific to cap-and trade schemes, of surrendering the required amount of allowances, or some combination of allowances and offsets, to cover an entity's emissions. Achievement by a Party in meeting its quantified emission limitation and reduction commitments under the Kyoto Protocol.

COP, see Conference of the Parties.

## [Community Independent Transaction Log \(CITL\)](#)

Registry recording the issue, transfer and cancellation of allowances within the European Union emissions trading scheme.

## [Conference of the Parties \(COP\)](#)

The COP is the supreme body of the UNFCCC. It meets once a year to review the progress. COP-11 took place in Montreal, Canada in November/December 2005 and was also the first Meeting of the Parties to the Kyoto Protocol (MOP-1). COP-12 was held in Nairobi in November 2006 and COP-13 in December 2007 in Bali. COP-14 will be in Poznan, Poland in late 2008, while COP-15 takes place in Copenhagen, Denmark in late 2009.

## [Conference of the parties serving as the meeting of the parties to the Protocol \(CMP\)](#)

The highest decision-making body of the Kyoto Protocol. Also known as COP/MOP.

## [Credit Limit](#)

Limit on the use of CERs/ERUs for compliance by the companies under the EU ETS or other cap-and-trade systems. In the EU ETS, it is expressed as a maximum share of the total allocation.

## [Crediting Period](#)

The crediting period is the duration for which a project generates carbon credits. The crediting period shall not extend beyond the operational lifetime of the project. For CDM projects crediting period continues either a 7-year period, which can be renewed twice to make a total of 21 years, or a one-off 10-year period; for JI projects crediting period overlaps with the first commitment period under the Kyoto Protocol (2008-2012).

## **D**

## [Designated National Authority \(DNA\)](#)

The official body representing the government of the host country for CDM/JI projects. For JI host countries, the national authority approves the projects and issues the emission reduction units (ERUs). For CDM host countries, the designated national authority issues a non-objection letter necessary for the project approval, if it agrees that a project is in line with its sustainable development objectives. The DNA also issues the Letter of Approval (LoA) needed for the registration of a CDM project. A project will need both a host country approval as well as investor country approval.

## [Designated Operational Entity \(DOE\)](#)

A domestic legal entity or an international organization accredited and designated by the CDM EB. The DOE validates and requests registration of a proposed CDM projects activity as well as verifies emission reductions of a registered CDM project activity.

## [Determination](#), see also Validation and Verification.

The process of independent evaluation of a JI project by an Accredited Independent Entity whether the Project Design Document (PDD) fulfil all requirements to JI projects under Article 6 of the Kyoto Protocol and the JI guidelines. Determinations of reductions in anthropogenic emissions by sources or enhancements of anthropogenic removals by sinks pursuant to paragraph 37 of the JI guidelines are also referred to as verifications as for JI projects.

## [Domestic Project](#)

In the JI context, project developed in the absence of another Annex 1 Party participant.

## [Double Counting](#)

Potential problem with JI projects in sectors covered by the EU ETS. See also JI reserve.

## E

[EIT](#), see Countries with Economies in Transition.

### [Eligibility Requirements](#)

Conditions for being able to trade AAUs and ERUs under Article 17 of the Kyoto Protocol. There are six eligibility requirements for participating in emissions trading for Annex I Parties: (i) being a Party to the Kyoto Protocol, (ii) having calculated and recorded one's Assigned Amount, (iii) having in place a national system for inventory, (iv) having in place a national registry, (v) having submitted an annual inventory and (vi) submit supplementary information on assigned amount. An Annex I party will automatically become eligible after 16 months of the submission of its report on calculation of its assigned amount.

### [Emission Reduction Unit \(ERU\)](#)

Permits achieved through a Joint Implementation project.

### [Emissions Reductions \(ERs\)](#)

Emissions reductions generated by a project that have not undergone a validation/verification process, but are contracted for purchase.

