OPINION

How to win the argument on climate change: a five-point plan

By Simon Maxwell,
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About this CDKN paper

The paper offers a five-point plan on how to win the public and policy argument on climate change. A plan is necessary because climate change policy is contested, and – like all policy – has winners and losers. As with all our publications, the Climate and Development Knowledge Network (CDKN) welcomes readers' views and comments. Our purpose is to facilitate exchange of experience on climate compatible development, in order to accelerate the transition towards a low-carbon, more climate-resilient global society. You can find us on twitter (@cdknetwork) and Facebook, or email us at enquiries@cdkn.org.

About the author

Simon Maxwell is the Executive Chair of CDKN. His career in international development spans 40 years of research and policy work. He worked overseas for ten years, in Kenya and India for the United Nations Development Program (UNDP), and in Bolivia for the British aid programme, and then spent 15 years at the Institute of Development Studies at the University of Sussex. In 1997, he became Director of the Overseas Development Institute, the UK's leading independent think-tank on international development and humanitarian issues. He held this post until 2009. Simon Maxwell writes widely on poverty, food security, aid and climate change. He is a past President of the Development Studies Association of the UK and Ireland. In 2007, he was awarded a CBE for services to international development.

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Windmill park in Kanyakumari, South India.

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Why we need a plan to win the argument on climate change

Tackling climate change is tough. It often feels like we take two steps forward and one step back. Every now and then a tragic event like Typhoon Haiyan dominates the news bulletins and people make a link between climate change and the frequency or severity of natural disasters.[1] The severe winter of January 2014, with exceptionally cold conditions in North America and extensive floods in the United Kingdom (UK) and elsewhere in Europe, may also have had this effect. But then we go back to normal, arguing about who will do what, and the fine detail of taxes, subsidies or regulations.

That is not surprising. All policies have winners and losers. Look at Germany's industry, where people are worried about high energy prices caused by the *Energiewende*, the transition to renewables. Or Australian electors, apparently so opposed to a carbon tax that they voted out the government of Kevin Rudd.[2] Or talk to citizens in the UK, campaigning vehemently against wind farms,[3] hydraulic fracturing (known as 'fracking') for gas,[4] or a rise in energy prices.

Of course, everyone wins in the long term if climate change can be avoided. In the short term, however, the number and geographical distribution of potential losers makes it extremely tricky to design policy. I remember being at a dinner with a UK climate change minister, who said quite openly, "you have to understand that for every company lobbying for more support to renewables, there are three standing outside my door lobbying for less". And ministers are right to worry about jobs in depressed parts of the UK, now and in the future, where many of the current jobs are in power-hungry heavy industry. These factors apply outside the UK as well.[5]

This is why it is important to win the public and policy argument: to build and sustain support for action on climate change. And the starting point to winning the argument must be a plan. Mine is based on the following five steps:

1. Find a simple way to tell the story
2. Create a positive message on the transformational benefits of taking action
3. Craft a policy package which aids transition and helps losers
4. Build a leadership group that will deliver a long-term consensus
5. Focus relentlessly on implementation.

1. Find a simple way to tell the story

The science is unambiguous that human-induced climate change is real – but it is far from straightforward. The headlines of the latest Intergovernmental Panel on Climate Change (IPCC) 'Summary for Policy-Makers'[6] are clear enough, but the report is hard going. There are complex concepts, like radioactive forcing and representative concentration pathways.[7]

The aggregate numbers in the report are also hard to comprehend. For example, it is clear that carbon dioxide (CO_2) concentrations in the atmosphere have reached 400 parts per million (ppm), and that this is 40% higher than pre-industrial levels. However, a common sense analysis is that this means CO_2 has increased by about 100 ppm, which is one part in every 10,000. That does not seem very much. Imagine having 50 one-litre bottles of water and adding 5 ml (about one teaspoon) of CO_2 – does it make that much difference? And adding one more would end the world as we know it? That is surprising.

Or take another example. Current emissions of CO_2 are close to 50 gigatonnes equivalent per year.[8] That sounds like a lot, and it is. But how much is a gigatonne, actually? Apparently, one gigatonne is enough to fill the Black Sea, but that doesn't help without being able to visualise the area and depth of the Black Sea.

Here is one approach that helps. First, keep it simple by rounding up, rounding down, and avoiding ranges and probabilities. Note that the previous paragraphs use round numbers, rather than ranges or probabilities. That is one way to a simple story. For example, it is important to know that we can emit about 1,000 gigatonnes of CO_2 without seriously increasing the risk of 2° C warming, and that we have already used half of that allowance. So, at current rates of use we only have enough left for 20 years – and emissions are still rising. That's helpful to know.

