Summary

The recent climate summit in Durban led to an agreement to negotiate a single, legal agreement by 2015 that will cover all major carbon emitters and that will be in force from 2020. This is a big step forward, as it breaks the barrier between developing and developed countries that has been plaguing international negotiations for the last two decades (TCI 2011a). However, in Durban countries also recognised that existing commitments are not sufficient to keep global warming below the 2 °C above pre-industrial level they acknowledge as dangerous. In the agreement, called the Durban Platform, countries therefore renewed their commitment to increase the level of ambition of national efforts to reduce emissions (TCI 2011a).

Below we propose bi- or pluri-lateral arrangements that may help to boost the level of global mitigation ambition. These would allow developing and developed countries to trade in emissions permits. Such a structure has similarities to the regional and bilateral trade agreements that have risen largely from the lack of pace in global trade reform and would operationalize a trading based ‘flexibility mechanism’ in the lead up to a comprehensive legal agreement by 2015 for 2020 and beyond. In brief, the aim of bi- or pluri-lateral arrangements, or emissions trading coalitions (ETCs) as we call them here, is to:
+ Be complementary to the multilateral system. A key benefit of ETCs is that they can offer road-tested solutions to difficult policy design and implementation issues and thereby speed up the multilateral negotiation process regarding multilateral flexibility mechanisms. A strong focus on environmental effectiveness and using multilateral arrangements is central to achieving this. For instance, a high quality threshold for measurement, reporting and verification may be set to enhance credibility even though this restricts the emissions sources that can be covered by ETCs.

+ Reward developing countries that are leading the way by having pledged their own emissions reduction targets and offer positive incentives for others to follow suit. This contrasts with current arrangements whereby developing countries are given a dis-incentive to agree to binding targets because agreeing to their own target weakens their ability to sell emissions ‘offsets’ through the Clean Development Mechanism.

+ Allow a greater range of emissions reduction initiatives from developing countries to be eligible for sale to developed countries. Aside from providing greater access to imports of reliable and cost effective emissions reductions to developed countries, this enhances developing countries’ ability to use efficient mitigation policy tools such as broad based regulations and emissions pricing.

By providing opportunities for export revenues, ETCs can contribute to overcoming barriers to economic reforms that have the potential to reduce emissions and enhance economic development at the same time (e.g. improving the efficiency of electricity markets that may be hampered by entrenched interests and the accelerated removal of fossil fuel subsidies).

+ Leverage the concept of conditional targets that some developed countries (including Australia) have to increase levels of ambition in developed countries. Indeed, the effort required in setting up an ETC appear justified when compared to pursuing links to other developed country schemes, such as the European Union Emissions Trading Scheme (EU ETS). This is because large effort may be required to successfully link to other developed country schemes but the payoffs would be limited, for instance, limited improvement in global ambition can be expected.

This paper briefly outlines the concept of emissions trading coalitions, then provides some context by looking at the relative successes and shortcomings of the existing multilateral climate mechanisms aimed at reducing global mitigation costs – the ‘flexibility mechanisms’. Lastly, the paper covers selected ETC issues, including aligning incentives, measurement, reporting and verification (MRV) and potential costs and benefits to participants.
Emissions Trading Coalitions

Emissions trading coalitions (ETCs) are aimed at bringing together a select number of countries who agree that participating developing countries can sell emissions reductions beyond their pledged targets to participating developed countries. The core idea is to bring together willing countries to operationalize a trading based ‘flexibility mechanism’ in the lead up to a comprehensive binding agreement with a view to contributing positively to the multilateral negotiations. The idea is similar to the regional trading arrangements discussed in Professor Garnaut’s Update Paper 2 (Garnaut 2011). The biggest contrast perhaps is that less emphasis is placed on the geographic location of partners in ETCs and that rather than suggesting starting with reduced emissions from deforestation and forest degradation, we suggest covering sectors where MRV systems are better developed.

Figure 1 presents a snapshot of how an ETC might work.