[ERU](#), see Emission Reduction Unit.

### [European Union Allowances \(EUA\)](#)

The tradable unit under the EU ETS. Each allowance equals 1 tonne of CO<sub>2</sub>. EUAs are bankable from Phase 2 to Phase 3 of the EU ETS.

[EU ETS](#), see European Union Emissions Trading Scheme.

### [European Union Emissions Trading Scheme \(EU ETS\)](#)

Trading Scheme within the European Union, which was launched on January 1, 2005. The scheme is based on Directive 2003/87/EC, which entered into force on 25 October 2003. The Phase I (2005 - 2007) has received much criticism due to oversupply of allowances and the distribution method of allowances (via grandfathering rather than auctioning), Phase II (2008-2012) links the ETS to other countries participating in the Kyoto trading system. In Phase III, the share of auctioning will increase. In 2013 at least 50 percent of the total amount of allowances will be auctioned, and this share will increase, as free allocation (grandfathering) will be phased out towards 2020.

## F

### [Flexible mechanisms](#)

Under the Kyoto Protocol, a collective term for International Emissions Trading, the Clean Development Mechanism and Joint Implementation.

## G

[G77](#), see Group of 77.

[GIS](#), see Green Investment Scheme.

[Greenhouse gases \(GHGs\)](#)

Greenhouse gases (GHGs) are trace gases that control energy flows in the Earth's atmosphere by absorbing infra-red radiation. Some GHGs occur naturally in the atmosphere, while others result from human activities. There are six GHGs covered under the Kyoto Protocol - carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). CO<sub>2</sub> is the most important GHG released by human activities.

## [Green Investment Scheme \(GIS\)](#)

By implementing Green Investment Schemes (GIS), the seller governments of Assigned Amount Units (AAUs) demonstrate that the proceeds from these sales are invested in environmentally beneficial activities, a process also called the “greening” of AAUs.

There are two major concepts of greening – “hard” and “soft”, although both definitions are relative. Hard greening is usually defined as investing in projects aiming directly at GHG emission reductions. Soft greening stands for activities leading to environmental benefits not directly connected to GHG emission reductions measures

See also Hot Air.

## [Group of 77 and China \(G77/China\)](#)

G77/China is the developing country-group in the climate negotiations, consisting of more than 130 developing countries.

## **H**

### [Host Country](#)

A host country is the country where a JI or CDM project is physically located. A project has to be approved by the host country to receive CERs or ERUs.

### [Hot Air](#)

Excess permits (AAUs) that have occurred due to economic collapse or declined production for reasons not directly related to intentional efforts to curb emissions. Russia and Ukraine in particular have significant hot air volumes.

## **I**

[IET](#), see International Emissions Trading.

### [International Emissions Trading \(IET\)](#)

International emissions trading, one of the three flexible mechanisms under the Kyoto Protocol, allows for transfer of AAUs across international borders or emission allowances between companies covered by a cap-and-trade scheme. See emissions trading.

### [International Transaction Log \(ITL\)](#)

Database of all tradable credits under the Kyoto Protocol and the application that verifies all international transactions and their compliance with Kyoto rules and policies.

### [Intergovernmental Panel on Climate Change \(IPCC\)](#)

The IPCC was established by the World Meteorological Organisation (WMO) and the United Nations Environmental Programme (UNEP) in 1988 to assess scientific, technical and socio-economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation. It is open to all Members of the UN and of WMO ([www.ipcc.ch](http://www.ipcc.ch)).

## Issuance

Issuance refers to the instruction by the CDM Executive Board to the CDM registry administrator to issue a specified quantity of CERs for a project activity into the pending account of the Executive Board in the CDM registry.

## Internal Abatement

In emissions trading terminology, the act of reducing one's own emissions for compliance purposes, e.g. through technology upgrades and fuel switching, as opposed to buying allowances/offsets or scaling down production.