But rounding up or down is not enough. The public needs simple examples that mean something. So, the second point is: illustrate your argument. Sometimes numbers are best, sometimes stories, sometimes

Roof of a flooded house.

pictures. It is helpful to understand the Myers-Briggs[9] profile of the audience, which explains how some people are only impressed by hard facts and equations, while others need empathetic stories.[10] Also, Jonathan Haidt argues different people respond to different triggers – empathy, duty etc. – so messages need to be crafted accordingly.[11]

It helps to use good images. Figure 1 is a map from the World Bank's 'World Development Report' on climate change.[12] This shows which places European capitals are likely to resemble by about 2050. For example, Oslo and Stockholm will be 'relocated' to northern Spain, London will resemble a city in northern Portugal, and Berlin will be like Chlef in Algeria. If you haven't been to Chlef, try googling some images to get an idea…

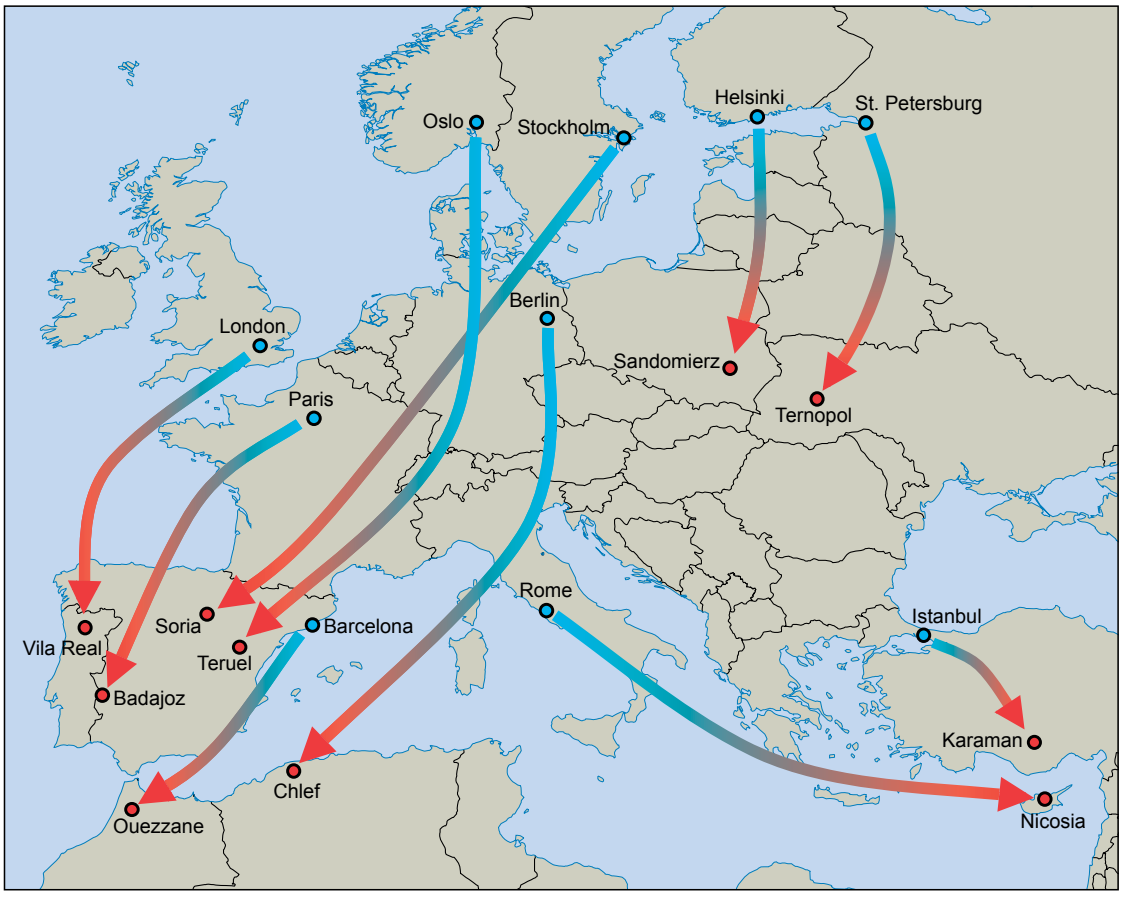

Figure 1. Northern European capital cities need to prepare for a Mediterranean climate in 2050

Source: Kopf et al. (2008)[13]

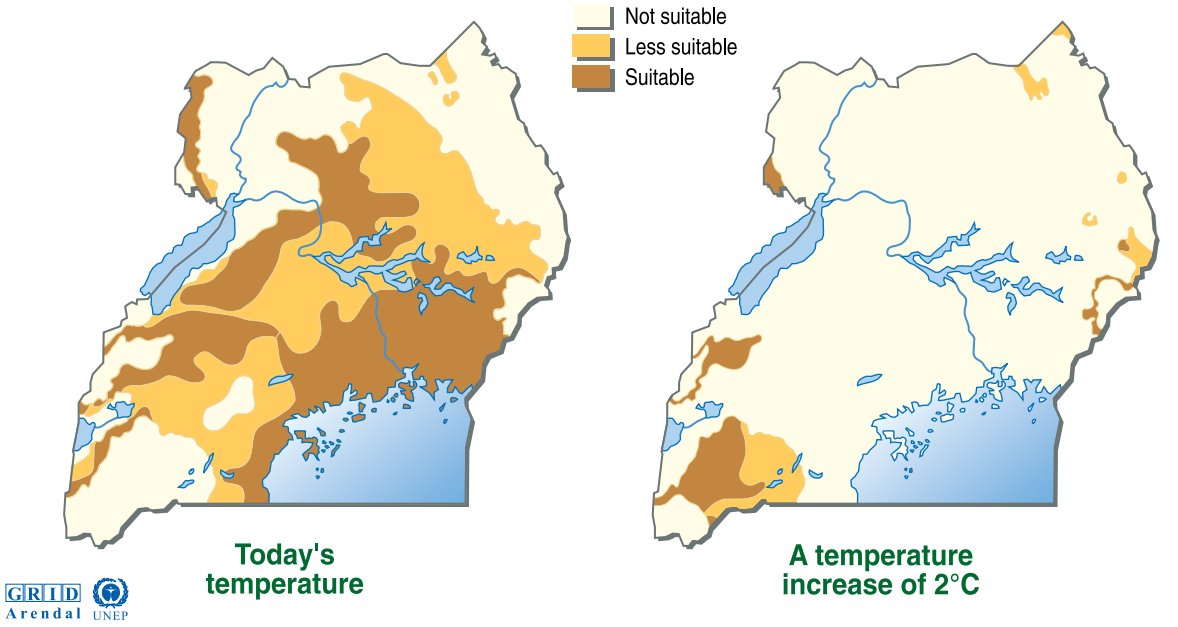

Figure 2. Impact of temperature rise on robusta coffee in Uganda

Source: Simonett (1989)[14]

