


THE RIPPLE EFFECT

The past few years has seen emissions trading ripple out throughout the world. The Paris agreement is an opportunity to leverage these efforts to inspire greater ambition, say Fred Krupp and Nathaniel Keohane

Shared global prosperity depends on robust growth in the world economy — without the carbon emissions that have fuelled growth in the past. By capping and pricing carbon emissions, we can align economic incentives with lower-carbon growth to help achieve this vision. Market-based policies such as emissions trading channel capital and entrepreneurial effort to the fastest and cheapest ways to cut emissions, making deeper reductions possible.

It's not hard to see why many companies have been staunch supporters of emission trading. Indeed, the private sector — with IETA's leadership — has played a critical role in catalysing and championing market-based approaches. Well-designed carbon markets offer the combination of flexibility, incentives, and guaranteed results that ensures that pollution targets are met while leaving it up to the market to figure out the best way to meet them, driving costs down.

As advocates for the environment, meanwhile, Environmental Defense Fund has long championed markets because they can drive ambition *up*.

A good illustration of how market-based policies can promote greater ambition is the landmark US cap-and-trade programme for sulphur dioxide, which has reduced national average concentrations of the pollutant by 76% since 1990 — taking an enormous step toward solving the problem of acid rain ahead of schedule and well below the estimated cost while creating hundreds of billions of dollars in annual benefits. Market mechanisms also played central roles in the phase-out of lead from gasoline, the implementation of the Montreal Protocol, and the dramatic reduction in nitrous oxide pollution from power plants.

GLOBAL LEADERSHIP

More recently, momentum on carbon markets has been building fast. Cap and trade has helped California be a global leader in climate action. Nearly three years into the programme, California has the world's most comprehensive cap-and-trade system, covering 80-85% of state-wide emissions. At the same time, the state's economy is in the midst of an impressive recovery. Since 2006, when California's

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climate change programme was signed into law, the state has received more clean tech venture capital investment than all other US states combined. Bloomberg News recently ranked the Golden State the best place in the US to do business, citing the state's visionary leadership on climate change as one of the markers of its success.

California's success has attracted the interest of its North American neighbours. Québec and California have linked their carbon markets, creating North America's largest cap-and-trade system and the first example of sub-national jurisdictions in different countries launching a joint market. Ontario, Canada's most populous province and home to a significant manufacturing base, is developing a cap-and-trade programme to launch by 2017 and link to California and Québec's market by 2018. Having the largest US state and Canadian province in a formal, linked carbon market will help lay the foundation for further carbon market collaboration in North America and beyond.

Emission trading remains a cornerstone of the EU's plans to step up its own ambition. Despite well-publicised ups and down — attributable in large part to the worst recession since the 1930s — the EU ETS is now performing well: it has overachieved its goals, leading to more reductions at lower cost than expected. The fact that allowance prices are low is a clear indicator of the low cost of emissions reductions — and an opportunity to ramp up ambition by tightening the EU's cap further, and even expanding the coverage of the ETS.

Perhaps the biggest development is in China, where in September 2015 Chinese President Xi Jinping announced plans for a national emissions trading programme by 2017. The insights gained and lessons learned from the country's seven large-scale pilots already in place will be put to use to help the world's largest emitter meet its target of peaking emissions by 2030 at the latest.

Climate progress in the US and China is changing the global dynamic. Gone are the days when the two largest emitters blame each other for inaction. And bilateral progress is inspiring commitments around the world. All told, cap-and-trade programmes are in place in over 50 jurisdictions worldwide that are home to nearly a billion people.

And more programnes are in the works. One of the most exciting opportunities is in international aviation. To meet the sector's stated commitments to carbon-neutral growth from 2020 and a 50% cut by 2050, and help drive net emissions even lower as will be needed to turn the corner to climate safety, the International Civil Aviation Organization (ICAO) is developing a market-based mechanism for consideration at its next Triennial Assembly in 2016. That would cap emissions from a global sector that accounts for roughly 2% of carbon emissions, and is growing fast — and would set a powerful precedent for international cooperation on climate change.

Another opening is in the forest sector. Tropical forests are not only crucial to stabilising the climate — they are critical to sustainable economic development for the communities and nations that rely on them. Carbon markets can play a key role in driving a new model of green growth in the tropics. By allowing jurisdictional REDD+ credits into their compliance markets, California and ICAO have the opportunity to create positive economic incentives for forest protection at a landscape scale.

TAKING THE MOMENTUM TO PARIS

Fuelled by these on-the-ground successes around the globe, markets have moved back to the centre of political discussions with a pace that has surprised even us. One of us (Fred) was at the third Conference of the Parties to the UNFCCC (COP 3), when the market mechanisms of the Kyoto Protocol were negotiated — and we were both at COP 15 when the hopes of a "global deal" evaporated in Copenhagen. For a few years afterward, market-based approaches seemed to fall off the radar in discussions of climate policy.