**Figure 1**
*Emissions Trading Coalition snapshot*

- **ETC Institution**
  - Ensure transparency (publish rules, methodologies and member reports)
  - Issue ETUs on the basis of verified reports, ensure no double counting
  - Manage process for updating rules and methodologies in line with international developments
  - Facilitate tracking of units in UNFCCC system

- **Developing country members**
  - Set national target, broken down to sectors covered by the ETC (e.g. settle BAU counterfactuals by sector and allocate contribution by sector to target)
  - Set national policies, including regulations and where appropriate market reforms
  - Set up MRV system in accordance with ETC rules and report against these

- **Developed Country Members**
  - Decide on how ETUs are to be accounted for (towards primary target, financing commitments or conditional target)
  - Set up arrangements for companies to be able to remit ETUs (and cancel AAUs in line with decision on ETU use)
  - Report ETU volumes and values to ETC Institution as well as AAU cancelations where appropriate

- **Funds + assistance to set up infrastructure, eg MRV system**
Figure 2 below illustrates how developing countries would generate permits for sale within an ETC:

Developing country members of the ETC need to have an agreed absolute target in sectors covered by the ETC arrangements. In this illustration we assume that this is expressed as a deviation from a quantified business as usual (BAU) emissions path. In order to ensure that there is no double counting, but to allow participating developing countries to take advantage of existing flexibility mechanisms (as discussed in a separate section below), developing countries would be allowed to sell emissions reductions below their agreed target, net of any credits sold through existing flexibility mechanisms such as the Clean Development Mechanism (Target - Credits Sold). So, to the extent that the actual emissions path is below the ‘Target - Credits Sold’ emissions path, then the difference between the two represents the emissions trading units (ETUs) available for sale to developed countries within the trading coalition.

Figure 2
Developing country permits available for sale within ETC
Developed country members of the ETC could account for imported permits in various ways. As illustrated in Figure 3, an option would be for ETUs to be counted towards the importing country’s target (Option 1). In other words, ETUs would be treated in a similar way to other imported units such as Certified Emissions Rights under the Clean Development Mechanism (more details on the CDM are provided below).

Option 1 has the advantage of increasing the availability (liquidity) of imported emissions reductions and providing more robustness to the flexibility mechanism system by allowing additional (beyond CERs) types of credits to be traded between developing and developed countries.

A drawback of Option 1 is that it may not be consistent with developed country multilateral commitments to count ETCs towards their target. For instance, if a country was to agree to a target for a second commitment period under the Kyoto Protocol, ETCs could technically only be counted if the Kyoto Protocol was expanded to recognise ETCs. However, judging from the Durban Platform the Kyoto Protocol may be superseded by new arrangements post 2020, some may suggest negotiating the introduction of ETCs to that Protocol may not be worth the effort.

In light of this – and given that part of the brief for this paper is to look at ways of increasing the levels of global mitigation ambition – another option would be to not count ETUs towards the purchasing countries’ target. This could be achieved by cancelling a unit in the domestic scheme for each imported ETU (Option 2), in effect increasing the level of collective mitigation ambition through the scheme. This may provide a credible way of operationalizing the conditional targets some developed countries (including Australia) have pledged under the Copenhagen Accord and Cancun Agreements. Alternatively, developed countries could use any transactions associated with ETUs to count towards their global climate change financing contribution (eg estimated to be around AU$1.9 to 2.7 billion per year for Australia by 2020 in Jotzo et al. 2011).

It may not be necessary to mandate the treatment of units by developed countries under ETCs for the period leading up to 2020. Different countries could decide to handle the imported units differently,
To provide some background about existing flexibility mechanisms and motivate the creation of ETCs, the following section discusses existing flexibility mechanisms in the multilateral system.

Flexibility mechanisms under the UNFCCC

There are three existing ‘flexibility’ mechanisms to facilitate the trade of units amongst Parties to the Kyoto Protocol:

- emissions trading;
- the Clean Development Mechanism; and
- Joint Implementation.

