Managing Global Insecurity MGI

Hitting Reboot

Where next for climate after Copenhagen?

Alex Evans and David Steven[1]

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[1] Alex Evans and David Steven are Non-Resident Fellows at the Center on International Cooperation (CIC) at New York University.

Summary

Copenhagen got us little further than Bali: a weak political declaration, with 2ºC as the only number. In some respects, the result moves us backwards: the politics are worse, while numbers previously agreed by the Kyoto club are omitted here. The conditions to turn a political declaration into a comprehensive deal appear absent.

Rather than hitting the brakes, deal-makers need to steer into the skid by building on unprecedented engagement by heads of state; ratcheting up pressure for US legislation; revitalising strategy among those pushing for a deal; and fundamentally altering the politics of developing country engagement on climate.

To do this: they should build and diversify the support base for action on climate change, making tangible to elites and publics what a long-term solution looks like; create the 'bandwidth' needed to agree a comprehensive deal, while developing the institutions needed to build confidence that the deal can actually be implemented; and increase levels of trust in the climate policy debate, by showing a new willingness to talk frankly and honestly about how to manage climate risk. With these ends in mind, the paper offers 12 recommendations as follows.

Focus debate on solutions by:

- **Rebuilding trust in the science**
- **Initiating a more mature discussion of climate risk**
- **Creating a common language to help deal-making**

Make the low carbon economy tangible by:

- **Pursuing quick wins alongside the post-Copenhagen process**
- **Building low carbon into the fiscal tightening**
- **Tightening the focus on disruptive technologies**

Connect the dots between climate and other global issues by:

- **Getting ready for the next resource price spike**
- **Recognizing and welcoming the inevitability of carbon tariffs**
- **Focusing development strategies on building resilience**

Correct the institutional deficit on climate change by:

- **Setting up a new International Climate Performance Committee**
- **Creating incentives for developing countries to take on binding targets**
- **Using the forthcoming UN High Level Panel on Climate and Development as a key avenue for progress**

Climate's Groundhog Day

"This agreement is a vital step forward for the whole world."
Gordon Brown after the Bali climate summit in December 2007

"This is the first step we are taking towards a green and low carbon future for the world."
Gordon Brown after the Copenhagen climate summit in December 2009

"A pivotal first step toward an agreement that can address the threat of climate change."
Ban Ki-Moon after the Bali climate summit in December 2007

"It is a step in the right direction."
Ban Ki-Moon after the Copenhagen climate summit in December 2009

After a build-up that lasted more than two years, the Copenhagen summit stands as an anticlimax and a failure. Far from reaching an ambitious global climate deal, two weeks of negotiation dumped the climate process more or less back where it started at the Bali summit in 2007 – with no more than a non-binding political agreement to keep talking.

	Bali (all countries)	*Bali (Kyoto countries)*	*Copenhagen*
Level of ambition	Deep cuts in global emissions.	Emissions to peak in the next 10-15 years and be reduced to very low levels, well below half of levels in 2000 by 2050.	Deep cuts in global emissions so as to hold the increase in global temperature below 2ºC Global emissions to peak as soon as possible. Review in 2015, including of the merits of a 1.5ºC goal
Action by developed countries	Quantified limitation and reduction objectives, with each country to make a 'comparable effort'.	As a group to reduce emissions in the range of 25-40% below 1990 levels by 2020.	Each country to submit a quantified economy-wide emissions target by 31 January 2010, with performance subjected to international review.
Action by emerging and developing countries	'Nationally appropriate mitigation actions…in a measurable, reportable and verifiable manner.'		Countries to provide a list of their 'mitigation actions' by 31 January 2010. Domestic verification but with 'international consultations and analysis under clearly defined guidelines that will ensure that national sovereignty is respected.'
Status	Unanimously adopted	Adopted by all Kyoto parties (though not by the USA)	'Noted' in plenary, with six countries registering dissent.

Table 1 - Scant Progress from Bali to Copenhagen

There was some concrete progress. Copenhagen's agreed to keep warming to less than 2ºC (a target on which G8 members had already agreed at their 2008 summit at L'Aquila). There was also a plan for all countries to make specific commitments to reduce or limit the growth of emissions, and a new provision for some form of external review of how effectively developing countries are controlling the growth of their carbon emissions.

