



## **A Low Carbon World – Pathways to a Global Deal**

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Entrepreneurship in the Time of Climate Change  
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David Steven

## Main themes

In my talk today, I am going to focus on the politics of a climate change deal – exploring the dynamics that make co-operation on climate more or less likely.

My assumption is that before any actor – whether government, investor or advocate – can seek to influence the climate debate, they need to understand the drivers of that debate. Furthermore, that a lack of clarity about the politics of climate change favours those who would prefer inaction and who, for one reason or another, do not believe that climate stabilisation is a priority.

There are two interlinked systems in play here. On the one hand, we have the global climate. We have long recognised that knowledge and information about this physical system is a public good and have invested heavily in providing this good – in particular through the IPCC.

On the other, we have the human system that has disturbed the climate and may be able to stabilise it. Knowledge of this system, I believe, is also a public good, and one that is currently in very short supply. As the UNU's new Rector, Konrad Osterwalder put it this morning, "what is the point of solving the scientific problem if the political side does not follow?"

I am therefore going to use my talk to focus on climate politics. This being a university, however, I am going to suggest a framework for helping us think about the problem, focusing in particular on the incentives countries have to co-operate or compete on climate change.

## Negative sum dynamic

Let's start with a simple distinction: between zero sum and non-zero sum games.

- In a zero sum game, the size of the cake is fixed. If I take a bigger slice, your slice will be correspondingly smaller. Winners are balanced by losers.
- In a non-zero sum game, the size of the cake changes. It can either grow – a positive sum game, with more winners than losers. Or shrink – a negative sum game, with more losers than winners.

So which of these three games – positive sum, negative sum, zero sum – most closely matches the world's climate challenge?

Clearly, **unchecked climate change is a negative sum game**. According to IPCC WGII:

Impacts of climate change will vary regionally but, *aggregated* and discounted to the present, they are *very likely* to impose net annual costs which will increase over time as global temperatures increase.<sup>i</sup>

In other words, there will be winners, but there will be more losers – possibly many more. And the predicament intensifies as the temperature rises. Above a certain level – 2-3°C according to IPCC WGII – it is believed that *all regions* “will experience either declines in net benefits or increases in net costs.”

Moreover, we have heard today from Jim Hansen that the IPCC may be conservative in its assessment of impacts. Its consensus reflects a snapshot of the science that, given the pace of research into the issue, inevitably dates quickly. Recent work has continued to highlight the potential for (relatively) sudden, irreversible and highly disruptive climate change – with impacts that could be much more serious than previously thought.

The downside, in other words, could be quite considerable.

### Positive sum dynamic

But there is a potential upside.

Many analysts believe that a rapid transition to a low carbon economy offers potential to limit these losses, while inventing new industries, institutions, lifestyles, and social modalities.

Nick Stern is the man most strongly associated with this view. His review argued that:

In broad brush terms, spending somewhere in the region of 1% of gross world product on average forever could prevent the world losing the equivalent of 10% of gross world product for ever.ii

In this case (and leaving aside, arguments over the estimates that Stern made), the cake *can* be made bigger, and there *can* be many more winners and fewer losers.

**A transition to a low carbon economy, then, would be a positive sum game.**

But this outcome:

- Can only be delivered collectively – through action to cut global emissions drastically. No country will act alone. Nor will it make any difference if one did.
- Becomes harder to achieve the longer we wait, as current emissions ‘lock in’ future temperature rises, while long-term investment decisions commit us to continuing along a high-carbon economic pathway.

### Nested zero sum games

So, if decision-makers accept the consensus position on the science of climate change, then they have very powerful incentives to act together, forcefully and, above all, rapidly. So what’s likely to stop this happening?

The answer, of course, is that, **within the broader non-zero sum dynamic, are nested a number of zero sum games.** These competitive games are played:

- *Between countries* – which compete between each other for a larger share of scarce future emissions.
- *Between citizens within countries* – who want others to bear the costs of any agreement.
- *Between generations* – with current generations deferring action at the cost of future ones.
- *Between incumbents and new entrants* – with firms rallying to protect existing high carbon business models, at the expense of a new wave of low carbon innovators.

This competitive logic:

- Exerts a powerful *psychological attraction* – from early childhood, human beings are capable of competing fiercely for scarce resources.
- Is *self-sustaining* – one fierce competitor will encourage others to mobilise to protect their interests.
- Has *immediacy* on its side – contrasting tangible benefits with more distant and less easily calculated costs.

As a result, even agents who are predisposed to cooperate find it easy to get locked into a spiral whereby competition becomes more likely. Players become increasingly fixated on the free-riding of others. They come into conflict because they have *competing views of what is fair*. In the worst case, they will be prepared to tolerate an absolute loss if this helps them preserve a relative gain.