Another sobering image shows the area suitable for growing robusta coffee in Uganda, now and if temperature rises by 2° C. Coffee growing employs 3.5 million people in Uganda, and provides 30% of export earnings, but this analysis predicts that coffee will almost disappear from Uganda unless new technology can be found. There are many similar examples: in Colombia, coffee growing regions will move up mountains by 400m, a very significant change – if there is a mountain up which to move.

The third way to keep the story simple is to make it personal. The previous examples relate to impacts. What about emissions? There are various ways of visualising gigatonnes, but current and future emissions at a personal level are more powerful. Overall, we seem to be emitting about 7 tonnes per capita globally on average at present, from all sources. Of course, much more comes from rich countries and much less from the poorest. By 2050, that figure will have to come right down, to perhaps no more than 2 tonnes per capita. The UK Climate Change Committee[15] endorses this figure, but it may well be generous if mitigation efforts do not pick up speed.

To show what that means, it's good to encourage people to complete a personal carbon calculator. These are available for most developed countries, but how many developing countries have personal calculators, I wonder?[16] Two tonnes is not much in a modern economy, of course. Most of us working on climate change emit more rather than less than the national average for our country, especially if we fly for work.

As an alternative, here is an example I used in Colombia recently. The country currently emits 1.6 tonnes of CO_2 per capita and gross domestic product (GDP) is growing at 4% a year. This means the economy is doubling every 18 years. At this rate, GDP will increase by four times by 2050, which is needed to tackle poverty. But Colombia will only be able to use 25% more CO_2 per capita. To complicate matters further, Colombia's most dynamic sectors are petrochemicals and coal, which together account for over half of exports. Of course, the emissions are counted at the point of use, rather than the point of extraction, so do not appear on Colombia's carbon budget. The sectors may, however, be forced to cut back if global limits on carbon are agreed.

The fourth approach is to make an emotional connection between climate change and the audience. Ideally, people need to experience the reality of climate change, but failing that, television can help. Images

from disasters like Typhoon Haiyan in the Philippines move people. Or a great communicator can touch people's hearts. I remember being at the World Economic Forum in Davos, Switzerland, and hearing Bill Clinton tell a story about the Indian Ocean tsunami, which hit in 2004 (an event caused by an earthquake not climate change, of course). When Bill Clinton paused, you could hear a pin drop. I have repeated the story, of course citing the source, and it had a similar impact. Clinton has used the story elsewhere, including during a speech he made to a meeting on disaster prevention and preparedness:[17]

> "I'd like to close with just a story to remind you of what this is all about. The last time I went to Aceh, I went to one of the camps for the internally displaced where there were thousands of people living. All these little communities, these little makeshift communities elect a community leader to represent them while they are there. I had at my side a young Indonesian woman who had been a television reporter. She quit her job to be an interpreter and to work with people in the camps until the reconstruction was done. So we walked into the camp and I was greeted by the elected leader of the community, a fellow just like everybody else living in the camp, and his wife and his son. This little boy of theirs, nine years old, was the most beautiful child I have ever seen. It was shocking; I could hardly get my breath when I looked at him: luminous eyes, bright smile. So I said to my young interpreter: I believe that's the best-looking boy I ever saw in my life. She said: "Yes, he is a beautiful boy. And before the tsunami, he had nine brothers and sisters. Now they are all gone."

Finally, leave people feeling empowered not powerless, with an optimistic message that something can be done (I will discuss this more in the next section). As Anthony Giddens observed in his book 'The Politics of Climate Change',[18] Martin Luther King did not stir his audience in 1963 by declaiming 'I have a nightmare…'.

2. Create a positive message on the transformational benefits of climate change action

Climate leaders know they have to create a positive message, and do so by emphasising the transformational potential of action on climate change. A good example is Christiana Figueres, speaking at the Harvard Kennedy School in Boston, USA, in September 2013:[19]

> "Today, we stand on the verge of the deepest energy transformation human society has ever seen, and it has already started. Consider that:
>
> - over US$1 trillion dollars has been invested in clean energy technologies
> - the cost of solar panels has decreased 80% since 2008
> - Tesla [a type of electric car] sales are already outpacing other luxury cars in California, and news about charging infrastructure is great
> - bike share programs in the US have doubled just this year [2013]
> - building technology is moving towards sustainably produced materials and smart thermostats.
>
> These and many other technologies are just the foundation. The larger opportunity comes from building on this foundation because it is a better way of doing things, not just a low-carbon life, but a better life.
>
> Imagine a future of practically unlimited energy harnessed efficiently from the power of the sun, wind and tides. Imagine a future where this energy is stored personally instead of delivered to you, untethering you from power outlets, cables and adapters, increasing freedom and mobility. Imagine a future where you can travel from coast to coast in mere hours, and the technology to get you there produces more energy than it uses. Imagine a future where driverless vehicles communicate to maximize roadway capacity and fuel efficiency, so you are free to happily text your way to work without being stopped by the police. Imagine a future where electric cars charge through inductive power transfer so you never have to stop to get fuel. Imagine a future where intelligent buildings are capable of producing all the energy they need, learning how to best use that energy to maximize your comfort and reduce your costs. Imagine a future where cities are not just planned, they are 'planted', cities where nature and engineering act as one to anticipate and meet residents' needs. This is a future where technology moves us towards constantly lower carbon intensity not just because it is good for the climate, but because it is good for people, for you and me, for my kids and your kids."