Aside from these modest gains, the Copenhagen Accord fails to set out firm numbers – and is significantly weaker than the agreement reached by the Kyoto countries in Bali. Such limited progress reflects changing political dynamics. At Copenhagen, the main bulwark against specifics was China, which opposed even a target of a 50% reduction in global emissions by 2050 – presumably because it knows this can only be achieved if the country's emissions peak within a decade or so (rather than between 2030-2040, as the Chinese government plans).[1]

The return then is very thin for two years of negotiation. A '*car crash*' may have been averted in Copenhagen, but we are now much further down the road to a '*bad deal*'. According to Project Catalyst, a non-profit initiative that provides analytical support to climate negotiators, the world is currently on track for 5ºC of warming – an almost unimaginable catastrophe.[2]

If all countries fulfill the low end of the 'offers' for 2020 they have put on the table, then warming might be limited to 3ºC, taking the world only around a third of the way towards the trajectory needed for stabilization at 450ppm CO2e – the target that Catalyst believes would provide a 40-60% chance of restraining warming to below 2ºC. Even full implementation of the high end of all existing 'offers' would still leave the world only two thirds of the way towards a 450ppm trajectory in 2020. Due to the lock-in of high carbon infrastructure, Project Catalyst concludes that it will not be possible to 'catch up' with a 2ºC pathway after 2020 if more vigorous action is not taken before that date.

Country	*Pledge*
US	Reduction in emissions in stages, starting with 17% cut from 2005 levels by 2020 (equivalent to 2% on 1990 levels). To be followed by 30% by 2025, 42% by 2030 and 83% by 2050.[3]
EU	Reduction in emissions by 20% by 2020 from 1990 levels (an 18.5% cut from a 2005 benchmark) and by 30% if is there is wider global consensus.[4]
Japan	Reduction in emissions by 25% by 2020 from 1990 levels.[5]
China	Reduce 'carbon intensity'* by 40-45% by 2020 from 2005 levels.[6] Government has also referred to a possible peak between 2020 and 2030.[7]
India	Cut emissions intensity by 20-25% by 2020 from 2005 levels.[8]
Brazil	Voluntary cut of between 36-39% by 2020, based on predicted emission levels for 2020 (mostly from avoided deforestation), taking it back to 1994 emission levels.[9]

* Carbon intensity is the amount of carbon dioxide emitted for each unit of GDP, China's preferred measurement

Table 2: Major Pre-Copenhagen Commitments

The next deadline is the end of January 2010, when countries will list their proposed commitments. The developed country response to this request can be predicted with some certainty (see table 2); China and India may add their unilateral 'carbon intensity' targets, but even this is not certain. Assuming that most countries contribute their targets by the deadline, two key tracks will then run through 2010.

The first runs through the US Senate. Assuming that health care finally passes, will the Senate swiftly agree a climate bill? If so, how weakened will it have been in passage? Will its provisions leave Obama able to promise a 17% reduction by 2020 with any credibility?

Second, there is the post-Copenhagen process – where prospects now look shaky. Before Copenhagen, we set out six criteria that would be needed in order for a 'Bali #2' political deal at Copenhagen to lead fluidly on to a binding global deal, as follows:

i. Rock solid agreement among countries about the eventual legal status of a deal;
ii. Strong mutual understanding between the US and China of what the other should contribute, in each case more or less in line with IPCC findings;
iii. Obvious bear traps – especially Monitoring, Reporting and Verification (MRV), governance and finance – to have been cleared away;
iv. An agreed roadmap leading out of the summit;
v. Clear outlines for a Senate bill; and
vi. Assurances on the US domestic roadmap that are based on more than wishful thinking.[10]

These criteria are *far* from being met. There is no consensus on whether to have a binding treaty, or on the future of the Kyoto Protocol. Agreement between US and China is paper-thin. There is no clear road map for what happens next and no deadlines, while some substantial roadblocks lie ahead. Only a congenital optimist would give better than even money odds on robust US domestic legislation – without which, international progress is more or less certain to grind to a halt.

History's final verdict on Copenhagen, then, could be of failure deferred. Even if a crash at the next climate summit (in Mexico, in December 2010) is avoided, the process will still be at risk from one of two other 'slow motion failure' scenarios:

- *'A Multilateral Zombie'* – in which the process staggers on piteously, never making much progress, while never quite dying either, like the Doha round before it. This would be disastrous for climate, but also for all other attempts to manage global risks at an international level.

- *'Death by Climatocracy'* – in which an apparently robust deal fails during implementation, with inadequate attention paid to the supporting institutional infrastructure, and the deal slowly collapsing under the weight of its own complexity.[11] Again, this is an all-too-feasible outcome, given a failure to invest in designing the institutions needed to underpin low carbon institutions.

Steering into the skid

Dealmakers should react to Copenhagen by *steering into the skid*. Rather than signaling retreat, they should resist the urge to hit the brakes, and keep the wheels of the process pointed towards the desired endpoint 2°C. They should:

- *Build on the new engagement between heads of government*, which was one of Copenhagen's few positive developments. UN Assistant Secretary-General Bob Orr described the summit as "the most genuine negotiation I've ever seen between leaders".[12] If a climate deal is eventually brought to a successful outcome, it will be because leaders definitively wrest control of the process away from the technocratic climate 'priesthood' that tends always to believe success is always just around the corner, but persistently frowns on tackling difficult issues head-on.