Now markets are back. More than 1000 businesses, nearly 100 national, state, provincial, and city governments, and over 30 NGOs signed the carbon pricing statement released at the New York Climate Leaders' Summit in September 2014. In October 2015, World Bank Group President Jim Yong Kim and IMF Managing Director Christine Lagarde launched a high-level panel on carbon pricing, including German Chancellor Angela Merkel, Chilean President Michelle Bachelet, French President François Hollande, Ethiopian Prime Minister Hailemariam Desalegn, Philippines President Benigno Aquino III, Mexican President Enrique Peña Nieto, Governor Jerry Brown of California, and Mayor Eduardo Paes of Rio de Janeiro.

CLIMATE PROGRESS IN THE US AND CHINA IS CHANGING THE GLOBAL DYNAMIC

How can we capitalise on this political moment and build on the momentum we are seeing, to keep carbon markets growing around the globe?

The first step is a Paris agreement that provides a solid footing for markets in the post-2020 climate regime. By markets, we don't have in mind some form of centralised mechanism under UN oversight. To be sure, there are a number of Parties who would like to have such a mechanism available — and properly designed, with provisions ensuring that any credits generated by such a mechanism meet the highest standards of environmental integrity, it could have an important role to play.

But the more powerful role for markets will be in the new decentralised world that is emerging. Markets not only provide a powerful way for individual countries to meet their own commitments. Over time, as jurisdictional emissions trading systems mature and take root, international linkages can promote greater robustness and liquidity, attracting new countries into a growing global market, and driving greater ambition – as well as certainty of environmental outcome, one of the signature benefits of a mandatory declining cap.

Ideally, Paris will provide a political signal that such international cooperation will be a core part of the new regime. But it's not

A DURABLE CLIMATE REGIME WILL BE ONE THAT HARNESSES MARKET FORCES IN THE HUNT FOR SOLUTIONS

needed. As sovereigns, Parties already have all the authority they need to use markets in meeting their commitments. The UNFCCC enshrines cooperation as a central principle. And more than 70 countries have already expressed an interest in using markets as part of their Intended Nationally Determined Contributions (INDCs) submitted to the UNFCCC.

Where the Paris agreement does have a role to play is in making sure that, when markets are used, they have integrity. In particular, the Paris agreement (and the associated COP decision) should articulate clear principles — on accounting, transparency, and monitoring, reporting, and verification — that rule out "double-counting" of emissions reductions. To ensure the integrity and credibility of the climate regime, and keep the atmosphere whole, emissions reductions achieved in one country and transferred to another must only be claimed once.

Even if the Paris agreement meets this standard, however, much work will remain to lay out clear guidelines for integrity of international carbon markets. As momentum grows, coordination among jurisdictions with carbon markets will be increasingly crucial to maximising cost-effectiveness and environmental integrity – which in turn will give jurisdictions the confidence to go faster and farther in reducing emissions.

A CLUB OF CARBON MARKETS

So far, the UNFCCC process has failed to make much progress on this front, through the so-called Framework for Various Approaches discussions that have taken place since COP17 in Durban. An alternative approach may be needed — one that starts small and engages only those countries and jurisdictions that actually have an interest in implementing emission trading.

Much as the General Agreement on Tariffs and Trade (GATT) helped promote trade liberalisation by attracting broad participation in a plurilateral trade system, a voluntary coalition or "club" of carbon market jurisdictions could promote climate action by attracting broad participation in mitigation effort. Such a coalition would complement efforts under the UNFCCC, encouraging enhanced ambition by countries and allowing participation by sub-national jurisdictions as well as national and regional ones. Indeed, drawing on the similar experience of the Forest Carbon Partnership Facility, the trust and expertise gained from shared experience in a carbon markets club could lay a deeper foundation for cooperation on markets within the UNFCCC itself.

A durable climate regime will be one that harnesses market forces in the hunt for solutions, mobilises private sector energies, enhances national self-interest and, through rigorous and transparent reporting, allows countries to demonstrate to each other that they are meeting their commitment. The Paris agreement can help on each of these fronts, but the model here is an incremental one: Rather than seeking to solve climate change in one fell swoop, a successful outcome in Paris would contribute to growing momentum in the scope and effectiveness of climate action around the world, over time. A UN agreement is only one of many tools available to address climate change. It will take continuing strong action by leading emitters and leading carbon market jurisdictions to spur the technological, political and institutional transformations that will support more ambitious action in the years to come.

Environmental Defense Fund president ***Fred Krupp****, who has guided EDF for more than three decades, is a widely recognised leader of the international environmental community. He is an influential voice on climate change, energy, and sustainability issues, and an eloquent champion for harnessing the power of the marketplace to protect our environment.*

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