All of these mechanisms reduce the total cost of achieving agreed emission targets under the Kyoto Protocol by allowing emissions reductions to be bought and sold across national boundaries. Net buyers can reduce the cost of achieving their targets through cheaper abatement, while sellers boost their export earnings. These mechanisms are subject to a number of decisions by the Parties to the Kyoto Protocol regarding post 2012 arrangements, for example, which countries will take on new Kyoto targets. The ability of countries to access these mechanisms post-2012 is subject to some uncertainty (in particular for emission trading, see below), which may reduce investor confidence and thereby diminish their ability to contribute the desired ‘flexibility’.

Negotiations around new market mechanisms are also ongoing under the UNFCCC and will be a central feature of the detail around the new agreement to be finalized by 2015. In Durban, countries made an undertaking to maintain and build on existing mechanisms associated with the Kyoto Protocol, and agreed to implement a work plan that will define a framework for new market based mechanisms to ensure they are credible and deliver real pollution reductions. Countries also acknowledged that countries can individually or jointly develop new market mechanisms outside the UNFCCC negotiations (TCI 2011a).

Emissions Trading

Under the Kyoto Protocol, countries with a Kyoto target (Annex B Parties) can buy emissions reductions to meet their target for the commitment period (2008-2012) from other Annex B Parties that are emitting less than their target (expressed as levels of allowed emissions or ‘assigned amounts’, hence the units traded are Assigned Amount Units or AAUs). For example, Australia will likely exceed its first commitment Kyoto target and may have around 125 million AAUs worth $300-$770 million to sell (Deutsche Bank, 2012).

In principle, emissions trading provides incentives for emissions to be reduced in a least cost manner—if an additional unit of abatement is cheaper in one jurisdiction than another, then the fact that emissions can be traded provides an incentive for the cheaper abatement to go ahead and reductions to be sold at profit. Gains from trade are exhausted through this process by ensuring that the cost of an additional unit of abatement gets equalised across all participating jurisdictions.

However, emissions trading can only work as ‘flexibility’ mechanism where all trading parties have accepted emission caps, so that collective emissions are unchanged if one country emits more than covered by their AAUs by buying spare AAUs from another party. To date it has therefore been restricted to Annex B Parties who have taken on binding commitments under the Kyoto Protocol.

ETCs may provide a stepping stone to multilateral emissions trading by allowing non Annex B Parties that are willing to accept targets in the lead up to 2020 to sell emissions reductions beyond their target to Annex B Parties.

Project-based mechanisms

The Joint Implementation (JI) mechanism and the Clean Development Mechanism (CDM) are mechanisms that allow abatement generated by individual projects (like replacing an emissions intensive old power plant with a clean new one) to be sold. JI projects can only be generated in Annex B countries and give rise to Emission Reduction Units (ERUs). The CDM is the non Annex B (mainly developing countries) equivalent; it allows the sale of abatement from projects in developing countries by allowing Annex B country
buyers to fulfill (a part of) their Kyoto commitments with the use of CDM credits, called Certified Emission Reductions (CERs).

The CDM has given rise to large investment in low carbon development in developing countries and is seen as the most successful of the flexibility mechanisms (Carbon Trust 2009). The relative success of the mechanism provides important lessons for flexibility mechanism design. As succinctly put in a German Environment Ministry discussion paper on sectoral approaches (Umweltbundesamt 2011, p 12):

[…] the CDM became the most successful of the Kyoto Mechanisms. This was due to the fact that emissions credits are granted by an international institution without interference of the host country government. This enabled to avoid governmental corruption [sic], especially due to the higher transparency of the CDM process in comparison to the Joint Implementation (JI) process.

While the CDM project cycle is cumbersome, it has led to full fungibility of credits and their general acceptance as compliance tools. Only recently, media and NGO pressure has weakened the trust in CERs, leading to the EU decision to ban imports of certain credit types.

Moreover, companies in developing countries, especially the BASIC countries, discovered that CERs are a valuable export commodity, leading to a race to unilaterally develop CDM projects. This had not been foreseen by anyone and is the key secret of CDM success.