And here, somewhat more prosaically on this occasion, is Connie Hedegaard, also at Harvard, in March 2013:[20]

> "This is about our future economy… should WE keep a competitive edge here – or should we give it away? This was the exact point the President made in the State of the Union [address]: China does it, and so must we. Or we will lose out on this opportunity. We must force ourselves to innovate … investing in innovation in this field works. You can see it in a number of American states. And we can see it in our statistics: in the space of just five years, Europe's renewables sector is estimated to have created more than 300,000 jobs. By the end of the decade the net gain is expected to be around 410,000. And our goal of improving energy efficiency by 20% is forecast to create 400,000 additional jobs in that sector too, in the next few years."

There are many other examples, of course. A key paragraph from Barack Obama's Inaugural Address in January 2013 reads as follows:[21]

> "The path towards sustainable energy sources will be long and sometimes difficult. But America cannot resist this transition, we must lead it. We cannot cede to other nations the technology that will power new jobs and new industries, we must claim its promise. That's how we will maintain our economic vitality and our national treasure – our forests and waterways, our croplands and snow-capped peaks. That is how we will preserve our planet, commanded to our care by God. That's what will lend meaning to the creed our fathers once declared."

The argument can be broadened still further, and systematised. An entry point is the model of climate compatible development Tom Mitchell and I developed for CDKN. Figure 3 shows the diagrammatic version, which demonstrates that climate compatible development takes place when three things come together: mitigation, adaptation and development. This is important, because it reminds us that action on climate change cannot be at the expense of poverty eradication, human development and other aspects of 'good change'.

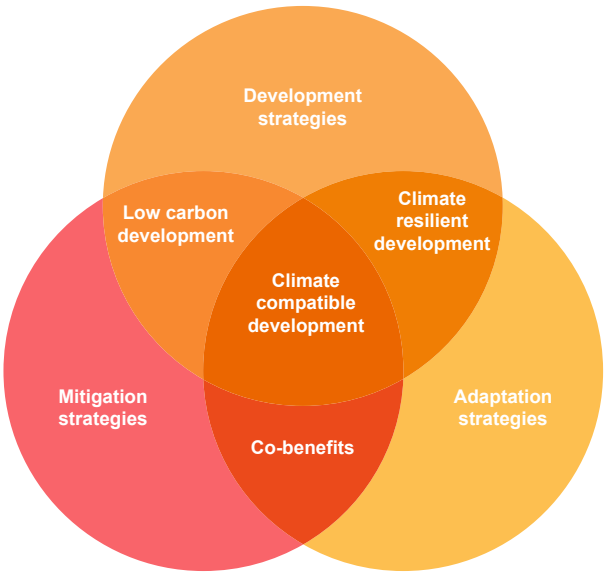

Figure 3. Climate compatible development

Source: CDKN (2010)[22]

What the diagram does not quite do is capture the extent of transformational change driven either by climate change itself or the action taken to tackle climate change. This was discussed extensively in the CDKN Policy Brief on the subject, but the point does not feature properly in the diagram. That's why I like to now re-label the top circle as 'transformation'. Everything else remains unchanged. The change is significant, though; transformation is the great undiscussed topic in climate debates in developing countries.

From a practical perspective, there are four ways to create a positive message, four drivers of change.

Avoiding disasters

Adaptation is the obvious driver of change in many poor countries. Disasters are costly, in human life and money, and they concentrate the minds of politicians and policy-makers: see cases in El Salvador (Box 1), Bangladesh, Pakistan, and now the Philippines, or track the pronouncements of the Climate Vulnerability Forum.[23]

Box 1. El Salvador builds resilience in the face of a stormy future

El Salvador is highly vulnerable to climate disasters. According to the Global Facility for Disaster Reduction and Recovery, almost 90% of land area is at risk from disasters; 95% of the population live in these areas and 96% of the country's GDP is produced in them.

The problem is not just theoretical. In just three years, El Salvador weather-related events caused losses of US$1.3 billion – equivalent to 2% of GDP. As a result, in 2011, El Salvador began to develop and implement a National Policy and Strategy for Climate Change, which culminated with the launch of the National Environmental Policy in June 2012 and the National Environmental Strategy in June 2013. The Budget Policy of 2013 prioritised "halting environmental degradation and promoting climate change adaptation".

Putting the strategy into practice, the National Program for Ecosystem and Landscape Restoration emphasises reforestation and conservation agriculture. These contribute to mitigation by increasing carbon storage, while bolstering adaptation by reducing the scale of flooding and landslides.