- *Ratchet up pressure for US domestic legislation*. The battle over healthcare needs to be seen as an object lesson. Health care proponents have failed to find fresh ways to 'sell the bill' to the electorate at each stage of the long slog through Congress, with many activists becoming so disenchanted as to prefer failure (presumably hoping to come back to the issue in another twenty-five years). Given the political capital that healthcare has now used up, climate legislation *will* fail unless there is an effective and persistent campaign to persuade voters that America's future is a low carbon one, while vigorously resisting the lobbying efforts of high-carbon corporate interests.

- *Rebuild strategy across the global alliance of dealmakers from the ground up*. The EU had a shockingly poor Copenhagen and needs to take a much more robust line in future negotiations to retain any influence.[13] Civil society, too, needs to ask questions about its failure to make more than a marginal impact. Its mistakes include a disturbingly supine attitude to China (and to a lesser extent, India), and an unfortunate combination of unattainable long-term goals (350 ppm, for example), with a weak 'asks' in the short/medium term. The expenditure of so much energy on pursuing a 1.5º warming target was especially regrettable, when the movement could have instead set out plans for how peak global emissions can rapidly be attained, given the world at least a chance of getting near 2º.

- *Develop a fundamentally new approach to developing countries*. Copenhagen showed definitively that the G77 is unable to represent the interests of vulnerable countries. Without an amplified voice for those countries that recognize the threat to their survival, the will to seal a deal will never be summoned. The softly-softly approach to China, in particular, can now be seen to be a failure. The Chinese government has a legitimate need to protect the interests of its many poor *people*, but China can no longer be treated as a poor *country* now its *per capita* emissions have passed the global average and will surpass those of a growing number of annex 1 countries between now and 2020. China's partners need to keep asking when the country's emissions will peak and how China can be brought into the same stringent review and enforcement process that must be compulsory for all major emitters.

Above all, dealmakers must focus on the fact that climate policy should not only be politically feasible within the next electoral cycle, but also effective over the *full term* of climate change – with greenhouse gas levels stabilized at a safe level. While an evolutionary approach is the only practical option, incremental actions in the short term may actually make it *harder* to move towards stabilization if they have the effect of locking in ineffective rules of the game. Moreover, if policymakers avoid dealing with difficult issues of *fairness and equity*, then they *erode* confidence that they are serious about a robust deal.

In the aftermath of Copenhagen, then, dealmakers must work to:

- Build and diversify the support base for action on climate change, making tangible to elites and publics what a long-term solution looks like.

- Create the 'bandwidth' needed to agree a comprehensive deal, while developing the institutions needed to build confidence that the deal can actually be implemented.

- Increase levels of trust in the climate policy debate, by showing a new willingness to talk frankly and honestly about how to manage climate risk.

With these considerations in mind, we offer twelve recommendations that, taken together, will help reboot the climate process in the wake of Copenhagen. Each proposal is designed to be feasible in the short term, but also to help prepare the way for a more comprehensive approach to climate change in the future.

Three ways to focus debate on solutions.

1. **Rebuild trust in the science.** Polls show that public confidence in the scientific consensus on climate change – the indispensable bedrock of *any* attempt to develop policy on the issue – is falling.[14] Protecting the independence, authority and reputation of the IPCC must be the first task of leaders.

   The leak of emails between British climate scientists, seized on by climate skeptics as evidence of data being massaged, is a particular issue. Belatedly, the University of East Anglia has commissioned a review into the leaked emails from its Climate Research Unit, but it has selected an ex-civil servant with no international profile as chair.[15] The IPCC has announced that it will complete its own review.[16] Neither of these exercises, however, have sufficient independence to provide reassurance on the integrity of the scientific process. <u>Leaders should therefore commission an independent review of the IPCC's integrity, auditing the executions of its mandate to provide a comprehensive, objective, open and transparent assessment of the scientific basis of the risk of human-induced climate change.</u>[17]

   This review should not be of the state of climate science – where the IPCC has, and should retain, primacy – but rather of the quality of the IPCC's procedures and the integrity of the research methods on which its findings rely, especially where these have been called into question by the leaked emails. The review should audit the quality of the Fourth Assessment Report, while making recommendations, if necessary, for the conduct of the Fifth Assessment Report, on which work is now underway and which will be published in 2013-2014. It should also be accompanied by an indication that rapid action will be taken to investigate any future challenge that brings into question the IPCC's objectivity, independence and transparency.

2. **Initiate a more mature discussion of climate risk.** At the same time as ensuring the scientific foundation is sound, leaders need to engage their citizens in an adult and open discussion of *climate risk*. The case for a robust response to the threat is made more, not less, urgent by residual uncertainty.[18] We lack *a granular* understanding of the exact nature, timing and distribution of climate impacts, while tipping points could be reached with little warning, leading to sudden and abrupt changes in the climate.[19]

   Residual scientific uncertainty has an impact on policy responses as well, having a significant impact on the speed and depth of emissions reductions needed to limit global average temperature rises to a given level. Analysis suggests, for example, that there is a 53-87% chance of exceeding 2ºC if global greenhouse gas emissions are more than 25% above 2000 levels in 2020.[20] Sink failure and other feedback mechanisms could increase this already wide bound of uncertainty.