The lessons from the CDM are thus that the availability of a transparent incentive for private companies on the international level which cannot be taken away by governments of low credibility can mobilize significant mitigation action.

The CDM is also subject to a number of weaknesses. In contrast to emissions trading, whereby countries can sell emissions beyond their targets, CERs (and ERUs) are generated by assessing projects relative to a counterfactual baseline. To the extent that the amount of emissions savings is over-estimated, then it allows buyers to emit more without the seller emitting much less. In other words, project based mechanisms have the potential to weaken global abatement when CERs exceed actual emissions reductions and thereby undermining environmental integrity.

This potential problem is well understood and is part of the reason for the onerous rules and procedures associated with project certification (Carbon Trust 2009). Nonetheless, establishing a counterfactual emissions baseline for projects and crediting ‘additional’ emissions reductions is fraught and subject to error. Especially given that project investment decisions are ultimately based on the subjective judgment of investors. Indeed, the processes continue to be refined, as is evident from the CDM agenda items in Durban, which included methodology monitoring and additionality assessment as well as establishing a process for appeals against CDM Executive Board decisions (Andrews et al. 2012).

Despite all the best efforts, the credibility of the CDM has been undermined by bad press over certain classes of CDM projects. After investigations into the integrity of some project classes (HFC-23 and N₂O based CERs), the European Union (EU) has moved to ban their acceptance to safeguard the environmental integrity of their scheme (Sandbag 2011).

For the purposes of this paper, an interesting aspect of the CDM is that even if the CDM were, on average, to deliver the full emissions reductions it accounts for (say by erring on the side of giving less permits to some projects than they actually reduce emissions just as often as erring on the side of giving more), the bad press is likely to continue. This is because policies designed to abate greenhouse gas emissions are hotly contested, and those advocating weaker mitigation action have an incentive to highlight bad CDM projects to undermine support for strong mitigation action. As such, using CDM credits as the primary vehicle to obtain emissions reductions from developing countries is fraught politically.

Further, by being able to sell CERs, emitters obtain financial incentives to reduce emissions from a business as usual baseline for emissions they avoid. Thus, rather than facing a costly constraint, industry sectors that are able to generate CDM credits gain additional profit (Carbon Trust 2009, p 6). This effectively gives a boost to emitting industries in CDM host countries and exacerbates leakage opportunities for emissions intensive activities from Annex B Parties to non Annex B Parties.

Perhaps most importantly, however, incentives for developing countries to agree to binding targets are weakened through the CDM. This is because there is a financial incentive to have high baselines in order to generate more CDM credits. Efforts to counteract this provisions that allow policy baselines to be ‘backdated’ not withstanding, to the extent that a country agrees to achieve an emissions reductions goal by its own means (e.g. Indonesia with its 26% emissions reduction target relative to
business as usual emissions by 2020), then eligibility for CDM credits has to be affected if additionality is to be ensured and double counting is to be avoided. ETCs improve incentives for developing countries in this regard by allowing the sale of permits beyond acceptable targets. Indeed, as discussed below, an important feature of ETCs is the selection of participating developing countries on the basis of the targets they are willing to agree to.

As a project based mechanism, the CDM also suffers from not being able to harness emissions reductions from large categories of actions (e.g. carbon taxes, broad based regulations). This provides a strong case for the creation of ETCs in the lead up to a comprehensive agreement to allow participating developing countries to use broad based and efficient policies to restructure their economies away from carbon intensive activities. For instance, many developing countries have opportunities for broader economic reforms to also deliver significant emissions reductions. Export opportunities generated by ETCs may provide opportunities to overcome barriers to such reforms (e.g. improving the efficiency of electricity markets that may be hampered by entrenched interests and the accelerated removal of fossil fuel subsidies).

**Incentive alignment**

To be successful, the mechanism discussed here needs to align incentives with the ultimate goal that is being aimed at – a comprehensive multilateral agreement with a binding collective cap that adds up to an amount consistent with a stabilisation in atmospheric greenhouse gas concentrations at a level that avoids dangerous climate change.