Source: Global Facility for Disaster Reduction and Recovery (2010)[24]

Of course, not all disasters are climate-related, so adaptation planning should be integrated into wider national risk assessments and disaster preparedness strategies. Countries don't need two disaster risk management strategies; they need one plan, one set of institutions, and one budget. Also, not all adaptation is about disaster risk management, unless the field is drawn widely enough to include research on crop varieties, the design of infrastructure and buildings, and long-term investments in health systems. These also need to be part of integrated climate compatible development plans.

Finding new sources of growth through mitigating carbon pollution

The idea of mitigation is also fairly straightforward, in the sense that a 'business as usual' projection of carbon emissions for most countries will have them running into CO_2 constraints sooner rather than later – see the Colombia example, cited on page 3. If Angel Gurría, the Secretary-General of the Organisation for Economic Co-operation and Development (OECD), has his way and the 2050 target becomes zero net emissions, then there will be no escape from mitigation in any corner of the world.[25]

There is a burgeoning literature on green growth (economic growth that uses natural resources, including energy sources, in a sustainable manner). The OECD also has a workstream[26] on the topic and published a report, 'Putting Green Growth at the Heart of Development'.[27] My review[28] of a World Bank paper on green growth[29] concludes that:

> "The overall message is optimistic. Green growth, we are told, is (a) necessary, (b) efficient and (c) affordable, for poor countries as well as rich. It offers many opportunities for more inclusive development, meaning more jobs and better, healthier and more secure livelihoods for women and men. And the benefits can be achieved reasonably quickly, with a combination of standard growth-oriented policies, and additional measures to nudge, incentivise or regulate people, firms and government authorities to act in more environmentally sustainable ways."

As with adaptation, it is important to have an integrated approach, one plan not two. I have previously made the point that green growth is a special type of growth: there is no point in trying to stimulate green growth if the incentive and regulatory framework is unfavourable to growth of any kind.[30] On these topics, it is always worth checking the World Economic Forum's 'Global Competitiveness Report',[31] or the World Bank's 'Doing Business Report'.[32]

The arguments by Figueres and Hedegaard suggest that mitigation can deliver growth and jobs (see above). In the UK, the New Green Deal Group argues that the move to a zero carbon economy could create up to 1.5 million new jobs. It cites a 2012 report[33] by the Confederation of British Industry (CBI) as demonstrating:

> "The green economy [is] worth £122 billion a year, making up 8% of GDP, and [was] growing at 4.7% in 2011. The CBI report calculated that the green economy encompasses 50,000 firms across many different sectors, employing 940,000 people, two thirds outside London and the south-east. It also noted the UK green goods and services run a trade surplus of £5 billion a year and are forging strong links with growing economies, with its number one export market being China."

In February 2014, a group of progressive Conservatives in the UK also made a play in this territory, linking environmental policy to future competitiveness and claiming that 3 million jobs could be created, along with a boost of £5 billion to manufacturing profits, by tightening the rules on waste products.[34]

In developing countries, green growth is being seen as an important driver, for example in Ethiopia and Rwanda (see Box 2).

Box 2. Green growth as a driver of climate compatible development in Rwanda

Rwanda has a dynamic economy, enjoying an average annual GDP growth of 8.5% over the past five years. Its economic growth plan, Vision 2020, seeks to transform the country from a subsistence agriculture economy into a climate-resilient and low-carbon economy by 2020. Climate change is a major threat to economic prospects, however, predicted to cost 1% of GDP each year by 2030.

The Government of Rwanda developed the 'Green Growth and Climate Resilience Strategy' in 2011 and established the largest demand-based climate fund in Africa, Rwanda's Fund for Environment and Climate Change. The strategy's objectives include: development of national geothermal energy reserves; integrated soil fertility management; a robust and climate-resilient road network; sustainable natural resources management; and a low-carbon energy grid. Geothermal energy, in particular, could provide greater economic stability through decreased reliance on foreign oil imports.

In May 2013, the second 'Economic Development and Poverty Reduction Strategy (2013–2018)' was approved. This pursues a green approach to economic development as one of its five economic priorities.

Source: Roux (2013)[35]

Seizing opportunities for transformation

We need to build on the idea of transformation. It refers to the impact of global climate change (or measures to deal with it) on tradeable sectors, including import-competing sectors as well as export-oriented, and potential as well as actual sectors. Transformation can affect businesses and governments anywhere in the world. Will international prices change, either free on board (FOB) or cost, insurance and freight (CIF)? Will new markets appear? Will old ones disappear? What will happen to the competitive advantage of different firms in different sectors? In the climate compatible development policy brief,[36] we argued that:

> "Climate-related economic development challenges and opportunities mean that:
>
> - All exporters are affected by the rising cost of transport or the changing relative prices of transport types. So export-oriented growth strategies may not be as attractive or may require changing. Island economies that are dependent on tourism, for example, may be affected negatively by rising air transport prices. The same is true for export-led agricultural strategies, like flowers or horticulture, which also face uncertainty over temperature changes and the volume and distribution of rainfall.
> - Some developing country producers may benefit from exploiting demand for biofuels or the opportunities presented by carbon market incentives to conserve forests. Conversely, countries with a traditional economic reliance on exporting high carbon fuel sources, such as oil and coal, may be disrupted by a shift in demand to cleaner fuels.
> - Mitigation and adaptation technologies are developing rapidly, creating opportunities for innovators to make profits, disadvantages for late adopters, and the potential for technological leap-frogging. Technological innovation can also create new resource opportunities. Demand for a new generation of batteries, for example, is good news for Bolivia's lithium industry."