   To date, policymakers have fought shy of talking openly to the public about risk. By tending to gloss over the uncertainties that are inherent in the science, they have allowed global warming skeptics to argue that these uncertainties undermine the argument for precautionary action – when in fact a risk management approach would regard the uncertainties over potential worst case scenarios as *strengthening* the case for action. If a plane is known to have a 12.5% chance of crashing, for example, then a rational approach to risk management would not focus cheerfully on the 7 in 8 chance of escaping unscathed. Similarly with climate, in many cases, action today makes sense because we cannot (as yet at least) precisely quantify the risks we are running.

   <u>Leaders should therefore undertake a coordinated effort to initiate a debate about the risk that climate change poses to citizens, and use this to discuss what societies should be prepared to spend today, in order to ensure a safer future.</u> Consensus will *only* be achieved if policymakers have the fortitude to talk openly and honestly about uncertainty and the wager we are taking with our future. Bland bromides, or political narratives in which the vast scale of the problem described clearly fails to cohere with the modest scale of solutions proposed, will simply drain public trust and make tough decisions ever harder to take.

3. **Create a common language to aid deal making.** Climate's 'deal makers' are playing a game with the opposite dynamic to chess. As the endgame approaches, so the number of pieces on the board grows as new actors realize that their interests are at stake and swarm to protect them. The only defense against such swarming behavior is to create simple, clear and widely-shared yardsticks that can be used to moderate the climate debate, create tools for decision makers, and help build a consensus on what a 'fair' solution looks like.

The 2ºC target has already been successful in helping set a widely accepted goal for climate policy. However, this goal can only be made concrete if policymakers are prepared to discuss:

- *A long term global budget for emissions* – the total quantity of emissions that reduces the risk of exceeding 2º to an acceptable level. A budget of 1,000 GT of CO_2 between 2000 and 2050, for example, would give a 10-42% probability of exceeding 2º; 1,158 GT of CO_2 would give a 16-51% probability.[21] Roughly 390 GT of this budget have been used in the first decade of the twenty-first century.[22]

- *A date for peak global emissions* – the date that determines the trade-off between action taken now and action taken later. With a peak date in 2011, emissions would have to decline at 3.7% a year to 2050 to give a 16-51% chance of exceeding 2º. This decline increases to 5.3% per year if the peak date is 2015, and 9% a year if peaking is not achieved until 2020[23].

- Finally, *national per capita emissions* provide a yardstick for shaping debate around an intuitively recognizable metric of fairness. As the table below shows, countries currently cluster into four rough groups: high per capita emitters (the United States, Canada and Australia), medium high emitters (Europe and Japan), medium low emitters (China), and low emitters (India and the rest of the world). At present, however, clear majorities of the publics in the US, UK, Spain, Italy, Germany, and France believe that, as China has the highest absolute level of emissions, it should be forced to cut them faster than other countries. This shows how unrealistic popular expectations for a future deal have become, given the failure to apply the per capita yardstick.[24]

High per capita emitters	United States	19.5 tonnes
	Australia	18.1 tonnes
	Canada	16.6 tonnes
Medium high emitters	Japan	9.6 tonnes
	Germany	9.5 tonnes
	United Kingdom	9.1 tonnes
Medium low emitters	*World average*	*4.5 tonnes*
	China	4.3 tonnes
	Mexico	4.1 tonnes
Low emitters	Brazil	1.7 tonnes
	India	1.3 tonnes
	Burkina Faso	0.1 tonnes

Selected countries' 2005 per capita emissions (source: World Bank)[25]

<u>Leaders who are prepared to push for a deal in the wake of Copenhagen should therefore start consistently to talk about budgets, peak and per capita emissions, while starting to coalesce around a target for each of these indicators.</u>

This will help build an understanding of climate solutions that combines a long term objective, a sense of pace and urgency, and a measure of fairness, while also measuring countries' proportionate contribution to the problem – and how they fit into the solution. It will also help drive a vision for a near zero carbon economy by 2050, when per capita CO_2 emissions need to be at around half a ton – roughly a fortieth of levels seen in the United States today.[26]

Three ways to make the low carbon economy tangible.

4. **Pursue quick wins alongside the post-Copenhagen process.** As policymakers take stock of the post-Copenhagen environment and make sense of the current impasse, deal-makers need to agree confidence-building measures that can act as a springboard for a future deal. These building blocks should be structured so that they can be retro-fitted into the deal – thus acting as an enabler for more ambitious work in the future rather than as an impediment to it, as some of the features of the 1992 Convention and 1997 Kyoto Protocol have done.

