



Climate security - the geopolitical implications of climate change

Dev Sanyal

Chief executive, alternative energy and executive vice president, Europe and Asia regions

11 February 2020



Introduction

Good evening everyone and many congratulations to EUCERS on your 10th anniversary. And indeed, best wishes to the centre for the next decade.

We are all very conscious that 10 years is the timeframe within which the Intergovernmental Panel on Climate Change says global carbon emissions need to be roughly halved to avert the worst impacts of climate change.

And today's debate reminds us that the impacts are not only geological, physical and meteorological, but geopolitical and social.

In BP, as a global business, we are very aware that the world is not on a sustainable path.

We advocate for a rapid transition to a low carbon future.

And we believe that our strategy is consistent with the goals of the Paris Agreement, which of course calls for the world to rapidly reduce emissions in the context of sustainable development and eradicating poverty.

Working around the world over many decades, we have both witnessed and participated in the progress made to date: the rapid increase in renewable energy in the UK; falling emissions in North America; China's progress in renewables and electric vehicles. The pace needs to accelerate, but there is great opportunity here for countries, companies and consumers that embrace change.

Climate security is indeed a massive challenge but there is a solution, which I would call sustainable prosperity. And tonight, very briefly, I would like to look at four aspects of the challenge, four criteria for the response, and four dimensions of the solution.

That's 12 points in 10 minutes. So no pressure!

The new challenge: climate security

First then, in terms of the climate security challenge, here are four points that have struck me particularly forcefully.

First, climate change is a poverty multiplier. As the IPCC has stated, at 1.5°C of global warming, climate change is expected to make poor people poorer and increase the poverty head count, mostly through impacts on agriculture and food prices.

Second, climate change can drive people from their homes. The IPCC says that tropical populations may migrate 1000 kilometres or more if the global temperature rises by 2°C. Population densities could increase by 300% in tropical margins and the subtropics.

Third, in the view of many experts, climate change can be a contributing factor to conflict. As we have seen in regions such as the horn of Africa, impacts such as drought can exacerbate natural-resource stresses, raise tensions and increase the chances of conflict.

Fourth, climate change impacts are asymmetric and fall most heavily on the most vulnerable. Studies of communities facing multiple impacts, such as crop failure, drought and extreme weather, show that more than 90% of those exposed to such multi-sector risks are in particular hotspots in Asia and Africa.

Criteria for a solution

Moving then from the challenge towards potential solutions, what are the main boundary conditions for a response?

First, rather than trying to adapt to such impacts, it is far better to prevent, or mitigate, climate change wherever possible. As well as protecting vulnerable people, it makes economic sense. Successive studies have projected the cost of mitigation in line with the Paris Agreement at around 1 to 2% of global per capita GDP, whereas the costs of doing nothing could be 7% or more by 2100.

Second, any solution has to be realistic. Politics is the art of the possible – and geo-politics even more so. Solutions that depend on the fall of capitalism will no more work in the next decade than they did in the last.

Third, solutions need to be proven. Fortunately, many countries are already on a journey to a lower-carbon economy and they provide role models.

Fourth, solutions must be widely applicable. They need to be workable across countries with diverse political systems and diverse energy sectors.

The new response: a multi-layered solution

Moving finally onto the nature of the response, where better to start than here in the UK, where carbon emissions have been reduced to 19th century levels?

How has that been achieved? Essentially it is a multilateral solution, using several tools. There has been a robust carbon price, created by supplementing the EU trading system price with a domestic carbon price floor. Such use of market forces has been accompanied by regulation applied to homes, transport and industry. The power system has become more integrated, with gas from multiple sources alongside wind, solar, nuclear and hydro. And the process has encouraged innovation, for example incentivising competitive, subsidy-free solar farms and increasingly powerful wind turbines.

Let us look more broadly at those tools. The first is the use of mechanisms to harness market forces in service of the environment. In the UK, an effective CO₂ price of around £40 per tonne has reshaped the market and driven coal usage close to zero on many days. In addition, the process of auctions applied in offshore wind has seen strike prices fall from more than £120 per megawatt hour in 2014 to £40 in the last auction.

Second, some supporting regulation is needed because markets are not perfect. In the UK such regulations have included energy efficiency standards and tailpipe emission limits. In Germany, the plan to phase out coal-fired power includes a thoughtful regulatory approach that provides the most generous compensation to those who exit soonest.

The third factor is integration. Truly integrated systems create what we call 'firm power' – or reliable power – particularly in balancing the intermittency of renewables with the constancy of natural gas. They also eliminate waste by creating multiple linkages, as in household solar arrays that convey surplus energy to the grid. It is becoming possible to replicate such systems at the macro level so that an entire power grid or gas network becomes interconnected and automated, with the capacity to slot in new technologies such as grid scale batteries and hydrogen.

Fourth, business innovation in technology and business models is the perfect complement for environmental policy because it also acts to drive down costs and drive up deployment of low-carbon energy.

In the UK, for example, the time taken to build an offshore windfarm has fallen by two thirds in five years.

And as innovative low-carbon businesses grow, we see a snowball effect with improvements in learning rates, costs of capital, operations and maintenance.

We are now seeing this effect at scale in our BP Alternative Energy business.

For example, our solar joint venture Lightsource BP started with a solar business that was already innovative enough to build Europe's largest floating wind farm at the Queen Elizabeth the Second reservoir near London. But then add to that the global scale, resources and experience of BP and we have created a business that in two years has expanded from five to 13 countries and to become a top-tier, fast growing operator with a project pipeline in six continents.

Solar is now a strong, competitive, stable, long-term, low-risk source of energy – driven in part by agreements to supply global companies that have pledged to make their power 100% renewable – like Budweiser's parent company AB InBev which is to be supplied by Lightsource BP. Warren Buffet's business has invested heavily in solar and he is known for saying of outstanding investments: "Our favourite holding period is forever."

Our biofuels business in Brazil, BP Bunge Bioenergia, demonstrates many features of an integrated – and indeed circular – low-carbon system. The carbon emitted by the biofuels has previously been absorbed by sugar cane. And bagasse, the fibre that remains after sugar cane stalks are crushed, is used to provide enough power for all of the facilities plus electricity for the grid.

We have also invested in a UK-based start-up called Grid Edge which serves customers such as shopping centres and uses artificial intelligence to optimise energy flows, maximise use of renewable energy and reduce carbon footprints. It works by creating predictive data from everything from lifts and doors to football crowds and this helps the buildings achieve a 'Goldilocks' effect – not too hot, not too cold and no energy wasted.

Therefore in short, the response has four dimensions: valuation – of low-carbon energy, regulation, integration and innovation.

But at the end of the day, any measure that reduces emissions should be welcomed. As Deng Xiaoping famously said: “It doesn’t matter if the cat is white or black, as long as it catches the mouse.”

Conclusion

Let me conclude with a wider point. The global financial system of the 20th century, with institutions such as the IMF and World Bank, was predicated on the assumption that finance was the principal driver of development and prosperity was the principal goal. Today, it is widely understood that sustainability is just as important. The goal has become sustainable prosperity.

And for me, that is the proper response to the challenge of climate security – acting to mitigate wherever possible and adapt where necessary; using all the tools at our disposal, and harnessing the power of the market in service of the environment.

And the timeframe means, as the great environmentalist Lester Brown observed, that a choice “made by our generation ... will affect life on Earth for all generations to come.”

It is our challenge, but also our opportunity. Thank you.