A comparison of the incentives provided by ETCs with those provided by offset mechanisms demonstrates how they better align incentives to this goal. Offset mechanisms like the CDM provide incentives for poor countries to not accept binding targets, as doing so is made more costly due to the opportunity cost of foregone CER exports. This is because if a CDM host country were to have its own cap, then to avoid double counting (once towards the developing country target and again towards the country in which the CERs are redeemed) host countries would miss out on lucrative offset opportunities.

In contrast, ETCs reward developing countries for taking on their own caps by providing an export market for emissions reductions beyond their cap. Indeed, ETCs provide a vehicle for validating the choice of developing countries to commit to emission reductions and increase the likelihood that they will meet or exceed their target.

Such commitments are not a hypothetical; Indonesia’s pledge is a case in point. The exact numbers are not yet settled but according to an Indonesian Ministry of Finance Green Paper, which was prepared with assistance from Australia, the 26% reduction from BAU by 2020 plausibly implies a reduction of around 6% relative to 2005 levels, (MOF 2009, p 3). This is incontestably a significant contribution to global ambition given the current state of negotiations and a daunting task.

Negotiating an ETC provides an opportunity to set a valuable example to the rest of the world of how to use flexibility mechanisms to reward rather than punish such behaviour economically.

A key incentive issue that needs to be addressed as part of designing emissions trading coalitions is how to avoid interfering with a developing country’s ability to sell CDM or other credits should it choose to do so while ensuring that there is no double counting. Indeed, any additional mechanism will have to work in parallel to existing mechanisms and be flexible enough to withstand changes to arrangements in UNFCCC process. In part this is to avoid undermining the multilateral system but in part it is also to ensure that developing countries that sign up to emissions trading coalitions are not disadvantaged should prices inside the coalition trading system fall below what can be obtained through the multilateral system and/or if volumes are restricted.

To address this, emissions trading coalition credits could be traded net of any credits sold through other mechanisms, such as the CDM. Figure 2 above illustrates this. For further elaboration, suppose BAU for the covered sector(s) was 100 Mt and the agreed contribution by the exporting country was 10Mt and that at the end of the year emissions actually were measured to be 75Mt, then the country could prima facie export 15Mt (100 – 10 – 75 = 15). However, if the country had exported 5Mt of CDM credits in the covered sector(s) in the same year, then the calculation would leave 10 Mt for export in the trading coalition (100 – 10 – 5 – 75 = 10). In this way, double counting is avoided and the exporting country can still take advantage of alternative flexibility mechanisms if the prices are
favourable, if the volumes in the trading coalition market are insufficient and/or if the stability of the trading coalition is in doubt.

Implications for measurement, reporting and verification (MRV)

A significant challenge for emissions trading (this also applies to offset mechanisms) is that it requires very strong MRV systems. Indeed, the commodity that is traded is created by the MRV system in the first place. In other words, no exchange of actual goods or services takes place, instead payments are made for changes in emissions that are accounted for through the MRV system.

This underlines the importance of having a credible and transparent accounting system. In a recent analysis of options to develop international greenhouse gas unit accounting after 2012, Prag et al (2011) suggested a spectrum of options, ranging from a top down model whereby all greenhouse gas accounting and market mechanisms are managed through the UNFCCC to a fully fragmented model whereby individual countries define their own rules with minimal international coordination (Figure 4).

Figure 4

ETC arrangements occupy middle ground in options for greenhouse gas accounting.

Source: modified from Prag et al 2011
In order to ensure consistency with a strong multilateral framework, it is important to have transparent accounting rules as well as reporting links back into the UNFCCC system. A ETC institution may need to be set up to publish rules, procedures and member country reports; manage the process for updating such rules and procedures in line with international developments; and facilitate the comparability of ETUs and their tracking in the UNFCCC system.