Young female teapicker, Rwanda.

A good way to think about this is in terms of 'disruptive innovation' or 'creative destruction'. Sometimes, the effects of transformation are negative. This is not a case associated with climate change, but, for example, David Landes describes how the indigo industry in India was decimated by the development of chemical substitutes in Europe: production in 1895–96 was 187,000 tons, in 1913–14 only 11,000 tons.[37]

A current example, induced by policy rather than technical change, is the hand-stitching of footballs in Sialkot, Pakistan. This industry has been decimated by the latest Fédération Internationale de Football Association (FIFA) regulations, which specify that balls may only deviate from a perfect sphere by 1.3%. Sialkot was the world centre for stitching balls, but hand-stitching cannot meet the new specifications: employment has fallen in a decade from 100,000 jobs to only 10,000.[38] Another example can be found in a brilliant history of the shipping container, 'The Box', by Marc Levinson.[39] The Economist argues that containerisation has been a bigger driver of globalisation than all the trade agreements of the past fifty years.[40]

Sometimes the impact of disruptive innovation can be positive – for some at least. China now exports solar panels worth nearly US$30 billion a year to Europe, despite the fact that installed solar capacity in China has until recently been small. This is a case of China identifying and pursuing a market niche, to the point that there have been allegations of dumping and a need for dispute resolution.[41] Similarly the transformative potential of Bolivia's lithium reserves is highly significant for the future industrialisation of the country: Bolivia may hold up to 70% of the world's reserves. Both examples are unrelated to mitigation or adaption in those countries.

Positive or negative, the point is that no country can afford to ignore the disruptive effects of climate change on tradeable sectors. This puts industrial policy very firmly in the spotlight, and calls for active measures to minimise the development costs and maximise the development benefits.

Some countries have followed this path. South Korea established a Presidential Commission on Green Growth as early as 2008, followed by a national strategy and a five-year plan. Key sectors included

renewable energy, cities, water and 27 core, green technologies.[42] President Lee Myung-bak bet the family silver on green growth as South Korea's future path to prosperity – although the new Government has downgraded this policy.[43]

Denmark is another case, with very ambitious climate targets and a new climate plan outlining 78 different ways that the transport, agriculture, building and waste sectors can cut their emissions and contribute to reaching the target.[44] In February 2014, the Danish Government agreed to enshrine in law a commitment to reduce emissions by 40% below 1990 levels by 2020.[45] It also set up a new, independent Climate Council. There is also real potential in the developing world: Rwanda was an early leader, and Vietnam has adopted a transformative green growth strategy (Box 3). Peru recently identified 73 sectoral mitigation actions that will be screened and prioritised according to criteria such as co-benefits, poverty reduction and feasibility.[46]

Box 3. Vietnam's National Green Growth Strategy

The Vietnam Green Growth Strategy, approved in September 2012, aims to accelerate the process of economic restructuring to contribute to poverty reduction and drive sustainable economic growth. The development of new technologies, improved infrastructure and a more efficient use of resources are seen as ways to increase economic efficiency while reducing greenhouse gas emissions. Objectives include: reduce greenhouse gas emissions by 8–10% compared to 2010, and reduce energy consumption per unit of GDP by 1–1.5% per year.

A marginal abatement cost curve analysis undertaken on key sectors in Vietnam showed significant 'win-win' options in the energy and agricultural sectors and large, cost-effective opportunities in the forestry sector. The analysis underlined that with appropriate levels of investment, Vietnam's targets for reducing greenhouse gas emission can be achieved while maintaining high economic growth.

Source: Asia LEDS Partnership (2013)[47]

Exploiting synergies and co-benefits…

Finally, and this helps with the politics, there can be significant co-benefits to policies that tackle climate change. The various editions of the 'Emissions Gap' reports[48] by the United Nations Environmental Programme (UNEP) contain many examples, often when the primary driver of the policy was the co-benefit rather than concern for the climate: phasing out coal-fired power stations to improve air quality in Toronto; rapid bus transit systems to reduce traffic congestion and speed the journey to work in Bogota; or investing in renewables to increase energy security in Japan. In China, concern for the local environment looks like being a powerful driver of action on climate change.

…and make all this seem exciting and urgent

Avoid disasters. Find new sources of inclusive growth. Seize the opportunities of transformation. Exploit synergies and co-benefits. Also, help others. And save the planet. And be a responsible global citizen. It seems to me there is enough material there to forge a positive message, attractive to different personality types and to those with differing 'moral taste buds'. Tackling climate change is not (just) a grim duty, required for long-term sustainability of the human race. Can it not be the path to a more inventive, more socially inclusive and even happier world?

3. Craft a policy package that aids transition and helps losers

There is a great deal of literature on the technicalities of climate change policy in developing countries: international, national and local; fiscal and administrative; climate-specific or more general. There is no shortage of guidance on how to design a cap and trade regime, or an energy policy that favours renewables, or a package to strengthen resilience to climate shocks. CDKN has published many policy briefs and 'Inside Stories' that deal with these topics. Geothermal in Kenya is a good story.[49] Solar power in India is another.[50] Disaster management in Bangladesh is a third.[51]

However, as noted previously, policy is often contested and sometimes, as a direct result, reversed. This serves as a reminder that understanding the technicalities of a policy is not enough: the politics also

Solar powered house on Islas Flotantes, Peru.

matter. There are lavish literatures on this topic also, in anthropology, sociology and political science. The Overseas Development Institute (ODI) has a valuable work programme on 'Power, politics and evidence use'.[52] A World Bank book on political, social and institutional analysis of policy reform covers similar ground.[53]

Merilee Grindle, a professor of international development at the Harvard Kennedy School, has worked extensively on this topic. She focuses on the interests of different groups and the resources they bring to bear, in favour of or against a particular policy. The groups can be formal (the Minister of Finance, Parliament, business associations) as well as informal (the 'rust-belt', the unskilled working class).

