

Liz Bossley describes the background to Bali

As the world's climate leaders prepare for their last meeting before the Kyoto Protocol takes effect on 1 January 2008, the focus of attention will be on China, India and South Korea, three rapidly growing countries who have signed the Protocol, but who have not agreed to cap their emissions. These countries could have a much larger impact on the international price of carbon if they continued to reject Kyoto emissions caps and instead devised their own domestic greenhouse gas trading schemes better suited to their own needs and under their own control.

Background

The 13th Conference of Parties (COP 13) to the UN Framework Convention on Climate Change (UNFCCC) takes place in Bali between 3 and 14 December 2007, coinciding with the 3rd Meeting of Parties (MOP 3) to the Kyoto Protocol.

The Kyoto Protocol comes into full force and effect on 1 January 2008. Thirty-eight developed (UNFCCC Annex 1/Kyoto Annex B) countries have been given legally binding targets to reduce their emissions of greenhouse gases (GHGs) by on average 5.2 percent compared with 1990 levels in its first commitment period of 2008–2012. This average target was spread unevenly amongst the countries concerned as the result of a highly charged political negotiation:

EU	-8% average
USA	-7%
Croatia	-5%
Japan/Canada	-6%
New Zealand/Russia/Ukraine	0%
Norway	+1%
Australia	+8%
Iceland	+10%

Australia and the USA refused to ratify the protocol largely, but not solely, because the world's fastest developing economies, the so-called non-Annex 1 countries, were not

obliged to commit themselves to cap their own emissions growth.

In Bali discussions on the second Kyoto commitment period will centre on which countries will accept caps and what those caps will be for 2013 and beyond. It is now almost a foregone conclusion that Australia will ratify Kyoto after its elections on 24 November because both the main opposition parties have said that they will do so. It is also just a matter of time before the USA comes in to the Kyoto fold as the tide of US public opinion in favour of ratification is likely to prove too strong for the ultimate successor to George W. Bush to resist.

Pressure on China, India and South Korea to accept a cap from 2013 is growing but so far only South Korea is showing signs of weakening. It is this author's opinion that these three countries should stand firm and resist the imposition of Kyoto caps. This is because any caps that they might be induced to accept are likely to be set high for political reasons so as to undermine the whole Kyoto cap-and-trade concept.

The Cap and Trade Concept

The general idea of cap and trade is that a central authority, in this case the UN, sets a limit on permitted emissions levels. The central authority allocates a number of allowances, i.e. rights to emit, below current

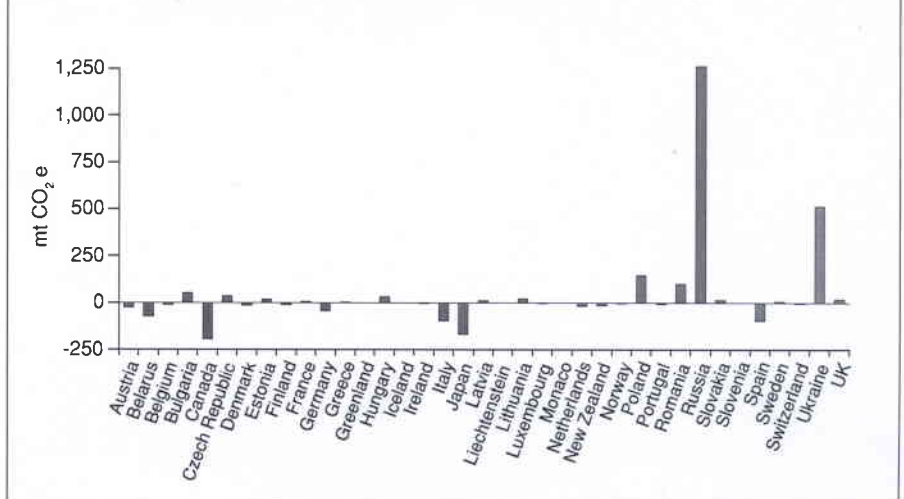
emissions levels, creating a shortage of allowances. The emitters must obtain sufficient allowances to cover their actual emissions levels over the target period, in this case 2008–2012. The emitter, faced with an allowance shortage, can then either cut its production or, invest in cleaner technology that emits less carbon per unit of production or, it can buy in the market sufficient allowances to cover its shortfall.

For Kyoto to achieve anything there must be a shortage of allowances such that their traded price is high enough to incentivise change. A positive allowance price will encourage countries and companies who can cut their emissions cheaply to do so, in order to generate a surplus of allowances to sell to those for whom emissions cuts are less easy and more expensive.

Kyoto looks to have fallen at the first fence in this objective. The surplus of allowances in the hands of Russia and the Ukraine during the period 2008–2012 is vastly greater than the shortages of all the other capped countries put together (see Figure 1). This is because of the choice of 1990 as the base year against which emissions caps were set: in 1990 the USSR's economy was much larger than that of the countries that emerged when it broke up.