## Inventory

Country report, under the Kyoto Protocol, on anthropogenic GHG emissions and removals delivered on a regular basis according to the IPCC guidelines.

## J

### JI Reserve

A set-aside established in the National Allocation Plan for the period 2008 to 2012 of each Member State hosting or intending to host activities under the project based mechanisms of the Kyoto Protocol that could cause double-counting. The reserve refers to planned project activities and associated reductions or limitations of emissions that take place in installations under EU ETS and for which ERUs or CERs should be issued by the Member State. Also known as set-aside.

### Joint Implementation (JI)

Joint Implementation is one of the three flexible mechanisms under the Kyoto Protocol, for transfer of emissions permits from one Annex B country to another. JI generates ERUs on the basis of emission reduction projects leading to quantifiable emissions reductions.

### Joint Implementation Supervisory Committee (JISC)

Joint Implementation Supervisory Committee (JISC) supervises the verification of ERUs generated by JI projects following the verification procedure under the JISC.

## K

### Kyoto gases

The six greenhouse gases (GHG) included in the Kyoto Protocol. See Global warming potential.

### Kyoto Protocol

The Kyoto Protocol originated at COP-3 to the UNFCCC in Kyoto, Japan, December 1997. It specifies emission obligations for the Annex B countries and defines the three so-called Kyoto flexible mechanisms: JI, CDM and emissions trading. It entered into force on 16 February 2005.

[Kyoto Mechanisms](#), see Flexible Mechanisms

## L

### Linking Directive (LD)

LD formally is not a directive on its own but rather an amendment to the EU Emissions Trading Directive 2003/87/EC that permits companies to use carbon credits from CDM/JI projects for compliance with their targets under the EU ETS. It provides provisions relating to project approval processes and authorisation to participate in the flexible mechanisms, and contains additional provisions relating to the establishment of the national emissions inventory.

## [Land Use, Land Use Change and Forestry \(LULUCF\)](#)

The land-use, land-use change and forestry (LULUCF) sector was included under the Kyoto Protocol to take into consideration certain human-induced activities that remove greenhouse gases from the atmosphere, also known as carbon "sinks". The following activities referred to in Article 3, paragraphs 3 and 4 of the Kyoto Protocol, as defined in paragraph 1 of the annex to decision 16/CMP.1: afforestation, reforestation, deforestation (the direct human-induced conversion of forested land to non-forested land), revegetation, forest management, cropland management, grazing land management.

## [Long-term Certified Emission Reductions \(ICERs\), see also Temporary Certified Emission Reductions \(tCERs\).](#)

Credits issued for an afforestation or reforestation project activity that expires at the end of its crediting period. ICERs are issued for the net anthropogenic greenhouse gas removals by sinks achieved by the project activity during each verification period.

[LULUCF](#), Land Use, Land Use Change and Forestry.

## **M**

### [Marrakesh Accords](#)

Agreement reached under the UNFCCC on modalities and procedures of the international climate change policy regime developed at the seventh Conference of the Parties. The Marrakesh Accords cover significant principles for technology transfer, accounting, flexible mechanisms implementation etc.

### [Memorandum of Understanding \(MoU\)](#)

An MoU is an agreement between two parties that aims to formally recognise a joint desire to ultimately conclude an agreement or to achieve goals jointly. It may or may not have legal backing of sanction, depending upon how it is constructed. MoUs between host and investor country are often used as a basis for CDM/JI projects.

[Meeting of Parties \(MOP\)](#), see CPM.

## **N**

### [National Allocation Plan \(NAP\)](#)

Plan from a Member State for how to distribute EU allowances across installations taking part in the EU ETS in that given country.

[National Authority](#), see Designated National Authority or Focal Point.

### [National Communication](#)

A report submitted in accordance with the UNFCCC and the Kyoto Protocol by which a Party informs other Parties of activities implemented to address climate change.