Of course, these ideas are not new. When I worked at the Institute of Development Studies (IDS) in the 1970s and 1980s, the questions most frequently asked – the questions we thought almost defined IDS – were who gains? Who loses? In fact, it was interesting to tell that story in Colombia.[54] Afterwards, a former minister said that when he used to go to see the President about a new policy, armed with reams of analysis, the President would only ask two questions: Who gains? Who loses?

The question of who gains and who loses led to many important debates about how to roll out and sequence policies in a way that manages the politics and protects the losers. 'Adjustment with a Human Face' (1987), a response to the rigours of structural adjustment, is just one example.[55]

It should not be surprising, then, that there are good examples of this approach being applied in the climate field. A World Bank paper on green growth[56] has some good cases. One example is tackling the problem of energy subsidies in Morocco (which cost 5.5% of GDP), first by educating the public about the cost and then making sure that losers from the elimination of subsidies are compensated through a social programme. GLOBE, the parliamentary alliance on climate change, has a climate legislation initiative[57] and has published a directory of climate legislation in 33 countries: many legislative frameworks deal with how to manage trade-offs.[58]

Another example of compensating potential losers is payment for environmental services, through which the owners of natural resources are compensated for the income losses that arise if they do not exploit the resource. Payments for ecosystem services have been used to protect forest resources in several Latin American countries, such as Bolivia (Box 4).

Box 4. Payments for ecosystem services as a driver of climate compatible development

In Santa Cruz, Bolivia, a project by Rare Conservation and Fundación Natura Bolivia has helped landholders from upstream areas, especially the Andes mountains, to receive payments for conserving forests.

Reciprocal Water Arrangements (known as *Acuerdos Recíprocos por Agua* in Spanish) are private contracts between the members of downstream water cooperatives and landholders in priority catchment areas. Landholders sign contracts that bind them to strict rules of land management: they must conserve the forest, avoid livestock practices that cause pollution, and enhance the biodiversity and forest carbon of their land. In exchange, they receive in-kind compensation that boosts their incomes and livelihood prospects.

The scheme has been very successful. Over 30 municipal governments and water cooperatives across the Bolivian Andes have joined the movement. More than 40,000 downstream users now compensate 2,000 upstream families for protecting 70,000 hectares of forested 'water factories'. And in the last two years, more than US$350,000 of local and donor funds have been used to compensate landowners' conservation efforts.

Source: Dupar and Huhtala (2013)[59]

Recent events in Australia are worth reporting as an illustration of a programme designed to be sensitive to political pressures, and to winners and losers, but also of pressures to change direction. Australia's Carbon Pricing Mechanism Legislation allowed for a staged implementation of a carbon price, beginning with emissions reporting, and moving gradually (by 2018) to a fully flexible emissions trading scheme, linked to the European Union's Emissions Trading Scheme. Pollution caps were announced in advance to provide five years' worth of certainty. The government assisted emissions-intensive trade-exposed industries through incentives to improve their emissions intensity. Households were assisted through tax cuts and increased payments to pensioners and welfare recipients.

In 2013, however, Australia elected a new Government, one committed to abolishing the carbon tax. This Government has introduced new legislation to abolish the tax in July 2014, as well as the independent Climate Change Authority. There are fears that the Renewable Energy Target will also be abandoned. The example leads us to the question: how can momentum be sustained and policy reversals avoided?

4. Build a leadership group that will deliver a long-term consensus

One way to sustain reforms of climate change policy is to take it out of the political arena – or at least to create such a strong consensus across parties and political positions that long-term policy can be guaranteed. This was the theme of two books I reviewed in 2009: Anthony Giddens's 'The Politics of Climate Change'[60] and Colin Challen's 'Too Little, Too Late', subtitled 'the politics of climate change'.[61] As I reported in the review:

> "Giddens suggests many innovations, among them the idea of 'political transcendence' in which 'climate change ... is not a left–right issue', but one for which 'a cross-party framework of some kind has to be forged to develop a politics of the long-term'. Giddens argues for a consensus-based 'radicalism of the centre' involving a suspension of hostilities between rival parties, and for a 'concordat' on climate.

Colin Challen [as a UK Member of Parliament] is well aware of the pressures exerted by a competitive political system, and argues that 'to break out of this padded cell requires courage. It may, indeed probably will, mean abandoning tribal loyalties, and risking the approbation of one's political kin'."[62]

Concretely, Giddens and Challen between them offered a series of options:

- Use all-party parliamentary groups to foster discussion and build consensus.
- Aim for consensus on long-term objectives, without focusing at all on detail – as in Britain's Climate Change Act (2008),[63] which mandates cuts in overall carbon emissions without specifying how they are to be achieved.