   One such example is reducing emissions from deforestation and forest degradation (REDD), which provide around a quarter of the most cost effective opportunities to cut greenhouse gas emissions.[27] REDD poses quite different challenges than controlling emissions, and given the pace of current deforestation, there are compelling reasons for pushing ahead with agreement now rather than waiting. A deal on REDD offers a valuable opportunity for rich countries to show the developing world that they are negotiating in good faith, while substantially increasing the chances of an early peak to global greenhouse gas emissions, thus taking some pressure away from energy-related carbon emissions.

   Moreover, there are also good reasons for actively *seeking* to deal with REDD separately from negotiations over national targets. Rather than basing REDD on the principle that deforestation projects should create emissions trading permits, a better approach would be to finance avoided deforestation separately – through rich countries clubbing together to provide financial incentives for poor countries to conserve their forests. While tough standards for monitoring, reporting and verification would still be needed, having a 'firebreak' between REDD and the emissions trading scheme would reduce the scope for problems if REDD monitoring systems take time to bring up to standard (as seems likely, given experience with other offset schemes such as the Clean Development Mechanism).

   Another example of a quick win that could be pursued outside the post-Copenhagen process is action to reduce emissions of 'black carbon' – soot – which accelerates global warming effects by reducing the amount of sunlight reflected into space and accelerating glacial melting. Early action to reduce soot emissions could both reduce these effects and improve air quality, but because black carbon is not a greenhouse gas in the same way as CO_2 or methane, emissions of it are not covered under Kyoto.

These quick wins, of course, should not be a substitute for action on low carbon growth – but should instead provide confidence that rapid progress to an emissions peak is possible.

5. **Build low carbon into fiscal tightening.** For all the talk of a 'green new deal', the global stimulus package implemented in 2008/09 largely missed the opportunity to generate a low carbon dividend. A February 2009 analysis by HSBC, the investment bank, found that the proportion of stimulus spending allocated to 'green' objectives in the US was around 10%; Japan, 3%; EU states, 17%; and Australia, 10%.[28] While China scored higher in the HSBC analysis (38%), this figure has been contested by analysts who argue that its stimulus has in fact come at a high cost in sustainability terms.[29]

   However, if the stimulus was a missed opportunity, the fiscal tightening that many governments will soon have to undertake offers a second chance for policymakers to build in incentives that favor low carbon technology options. In OECD economies, tightening is unavoidable as a means of paying back the vast debts incurred in financing stimulus packages at a time of reduced income from taxation; in the case of China and some other emerging economies, tightening may also be needed to cool off economies that are showing signs of overheating.[30]

   As they decide which taxes to raise or areas of spending to cut, governments' choices will have far-reaching implications for creating – or ruling out – energy futures:

   - Those governments that opt to increase taxes should do so by increasing taxation on carbon (whether through direct taxes or via auctioning permits in a cap and trade system), rather than by taxing income.

   - Governments that cut spending should aim to reduce subsidies for fossil fuels, some of which were eliminated at the Pittsburgh G20, and other high-polluting technologies, while protecting research and development for green technologies.

   The impact of these policies could be substantial. Phasing out energy subsidies in non-OECD countries between now and 2020 would cut energy demand by around 5%, while raising per capita GDP.[31] In the US, meanwhile, Congressional Budget Office estimates show that revenues from cap and trade would reduce the US deficit between now and 2020, while also driving substantial cuts in emissions.[32] These price signals would reinforce those applied by the energy price spike of 2008, which has already led to improvements in energy efficiency.[33]

   <u>G20 leaders and finance ministers should therefore initiate work to explore coordinated measures for green fiscal tightening, with the aim of announcing a package of measures for the Toronto summit in June 2010.</u>

6. **Tighten the focus on disruptive technologies.** The technologies already exist to underpin initial steps towards a transition to low carbon, but in the longer term, significant technological development will be needed to create cleaner and more resilient energy and transportation systems.

Today, public sector investment in energy research, development and demonstration (RD&D) is, in real terms, at two thirds of the level seen in 1980. Meanwhile, according to the International Energy Agency, there is "growing evidence that the private sector is, in current economic circumstances, slashing spending on energy RD&D."[34] There are real risks, therefore, that the financial crisis will slow rather than accelerate progress towards a low carbon growth trajectory.

The dangers of underinvestment in technology are considerable. RD&D decisions must be taken today for key technologies to be deployed by 2020. A failure to commercialize carbon capture and storage, for example, would increase the cost of decarbonization by over 70% in 2050. Ten full-scale demonstration power plants and eight industry demonstration plants are needed if CCS is to reach its potential. To date, none have been built.[35] Similar problems can be seen across a portfolio of critical technologies, where immediate action is needed to drive down costs.