In other words, *we all do badly, but at least I've stopped you doing better than me.*

### **The trade talk dynamic**

We can see this dynamic playing out in trade talks where parties tend to:

- Accept that free trade will lead to net benefits (informed by an expert consensus among economists).
- Therefore adopt a *positive sum strategy* that makes it relatively easy to agree the broad principles that should guide agreement.

However, over time, they become more aggressive in their advancement of self-interest, fighting tooth and nail to protect their 'red lines', egged on by powerful

lobbies from incumbent interest groups. These *zero sum tactics* make it painful, time-consuming and sometimes impossible to move from a broad framework to a full agreement. The devil is in the detail of an agreement painful, time-consuming, and often impossible to achieve.

Think of the sad fate of the Doha trade round, which Tony Blair described as “absolutely central to showing that the world has the capacity to confront its multilateral challenges with the necessary unity of purpose and overcome them.” The Doha talks remain stalled – with most of the key players claiming to follow a positive sum strategy, but simultaneously sticking to zero sum tactics.

Exactly the same pattern is being played out in climate. In Bali last year:

- All countries agreed that a post-2012 climate framework should be finalised by the end of 2009.
- The vast majority of countries accepted that global greenhouse emissions will need to be cut by at least half by 2050.
- All developed countries – with the sole exception of the United States – agreed that, as a group, they must cut emissions by 25-40 percent below 1990 levels by 2020.
- Developing countries agreed that they must move to a lower carbon growth trajectory.
- All countries agreed that funding will be needed to prevent deforestation, encourage innovation and technology transfer, and to pay for adaptation.

This is broad, simple and relatively non-contentious stuff. But even then, reaching agreement was hard work, as anyone who witnessed the dramatic last day in Bali will remember.

- A huge split opened up within the G77/China negotiating bloc – between countries who see climate change as a potential obstacle to their economic development (India, China, etc), and those who see it as a matter of national survival (Bangladesh, the small Island states, etc).<sup>iii</sup>
- This led the G77 to increase pressure on the American delegation, which reacted predictably by threatening to derail the agreement.
- With the result in real doubt, the Japanese adopted a highly ambiguous position, reflecting their sense that it had not received a fair deal under Kyoto, while the Canadians would have been happy for the summit not to reach a conclusion.

- Only intense public and behind-the-scenes pressure persuaded the Americans to rescind their objections, presumably due to an unwillingness to accept sole blame for Bali's failure.
- The Americans threatened not to support the Bali roadmap, but retreated under intense and vocal pressure.

What we saw, in other words, was the outbreak of zero sum warfare, even while the broader positive sum framework was being agreed.

### **Bad news for Copenhagen**

This is bad news for prospects of agreeing a global deal in Copenhagen.

If you want to understand what is likely to happen between Bali and Copenhagen, think of a game that has the opposite dynamic to chess. In this game, the endgame involves cuts in emissions which will be painful for some, at least in the short term; new types of regulation; and new taxes, whether or not these are imposed directly through a tax, or indirectly or through a cap.

With every step you take towards this endgame:

- The number of pieces on the board will grow, not shrink.
- Latecomers will be narrowly focused on their objectives.
- They will often have a similarly narrow understanding of the issue.

As a result, the game becomes more complex as it progresses, while progress is exponentially more difficult to achieve the nearer an agreement becomes. The last 10% of the negotiations are harder than the previous 90%, in other words. The last 1%, the hardest of all.

Then, if it comes to that, ratification will prove even more testing. At this point:

- A single international 'game' will fragment into many domestic ones.
- Each of these domestic games will tend to be more inward-looking and narrowly focused – more likely to lead to zero sum than positive sum thinking.

### **Is there another way?**

So should we despair?

Certainly, it would be easy to. And certainly, we will hear a growing number of voices who will suggest that a deal is impossible, undesirable, or both. They will suggest that countries should either ignore the problem, defer addressing it for a generation or two, or rely purely on a bottom-up response.

However, it is possible to conceive that **an alternative zero sum dynamic** might kick in. This would see countries continue to fight for their national competitiveness, but based on a very different view of how these interests can be secured. Consider the following logic:

- If you believe the current scientific consensus, a transition to a low carbon economy is inevitable.
- Even if there is short-term disagreement and delay, in the medium term, the cumulative impact of climate change – or a catastrophic climate shock such as the collapse of the West Atlantic Ice Sheet – will force governments to act.
- This will mean a radical restructuring of the global economy and a drive for what McKinsey have called ‘carbon productivity’ – a transformation that will need to resemble an accelerated version of the industrial revolution.<sup>iv</sup>

In this case, powerful countries, or regional blocs, might decide that it is in their interest to:

- Lead the process *politically* – allowing them to exert power in an international arena that is driving a wholesale economic transformation.
- Lead the process *economically* – by moving out of high carbon or ‘legacy’ sectors (leaving them to their neighbours), while at the same time gaining leadership in high carbon industries.