While much progress has been made with respect to accounting methodologies and MRV systems, many sources of emissions are still subject to measurement difficulties and significant controversy. In light of such difficulties, it may be easier and more credible to initially only cover limited sectors of the economy, targeting sectors where data is more readily available and where methodologies are relatively straightforward. This may be necessary to ensure that a sufficiently robust and credible MRV system can be finalised quickly (eg in the energy sector and perhaps the electricity sector specifically).

While reducing the complexity of establishing comprehensive MRV systems, a sectoral approach introduces the complication of requiring developing country participants to apportion a contribution by covered sectors to their overall commitment. This is not necessarily straightforward, for example in Indonesia, 26% below BAU for the economy as a whole may not mean 26% in the electricity sector – in fact, given the low cost abatement opportunities in the land sectors, the electricity sector is likely to contribute a smaller proportion.

Keeping with Indonesia as the example, while work has been done on ascertaining BAU and estimating how much may come from which sector by a number of government institutions in this space (notably Bappenas, the Ministry of the Environment and the National Council on Climate Change), this work has not been finalised. In one sense, this offers an important opportunity for potential partner countries, to have input into the apportionment before it is finalised and to satisfy themselves that the level of ambition in the covered sectors is appropriate.

Consistency with multilateral arrangements

A potential drawback from flexibility mechanisms that are negotiated outside UNFCCC system is that these may serve to undermine the environmental integrity of the existing multilateral system and may even undermine the system itself. For example, if less than robust and/or non compatible accounting methodologies proliferate, much of the work that has been done over the past two decades to build a credible, transparent and harmonised accounting framework as part of the UNFCCC process may be undone.

Similarly, if gases or sources are included in ETCs beyond those agreed as part of a multilateral system, but the measurability of impacts is controversial, the multilateral system may be undermined. There is also a risk that countries with otherwise strong accounting methodologies may water down the commitments they are making internationally by buying less than credible emissions reductions by applying soft rules or through trading arrangements with countries where the accounting methodologies and/or verification are weak.

That said, well-designed emissions trading coalition arrangements could support the multilateral system and even accelerate the emergence of a comprehensive legally binding multilateral agreement. Key is a strong focus on environmental effectiveness and using multilateral arrangements where possible. Variations from multilateral arrangements should only be introduced where they have strong merit and with emphasis on transparency and credibility. Coverage may initially be limited to areas where measurement methodologies are well established and less controversial – such as energy related emissions rather than REDD related ones. Targeting coverage in this way could help ensure robust governance arrangements and boost credibility.
In addition to ensuring credibility, a high threshold for sources of emissions to be covered within ETCs provides strong incentives for robust MRV systems to be instituted in areas not initially covered. This is because each extra source that is covered allows an increasing range of low cost abatement options to generate export revenues. Thus, ETCs could help accelerate the development and implementation of strong and credible MRV systems – a prerequisite for a comprehensive and well functioning global agreement – and these could serve as examples for the international community to learn from.

Some key design elements aimed at ensuring that emissions trading coalitions can have a positive role to play in moving the multilateral system along follow:

- ETC arrangements have to be based on credible, measurable and verifiable emissions reductions – transparency is key and this applies a fortiori to the setting of sectoral baselines.
- Coverage may have to be limited to areas where MRV systems are well established and international agreement on methodologies is high. For example, land based emissions account for the majority of Indonesia’s emissions and many low cost abatement options exist for REDD in that country. However, measurement methodologies and systems lag behind those available in the energy sector (MOF 2009), suggesting that coverage may be initially limited to energy sector emissions to ensure ETC credibility.
- Any expanded coverage compared to the multilateral system (e.g. additional gases, soil carbon etc) have to be carefully accounted for separately so that comparability of effort is not undermined and so that new areas being tested do not undermine confidence in the emissions trading coalition.