It is especially important to prop up investment levels today in anticipation of high oil prices in the future – at which point market incentives for deployment will increase dramatically. According to McKinsey, with oil at $120, the incremental investment needs for full deployment of 17 key technologies between now and 2030 fall to near zero.[36] Collaborative research across national boundaries will prove especially important, an area of considerable weakness at present.[37] A broad portfolio of investment is also needed, allowing costs to be minimized in a range of industrial and social settings, while releasing synergies between complementary technologies.[38]

Investment today has the potential to create employment in developed countries, while countering the 'jobless recovery' predicted for many countries. For developing countries, including the poorest, green technologies such as 'printable' solar and solar-powered heaters and cookers offer the potential to tackle energy poverty while leapfrogging high carbon development paths. Biochar, meanwhile, has the potential to create a small scale, distributed, but powerful, route to carbon sequestration, and shows the importance of continued 'scanning' to spot the potential of radical approaches to the climate problem.[39]

Accordingly as the Climate Group has argued, developed countries should double public RD&D expenditure on low carbon technologies by 2015 and quadruple it by 2020, while working with China and India to plan road maps for technological deployment, using the G20 or the Major Economies Forum to reach agreement, and the Technology Mechanism announced in the Copenhagen Accord to catalyze investment.

Three ways to connect the dots between climate change and other global issues.

7. **Get ready for the next resource spike**. The global downturn, and resulting fall in oil prices, has led to a 19% fall in investment in oil exploration and production, setting the stage for renewed oil price inflation as the world economy begins to recover.[40]
While higher oil prices will stimulate energy efficiency and the deployment of green technologies, high energy prices are also likely to drag food prices upwards with them, as costs increase for fertilizer, on-farm energy use, transportation and processing, and also

as biofuels become more attractive as an alternative to oil and compete with food crops for available land.

And just as food and energy markets have become increasingly intertwined, so both also face threats from climate impacts like reduced water availability, higher temperatures, sea-level increase and extreme weather events – all of which may reduce crop yields or devastate energy infrastructure. Both sectors also face a compound challenge because of the need to reduce their own massive greenhouse gas emissions. Policymakers, therefore, need to begin to explore *a single scarcity challenge*, in which energy, food, water, land, and atmospheric 'space' for emissions become increasingly tightly coupled as population growth and rising aspirations continue to increase demand across the board.
Growing scarcity pressures will bring radically different challenges to the international arena over the next decade, creating the potential for dangerous competition between great powers for resources while also increasing the pressure on some of the world's least stable states and acting as a potent driver of economic volatility and underperformance. An integrated policy response will be needed, but this will cut against the grain of international decision-making systems that are poorly configured to take such an integrated approach –fragmented as they are into single-issue 'silos'.

As a first step to a more effective synthesis, policymakers should encourage collaborative working and integrated analysis across the international organizations most relevant to scarcity issues – including the International Energy Agency, the Food and Agriculture Organization, IPCC, World Bank, International Monetary Fund, and UN Office for the Co-ordination of Humanitarian Assistance (OCHA) – <u>by mandating them to produce a regular World Resources Outlook report, bringing together global and regional level scientific surveillance across energy, carbon, food, water and other scarcity trends, and integrating this with economic analysis and field-level vulnerability surveillance.</u>

8. **Recognize – and welcome – the inevitability of carbon tariffs**. Carbon tariffs – the principle of applying tariffs to imports in proportion to the amount of carbon emitted in manufacturing them – have been extensively discussed in 2009.

President Sarkozy of France has, since 2007, proposed such tariffs as a way of penalizing countries that refuse to take on emissions targets, a position seen by many as aimed at the United States and possibly China.[41] More recently, the US Waxman-Markey climate bill has also set out detailed provisions that aim to impose "border measures designed to avoid or minimize carbon leakage" on any country that is failing to reduce its emissions at as least a fast a rate as the United States (on a 2005 benchmark, and not taking into account respective per capita emissions, though with an exception for least developed countries).[42]

A focus on tariffs helps clarify the distinction between the *production* and *consumption* of carbon. On the one hand, caps on emissions in OECD countries encourage production to move to emerging markets – so called 'carbon leakage' – raising concerns over competiveness. On the other hand, however, much of this carbon is still consumed in the developed world. The economist Dieter Helm estimates that, although emissions *produced* in the UK have fallen by over 12% since the Kyoto benchmark year of 1990, the

UK's *consumption* of carbon actually increased by 19% between 1990 and 2003. Other research suggests that only around half of China's rapid emissions growth is due to increased domestic consumption; the rest of the carbon is linked to goods that are exported.[43] In effect, selective constraints on emissions are distorting the development patterns of both rich and poor countries, providing an incentive for both sides to situate energy intensive industries outside 'tight cap' locations.