This suggests that the price of carbon may be so low in the period 2008–2012 that there will be no

Figure 1: Surplus/Deficit of Allowances 2008–2012



incentive to cut emissions. However, the situation may be retrieved by the fact that Russia can choose to carry forward some of its surplus into 2013 and beyond when caps should be set lower. Furthermore the countries that are short, notably Canada and Japan, have said that they will not buy 'hot air' from Russia i.e. surplus allowances that have been generated without any effort to cut emissions levels. Nevertheless the existence of the Russian surplus should put a psychological ceiling on prices in the first period.

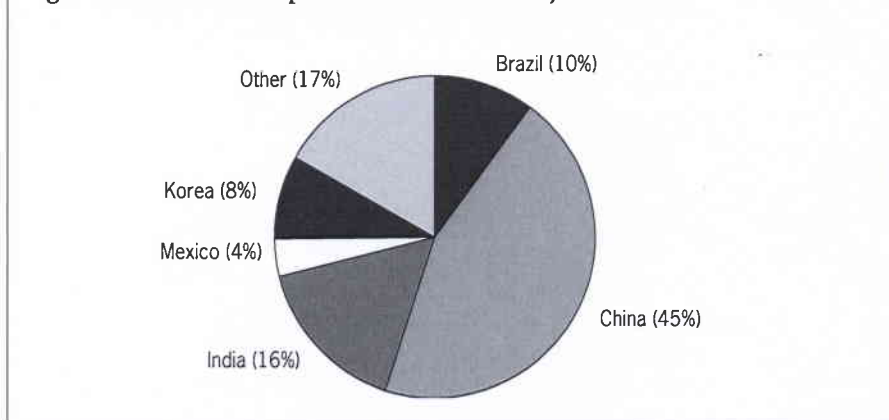
It would be unfortunate if the cooperation of the Non-Annex 1 countries such as China from 2013 were to be bought with a cap that is so high as to create a similar surplus in the second commitment period. It seems highly unlikely that China would accept a real limit on its rapidly growing economy and all of its rhetoric suggests that it will not do so. A high cap for China would not only fail to limit Chinese emissions, but could also create an emissions allowance price that is so low as to undermine efforts to cut emissions in the Annex 1 countries.

The Contribution of the Non-Annex 1 Countries

The fact that the Non-Annex 1 countries have not agreed to emissions caps does not mean that they are not contributing to the effort to mitigate climate change. Through the Kyoto Clean Development Mechanism (CDM) these countries are hosting clean technology projects financed by foreign investors who are rewarded in the form of tradable allowances, called Certified Emissions Reductions (CERs) (see Figure 2). These CERs can be sold on the international market or be used by Annex 1 countries to meet their own country-wide emissions caps set by the Kyoto Protocol.

The more CDM projects that are hosted by the Non-Annex 1 countries, the cleaner will be the technology underlying their inevitable economic growth. However the downside of this approach is that the more CDM projects that exist, the greater the

Figure 2: Clean Development Mechanism Projects



number of CER allowances that are created to add to the surplus already bearing down on the market price.

To guarantee a high emissions allowance price that incentivises green behaviour worldwide, there has to be a change in the fundamental supply and demand parameters of the Kyoto emissions trading scheme. This is where the Non-Annex 1 countries, particularly China, could achieve most from its position outside the Kyoto cap-and-trade mechanism.

If China were to devise its own domestic cap-and-trade mechanism, targeting whichever sectors, industries or regions within its own borders that it deemed appropriate, it could buy a significant proportion of the international market surplus of allowances for compliance with its own domestic scheme. This would rescue the price of allowances in the international market and support the objectives of the Kyoto Protocol without the need for negotiating a Kyoto-prescribed cap.

In this way China, or any other Non-Annex 1 country or even a country completely outside Kyoto for that matter, could encourage green growth in its own economy. If the international carbon price is low, this would be achieved at minimal cost. If, against all expectations, the international carbon price turns out to be high, the Non-Annex 1 country could adjust its domestic cap levels without consulting the UN if the compliance burden proved too onerous for its growing economy.

Mechanics

Any country, region, local authority, company or individual can trade in most of the different types of Kyoto allowance asset classes by opening up a registry 'Person Holding Account' in one of the 25 operating European allowance registries. This is achieved by a process similar to opening a bank account.

In time, as the various US regional schemes, such as the Californian or the RGGI scheme, the New Zealand and Australian emissions trading schemes start trading, a country such as China can recognise emissions allowances from around the world, not just those generated by Kyoto. It could, if it chose to do so, also recognise allowances from good quality voluntary emission reduction schemes (VERs).

At the moment, Kyoto-generated allowances are not fungible with allowances from other sources such as US, Australian and VERs. In other words a US allowance cannot be used by an Annex 1 country to meet its Kyoto cap, or vice versa.

If sufficient Non-Annex 1 countries chose to introduce domestic emissions trading schemes outside the direct control of the UN, but using existing Kyoto-based allowances and/or allowances generated by non-Kyoto schemes, it would not only raise the international carbon price but also provide a fungibility link between the prices of allowances from diverse sources that are not otherwise interchangeable.