The process and timeline for the development of an ETC is complex. A timeline for the finalisation of the post-2020 legal agreement is unlikely to be finalised before 2015 and it is also unclear whether the full set of accounting and other rules will be agreed by 2015. For instance, after Kyoto was signed a number of years of negotiations occurred before the detailed rules where finalised under the Marrakesh Accords. More investigation of appropriate timelines is necessary but operationalizing an ETC by 2015 may be opportune and coincide with the deadline for negotiations of a new global agreement as envisaged in the Durban Platform as well as with the timing of Australia’s emissions trading scheme moving to a floating price in 2015. A credible ETC can influence this process in a number of ways:

- Road test credible approaches to new market mechanisms. If robust this will build confidence in new non-project based mechanisms, provide the foundations for new accounting rules and provide a real world counter weight to proposals that lack environmental credibility, e.g. Japan’s Bilateral Crediting Mechanism (CDC Climat Research 2012);
- Form natural informal negotiating blocs, e.g. Australia, Indonesia and South Korea, who could act collectively to advance their interests in the negotiations. Negotiating groups that cross developed and developing country divides had proven effective in brokering solutions in the UNFCCC when the divide between these groups has stymied progress (TCI 2011b).
- Critically, by providing incentives to participate, ETCs can be used to encourage developing and developed nations to commit to binding post 2020 targets. As these targets are negotiated access to low cost abatement can allow developed nations to increase their level of ambition.
Improving conditionality arrangements

Many countries have pledged emissions targets that are tighter under more comprehensive international action. For example, Australia’s current pledge is to reduce emissions by 5% below 2000 levels by 2020 on an unconditional basis, and between 5 and 15, or 25% depending on the actions of other countries. ETCs could be used to add formal meaning to the conditionality of such conditional pledges by ensuring that emissions imported as part of coalition arrangements expand the importing country’s pledge (at least by a proportion).

This would confer a double benefit in terms of the level of global ambition – exporting countries have enhanced incentives to contribute own emissions reductions and importing countries automatically tighten their commitments as a function of trade. There are many subtleties to implementing this design feature and it is beyond the scope of this paper to go into the detail other than to say that it could add significantly to the global credibility of trading coalitions; provide an interesting blueprint for multilateral target negotiations; improve price stability in the scheme; and make being part of such coalitions very potent politically for exporting countries.

Bi- or plurilateral emissions trading coalitions

Emissions trading coalitions could function as a bilateral arrangement or a larger plurilateral arrangement. The main advantages of seeking to include a number of players rather than just having a bilateral trading arrangement is that:

+ international credibility would be enhanced if a multitude of partners were engaged;
+ credibility for participating sellers would be enhanced (avoiding the danger that a single buyer may change its policies and abandon the market); and
+ the larger size of the market increases the economic benefits of being able to sell into it.

Indeed, in a bilateral setting, it is more likely that countries may compromise on environmental integrity in order to achieve other aims. For example, developed countries may be tempted to leverage the fact that they are providing an export market for emissions reductions in developing countries to enhance their own export opportunities when it comes to low emission technology (CDC Climat Research 2012) — agreed rules and procedures may reflect this and provide a bilateral benefit that misses the mark when it comes to contributing to enhanced global ambition and providing a pathway to a comprehensive multilateral system.

Nonetheless, building a plurilateral system with multiple buyers provides significant challenges when developed countries do not yet have linked schemes amongst themselves (other than within the EU) due to difficulties in finding answers to key design issues relevant to linking (see Baker and McKenzie 2007). It may therefore be necessary for Australia to begin with bilateral trading with selected developing countries. But this would be an inferior outcome and appropriate efforts should be made to secure plurilateral trading for instance by exploring the willingness of other potential buyers such as New Zealand, Japan, South Korea and perhaps even California to be part of an ETC. Indeed, such efforts appear justified when compared to pursuing links to other developed country schemes, such as the EU ETS. This is because large effort may be required to successfully link to other developed country schemes but the payoffs would be limited, for instance, little improvement in global ambition can be expected.
Risks and benefits to parties

If we take trading between Australia and Indonesia for the sake of illustration, the benefits and risks to each may be characterised as follows:

**Benefits to Indonesia**

▲ Create an additional and potentially broader market for emission reductions to be exported into, providing a hedge against low prices and/or volume constraints in the CDM market (e.g. EU restricting CDM to least developed countries, supplementarity, etc.).