### [New Entrant Reserve](#)

In the EU ETS, this is the amount of allowances the countries have set aside for new installations ("new entrants") or expansions at existing installations.

### [Non-Annex I countries](#)

Countries that have ratified or acceded to the UNFCCC, but not included in Annex I and have no emission reduction targets. Annex I is an Annex in the UNFCCC listing those countries that are signatories to the Convention and committed to emission reductions.

## O

### [Offset credits or offsets](#)

Emission reduction credits from project-based activities that can be used to meet compliance or corporate objectives as a supplement or alternative to reducing one's own emissions. In a cap-and-trade scheme, offsets may be used instead of allowances, sometimes up to a limit (see credit limit). CERs and ERUs are types of offset credits

## R

### [Reduced emissions from deforestation and degradation \(REDD\)](#)

Reducing emissions from deforestation and [land] degradation. Mitigation action that seeks to preserve existing carbon stocks in forests (typically tropical rainforests), peat lands etc. The approach would be additional to project-based efforts such as the CDM. Issues to be solved are permanence, leakage, monitoring and baselines.

### [Removal Units \(RMUs\)](#)

A unit relating to land use, land use change and forestry activities and is equal to one metric tonne of CO<sub>2</sub> equivalent. RMUs cannot be banked for use in any subsequent commitment period, but can be converted into Assigned Amount Units (AAUs) within a national registry.

## S

### [Secondary Market](#)

The secondary market signifies the second transaction or trading of Certified Emissions Reductions (CERs) related to CDM projects or Emission Reduction Units (ERUs) from JI projects.

### [Sinks](#)

The removal of greenhouse gases (GHGs) from the atmosphere through land management and forestry activities that may be subtracted from a country's allowable level of emissions.

### [Subsidiary Body for Implementation \(SBI\)](#)

Body advising and assisting the COP in matters relating to implementation of the UNFCCC and in preparing its decisions.

### [Subsidiary Body for Scientific and Technological Advice \(SBSTA\)](#)

Body advising the COP on scientific and technical matters. It provides a link between the scientific information from experts and the policy-oriented needs of the COP. The SBSTA works closely with the Intergovernmental Panel on Climate Change (IPCC).

### [Supplementarity](#)

Supplementarity is a provision in the Kyoto Protocol stating that emissions trading should be a supplement to domestic action. This provision is the basis for the European Union's limitation on the imports of CERs and ERUs.

## T

### [Temporary Certified Emission Reductions \(tCERs\), see also Long-term Certified Emission Reductions \(lCERs\)](#)

Credits issued for an afforestation or reforestation project activity under the CDM that expires at the end of the commitment period following the one during which it was issued. tCERs are issued for the net anthropogenic greenhouse gas removals by sinks achieved by the project activity since the project start date.

## Track 1 and Track 2 JI Projects

To host Track 1 (fast-track) JI projects, a country has to meet the following criteria: a) be a Party to the Kyoto Protocol; b) calculated assigned amount; c) establish national registry; d) submit the annually required inventory; e) establish system for the estimation of emissions and sinks; and f) submit additional information on the assigned amount.

If host country meets all criteria, it is free to implement JI projects under Track 1: apply its own criteria and approve the project and emission reductions according to its own rules. In case a host country meets only a)-c) criteria mentioned above, it is eligible for Track 2 JI projects. Second track JI more closely resembles the CDM. Projects must be examined and the emissions reduced or sequestered verified by an independent entity before any transfer of ERUs can occur.

## U

### Umbrella group

An informal group of industrialised countries that do not belong to the EU but occasionally acts as an negotiating bloc on specific issues. The group was formed after the adoption of the Kyoto Protocol, and consists of Japan, USA, Canada, Australia, Norway, New Zealand, Iceland, the Russian Federation and Ukraine.

### United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC was established 1992 at the Rio Earth Summit. It is the overall framework guiding the international climate negotiations. Its main objective is "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (man-made) interference with the climate system".