Absent comprehensive targets for emissions covering all countries, carbon tariffs offer an inevitable backstop for those countries that fail to make an adequate contribution to achieving a deal. Of course, as the World Bank noted, unilateral use of tariffs could become highly problematic, potentially catalyzing a slide towards tit-for-tat protectionism if emerging economies feel that developed countries are 'pulling the ladder up after them'.[44] Any immediate imposition of tariffs would also be highly counterproductive.
However, an approach to carbon tariffs agreed multilaterally by a quorum of major emitters and other countries would avoid some of the protectionism risks inherent in a unilateral approach. More fundamentally, it is perhaps the only effective approach to ensuring *compliance* with a global climate agreement – including by countries that have refused to accede to it. For this reason, <u>policymakers should explore how carbon tariffs can be applied in a way consistent with wider global climate policy – while at the same time reassuring each other than they will not use the measure on a unilateral basis.</u>

9. **Focus development strategies on building resilience.** Even with decisive early action to reduce emissions, the world is still committed to significant warming over the next three decades due to greenhouse gases already in the atmosphere. Developing countries in tropical latitudes will be in the front line of early climate change impacts; the particular vulnerability of fragile states and the poorest people within them will leave them especially exposed.

At Copenhagen, discussion of climate adaptation centered heavily on how much rich countries were prepared to commit to helping poor countries deal with the effects of climate change, and whether these promises would be additional to existing aid flows. (In practice, promises about 'additionality' will be impossible to monitor, except in the few cases where countries have either met the UN target of giving 0.7% of national income to aid, or have announced a timetable for reaching it.) But while more money will undoubtedly be needed, the real question on adaptation is less 'how much?' than simply 'how?'.

While much adaptation work will be specific to particular sectors (such as flood defenses or new seed varieties), the biggest task will be to focus much more on building resilience as a core objective in development strategies – not only to climate impacts, but also to other shocks and stresses, such as the probable early resumption of rising food and energy prices, the risk of violent conflict or economic volatility such as the global downturn that followed the credit crunch.

In recent years, a range of areas of development work focused on resilience have come to prominence, including social protection, disaster risk reduction, peacebuilding, conflict prevention and more political, less technical approaches to 'good governance'.

Now, the need is to synthesize these various approaches into a coherent overall approach that rapidly builds up a body of learning on how developing countries can build resilience quickly to climate change and other risks – and how, in the absence of a capable state, other actors (both national and international) can still work towards this end.

Three ways towards correcting the institutional deficit on climate change.

10. **Set up an International Climate Performance Committee.** The IPCC was set up in the 1980s at a time of impasse for climate policy, with the United States lobbying hard for a body that would deepen and extend the scientific consensus on climate change. While the IPCC has helped anchor the scientific debate on the *problem* of climate change, there is no equivalent expert body to set out the implications of the *solution*. As a result, delegates at Copenhagen were reliant on jerry-rigged calculations of what prospective deals would mean to climate stabilization, some of which were leaked to the media.[45] This is in telling contrast with the legislative process in the United States, where the Congressional Budget Office has a mandate to provide "objective, nonpartisan, and timely analyses to aid in economic and budgetary decisions", ensuring that even as legislators disagree, they do so *on the basis of the same data.*[46] Within the climate sphere at national level, the United Kingdom has set up an independent body, the Committee on Climate Change, which advises the government on a national carbon budget, and reports to Parliament on the UK's progress in meetings its emissions targets.[47]

    At this moment of impasse, leaders should act swiftly to create similar capacity at international level, setting up an International Climate Performance Committee (ICPC), as an independent body charged with supporting, and holding to account, the negotiating process.

    Initially, such a body would provide definitive reporting on progress towards meeting the UNFCCC's climate stabilization objective; the likely impact that current and new emissions targets would have on this objective; national performance in reducing or restraining emissions; and the quality of data available to the committee, at international and national level. Like the IPCC, the Committee could be a hybrid of governmental and expert involvement. While its recommendations would not be binding, they would catalyze a fuller global discussion of stabilization scenarios, while grounding the negotiations in more robust analysis.

    The ICPC would play a particularly important role after the IPCC releases its next assessment report in 2013-2014, when it will be necessary to reassess existing policy against a new scientific benchmark. The Copenhagen Accord envisages a review in 2015. By that point, the ICPC should be well-placed to lead on this task, providing input for what Project Catalyst has described as a 'ratchet' mechanism to close any gap between existing commitments and the emissions abatement needed to stabilize at 2º.

    Over time, the ICPC's role could expand further, with it attaining a formal role in advising governments on stabilization targets, carbon budgets and formulae for allocating scarce carbon resources.

11. **Create incentives for developing countries to take on binding targets.** By switching the focus to emissions budgets, policymakers are forced to focus on the 'fair share' each country can expect to receive of limited emission rights, not just over the next few years, but through to mid-century, and even beyond.
To date, however, climate change's 'priesthood' has interpreted 'common but differentiated' responsibilities to mean that developing countries should be left out of quantified targets, while developed countries make a start on reducing their emissions. Now, though, it is starting to become clear that this approach is leading to an impasse. For one thing, no comprehensive solution to climate change is possible without the key developing countries on board – a point stressed not only by the US, but also by some small island developing countries in the front line of climate change. Just as fundamentally, developing countries will find that all or most of the available carbon budget to 2050 will have been used up if they delay taking on targets to 2020.