▲ Not prejudice Indonesia’s ability to sell CERs. Indonesia, may in fact be able to sell more CERs because systematic policies to reduce emissions in covered sectors are likely to provide a foundation for alternative technology deployment and hence more projects that would be eligible for CDM credits.

▲ Help achieve Indonesia’s emissions reduction target by also harnessing low cost reductions in the covered energy sector (currently Indonesia is planning to achieve most of the emissions reductions to achieve the 26% target in the land sectors) and using the lure of export revenues to justify doing so.

▲ Provide a mechanism to sell emissions reductions emanating from broad based policy and market reform rather than being restricted to the sale of permits from specific projects. If developed countries count the emissions reductions towards their international financing commitments, the ETC provides a way of operationalizing the 41% target set by Indonesia (Indonesia has pledged a reduction of 26% from BAU by 2020 with its own effort and up to 41% with international assistance).

**Benefits to Australia**

▲ Establish a credible source of permits creating additional liquidity and a hedge against problems in the CDM market (e.g. bad press may force the government to limit acceptance of CDM credits, China may become a weaker source of CDM credits given emissions trading trials in key regions).

▲ Institute a tangible way of increasing global ambition by rewarding commitments by developing countries. To the extent that ETU are not (fully) counted towards developed country targets, ETCs could also give more meaning to conditional targets.

▲ Help build new flexibility mechanisms and accelerate transition to comprehensive global action.

**Risks for Indonesia**

▲ If Indonesia does not manage to meet its target, it would damage its credibility (this is already an issue given that it has pledged a target publicly and entering a trading coalition may not make matters worse, especially if Indonesia can show that it has tried in good faith and entering a trading coalition would add to that).

▲ Australia abandons the scheme and does not make good on providing an export market when Indonesia has incurred costs to meet and exceed its target with a view to obtaining access to export revenues.

**Risks to Australia**

▲ Indonesia does not meet its target and has therefore nothing to sell, making efforts to establish the scheme look wasteful

▲ Indonesia initially has ETUs to sell but fails to meet its target in subsequent years leading to the perception that no emissions were saved (perception because it is likely that reductions did in fact happen but were not sufficient to offset trends in BAU that were not foreseen).

▲ Australia abandons the scheme and upsets Indonesia (and the international community) as well as providing an example of failure to the international community, making comprehensive agreement more difficult (through increasing a lack of trust by developing countries).
Conclusion

In summary, building on the multilateral framework – but complementary to it – ETC arrangements could bring together a select number of countries that agree to credit emissions reductions to each other beyond agreed baselines and count these in their emissions reduction pledges under the UNFCCC.

ETCs have the potential to accelerate progress towards the mitigation required to avoid dangerous levels of climate change. This is because:

+ An increasing number of developing countries are taking significant action and pledging their own emissions reduction targets. Bi or plurilateral trading may provide opportunities to use gains from trade to further encourage such action and show how workable and mutually beneficial arrangements can be put in place to support a comprehensive multilateral trading system.

+ Bi or plurilateral trading could enhance participating countries’ levels of ambition by enabling emissions reductions at less cost in developed countries and by encouraging developing countries to pledge targets in order to enter such arrangements and thereby take advantage of export opportunities. Ambition could be enhanced even further by providing a vehicle for importing countries to extend their pledged emissions reduction as a function of permits imported (giving formal meaning to conditional pledges).

+ Participating countries could benefit from being able to shape arrangements that, if successful, could form a basis for future multilateral arrangements.

+ If designed carefully to manage the potential for fragmentation in the multilateral system that may follow the proliferation of bi or plurilateral arrangements, emissions trading coalitions may provide a stepping-stone to more comprehensive multilateral arrangements. They may provide examples of workable solutions to the many design difficulties and uncertainties that will face policy makers in achieving a comprehensive agreement.
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