Under this scenario, we might reach a threshold or tipping point where, instead of competing to delay an agreement, a growing number of countries compete to lead it. In this case, zero sum competition would promote agreement, not delay it.

Are there any signs of this happening? The answer is yes, there are a few.

- Some American policy-makers and business leaders have expressed anxiety at being outside the Kyoto protocol. For them, lack of participation has led to a loss of influence.
- Many countries, meanwhile, are subsidising low carbon industries – not just because they want to cut emissions, but because they see these industries as critical to their future national competitiveness.
- This trend is not limited to developed countries. China, in particular, is engaged in intensive analysis and debate about its place in a low carbon world. Would it, as an emerging economic power, be best placed to dominate a new type of economic system than nations that have grown rich under the existing economic order?

- And finally, there is the example of the European Union, which has agreed cuts in its own emissions – 20% by 2020 – and is attempting to use this unilateral move to force the pace of a Copenhagen deal.

### High or low carbon competition

So let's summarise these four different dynamics that we can see in the politics of climate change. First the big picture:

- Unchecked climate change is a negative sum outcome – the cake gets smaller for everyone.
- A stable climate, with a corresponding economic transition, is a broadly positive sum outcome – the size of the cake can be increased if agents co-operate effectively.

But within this non-zero sum framework nest zero sum games. I have identified two main varieties:

- *High carbon competition*, where countries compete for a share of available carbon emissions.
- *Low carbon competition*, where countries compete to position themselves advantageously for the low carbon economy.

My contention is that our chance of reaching an overall positive sum outcome depends on whether countries increasingly prefer the second option to the first.

But how likely is this? Are early signs of low carbon competition a harbinger of what is to come? Will the political system reach a tipping point after countries compete to exit legacy industries and enter new ones? Or will countries continue to try and keep what they have now?

That is a question that I know the other speakers in this session plan to address.

### Conclusion

Let me close with a final reflection. As we move towards Copenhagen, there are real signs that the process is in trouble:

- There is a lack of *shared awareness* among countries about what will be needed to deliver a deal.<sup>v</sup>
- Negotiators are finding themselves overwhelmed by the *complexity of the negotiations* – while their political masters do not have the bandwidth to fully engage.



- We're too focused on the *negotiating bubble* – when it's the political conditions outside the bubble that will determine whether governments are able to commit to an ambitious deal.

As Alex argued, policy makers have had the IPCC to distil climate science for them. But there has been no parallel investment in understanding and debating solutions, and the human drivers that will decide whether those solutions are deployed or not.<sup>vi</sup>

Of course, an IPCC for climate solutions could not, and should not, be a formal intergovernmental mechanism. An attempt to build shared awareness will only be successful if we adopt an *open source* model – and start with a similar level of ambition as informed the early days of the IPCC.

Ultimately, co-operation on climate relies on *signals from the future*. At the moment, those signals are weak. If we fail to strengthen them, a global deal on climate will remain a long way off.

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<sup>i</sup> IPCC IV Summary for Policymakers – emphasis added.

<sup>ii</sup> Nicholas Stern, 'The Economics of Climate Change: The Stern Review', Cambridge University Press, 2007. <http://tinyurl.com/52d6l6>

<sup>iii</sup> <http://www.nytimes.com/2008/01/22/science/earth/22conv.html?ref=science>

<sup>iv</sup> 'The Carbon Productivity Challenge: curbing climate change, sustaining economic growth', McKinsey & Company, 2008. <http://tinyurl.com/4h6t85>

<sup>v</sup> Alex Evans and David Steven, 'Shooting the Rapids: multilateralism and global risks', paper presented to the Progressive Governance Summit, April 2008. <http://tinyurl.com/3jft8q>; and Alex Evans and David Steven 'Towards a Theory of Influence for Twenty-First Century Foreign Policy: Public Diplomacy in a Globalised World?', chapter in *Engagement: public diplomacy in a globalised world*, Foreign & Commonwealth Office, 2008. <http://tinyurl.com/6k2ydo>

<sup>vi</sup> Alex Evans and David Steven, 'Climate Change: the state of the debate', as part of the London Accord, 2007. <http://tinyurl.com/6zj5l8>