That said, most developing countries have persuaded themselves that it is *in their interests* to delay discussion on targets, leading to the ludicrous position where very low emitters in the G77 are defending the right of China to avoid setting a clear trajectory for when its emissions will peak. The climate framework is also saddled with the Clean Development Mechanism, an offset scheme of dubious quality that offers developing countries access to a 'fake' market mechanism with few of the benefits of a full carbon market.

<u>In order to break this deadlock, leaders of developed countries should signal to developing countries that they will create the option for them to take on quantified emission quotas on a voluntary basis – with access to carbon markets for those currently below their target.</u>

This policy would establish the following principles:

- Binding targets can be acceptable to developing countries if they are set according to fair and transparent criteria.

- Emissions quotas can be set above current emissions levels, so that carbon markets in effect compensate low emitters and provide a powerful new source of finance for development, while providing them with powerful incentives to adopt a low carbon development trajectory.

- What is most important for developed countries is the assurance that emission levels in the developing world will not exceed certain levels.

- These principles can all fit within the overall construct of a gradual, managed process convergence of rich and poor world emission rights.

The voluntary accession to the 'Annex 1' group of countries (those with binding emission targets) of even a small number of developing countries would also reflect the fact that G77 rejection of targets is only in the interests of some of its more powerful members.

12. **Use the forthcoming UN High Level Panel on Climate and Development as a key avenue for progress**. In September 2009, UN Secretary-General Ban Ki-moon announced his intention to set up a new UN High-level Panel on climate change and development. The Panel is expected to launch formally early in the new year, and to include serving heads of government among its membership. The likeliest option is that the Panel will deliver an interim report shortly before the COP16 talks in Mexico in December 2010, and its final report in the fall of 2011 – around nine months before the 20th anniversary of the Rio Earth Summit, itself likely to be marked by a major summit on sustainable development.

    High-level Panels of this kind have a history of driving major institutional changes in the multilateral system. The 2004 High-level Panel on Threats, Challenges and Change, for example, led directly to the principle of the Responsibility to Protect being formally adopted in the UN and successfully recommended in favor of the reform of UN's human rights machinery and the creation of a new UN Peacebuilding Commission. A new High-level Panel on climate and development – convened by the United Nations but covering the international system as a whole – could help build the shared awareness about how we build a global system capable of stabilizing the world's climate.

    <u>Leaders should seize the opportunity provided by the Panel to step back from the Copenhagen process, by ensuring that the Panel has the membership, funding, and support to address the 'big picture' questions needed to break the current climate deadlock.</u>

    The Panel should be mandated to:

    - Explore the institutional framework needed to achieve the UNFCCC's long term climate stabilization objective.

    - Examine how international collective action can increase resilience to a changing climate at global, regional, national, and local levels.

    - Analyze the implications of climate change and climate change policy for other parts of the international system, including security, economic governance, international development, and human rights.

    - Set out a high level strategy for increasing the effectiveness, coherence and credibility of the international system, with objectives for the short and medium term (e.g. to allow implementation of a post-2012 global deal; to put the world on a path to stabilization by 2030).

    Given the cross-cutting nature of these objectives, it would be essential for the Panel's membership to be drawn from a wide range of backgrounds – probably with the majority from outside the climate sector. While 192 country negotiations are clearly unwieldy, smaller bodies like the Major Economies Forum lack the legitimacy of a UN-led process. The High-level Panel represents a major opportunity to combine the best of both worlds.

About the authors

Alex Evans *is a Non-Resident Fellow at the Center on International Cooperation (CIC) at New York University, where he works on climate change, resource scarcity and global public goods. He was seconded to the UN in 2007 as part of the team coordinating the Secretary-General's high level event on climate change. From 2003 to 2006, he was Special Adviser to Hilary Benn, then the UK Secretary of State for International Development.*

David Steven *is a policy analyst, strategic consultant and researcher. He is a Non-Resident Fellow at the Center on International Cooperation (CIC) at New York University, where he works with Alex on climate change and global public goods. David is also a Director of River Path Associates where he specializes in international responses to global risks, the development of communications and influencing strategies, and intercultural dialogue.*

David and Alex have co-authored a Brookings Institution paper on improving multilateral management of global risks which will be published early next year, in a project funded by the UK Foreign Office. They also recently completed a report for the UK Department for International Development on multilateral reform and climate change. Previous joint publications include Climate Change: the state of the debate, published by the London Accord; and Fixing the UK's Foreign Policy Apparatus: A Memo to Gordon Brown. In April 2008, they were commissioned by 10 Downing Street to present a paper on multilateralism and global risks to heads of state at the Progressive Governance Summit.

They jointly edit www.GlobalDashboard.org, the global risks and foreign policy blog.

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