- Set up independent bodies, such as the Committee on Climate Change[64] created by the Climate Change Act, to monitor progress in achieving targets and to advise on (but not yet mandate) the measures.
- Require such bodies to help build consensus, for example by consulting all political parties.
- Seek ways to increase the costs of defection from the consensus.
- Encourage mass movements and civil-society action groups to agitate for change.

Five years later, we can add to this list:

- Set up an inclusive and multi-stakeholder policy process. This was done for the South Africa project on Long Term Mitigation Scenarios (see Box 5) and as is now being rolled out in four Latin American countries through the Mitigation Action Plans & Scenarios (MAPS) project.[65] Collaborative scenario planning is a key feature of this approach.
- In Kenya, the rich participatory process to validate the national climate change action plan in 2012 saw county-level consultations, which included representatives from all 47 counties. This linked to the new constitutional requirement that all major public policy processes must undergo extensive public consultation. Members of civil society groups, the private sector and academia all aired opinions that enhanced the final action plan.[66]
- Use national and regional think tanks to help build a community of researchers, policy-makers, parliamentarians and activists (these can be overlapping categories), who share ideas and together build consensus. As an example, in 2009, ODI organised a series of public meetings in parliament, bringing top speakers and the above interest groups together, to debate climate change. The series was organised by Natasha Grist and jointly sponsored by the All Party Parliamentary Groups on Development and Climate Change. It is hard to evaluate the long-term impact of this kind of activity, but it helps to build momentum.

Box 5. South Africa's Long Term Mitigation Scenarios

The idea behind South Africa's work on long-term mitigation scenarios was that any plan should have "firm roots with everyone in the 'community', from power players in the economy, to workers and consumers, and from environmentalists to oil barons … [There had] to be a national effort, indeed a national conversation – one in which emotion [was] stripped out of the equation, and trusted and reliable data inserted in its place".

An approach was developed using model-based scenario planning, with professional facilitators helping diverse stakeholders with different interests to "find the routes towards the mental and emotional places where people want to make deals". Between 2006–08, the work progressed from model-based technical analysis, through the development of high-level scenarios, to workshops and policy discussions involving senior decision-makers from all sectors of society. The final outcome provided endorsement for an ambitious mitigation reduction pathway "required by science".

Source: Raubenheimer (2011)[67]

5. Focus relentlessly on implementation

The writing of this final point in the plan was triggered by a recent encounter. Someone proudly gave me a copy of a new strategy her team had produced, nicely printed in full colour. "Brilliant", I said. "When does implementation start?" "Oh", she replied, "that is someone else's job. We just do the strategy." I wonder: is this a common phenomenon?

Implementation of policies and strategies is certainly a problem, and not just for governments. That is why there is a literature on managing change. John Kotter, for example, talks about the need to establish a sense of urgency and build a coalition for change. He also emphasises the need to generate short-term wins in order to build momentum.[68]

In the UK Government, the difficulty of achieving change has been a constant refrain. For example, Tony Blair created controversy with a speech complaining about 'scars on my back' from trying to reform the public sector.[69] Blair established a delivery unit to focus on implementation, headed by Sir Michael Barber, who wrote a book pointedly called 'Instruction to Deliver: Fighting to Transform Britain's Public Services'.[70]

20 year-old Meenakshi Diwan tends to maintenance works in the solar village Tinginapu, India.

Barber can be thought of as the 'high priest' of targets, implementation plans and analysis of trajectories. This quantitative approach to implementation has strengths and weaknesses, but focuses relentlessly on delivering cross-government priorities. Just don't ask too many questions about the quality of the data or the perverse incentives created by focusing on just a few indicators. Jake Chapman wrote about the risk of over-reliance on targets leading to 'system failure',[71] and there is currently a debate in the UK about the quality of data being used by the Government.[72] Others write about unpredictability and complexity: for example, Ben Ramalingam's new book on the implementation of aid policy is called 'Aid on the Edge of Chaos'.[73]

Managing change remains an issue, however. For example, Andrew Adonis provides very practical lessons about leadership and getting things done (in his book about UK schools):[74]

1. Address the big problems
2. Seek the truth and fail to succeed
3. Keep it simple
4. Be bold, but go with the grain as far as possible
5. Lead and explain, lead and explain
6. Build a team
7. Build coalitions, not tabernacles
8. Champion consumers not producers
9. On important issues, micro-manage constantly
10. Keep calm and carry on
11. Reform is a marathon not a sprint
12. Always have a plan for the future

This is not just a UK problem, of course. For the USA, a contrast is sometimes drawn between Presidents Kennedy and Johnson, the former a visionary and the latter a practical politician: it was Johnson, not Kennedy, who pushed civil rights legislation through Congress. Robert Caro's biography of Johnson is a must-read.[75]

In developing countries, and Africa specifically, the problem can be acute. As Tony Blair observed:

> "Government is a race between expectations and capability. As a leader, you either reform government fast enough to deliver what people expect of it, or you lose the support to govern … (Thus), good leadership is … not merely a function of good intentions but of the capacity of the institutions that support leaders to turn those intentions into practical results."[76]

In the field of climate change, some countries have shown a commitment to implementation. Box 6 provides an example from the Caribbean.

Box 6. Delivering transformational change in the Caribbean

The annual impact of climate change on all 15 Caribbean Community (CARICOM) member states is estimated to be 11.3% of their total annual GDP, which could double by mid-century. In 2009, CARICOM Heads of Government publically recognised this challenge through the Liliendaal Declaration. They then asked the Caribbean Community Climate Change Centre (CCCCC) to prepare a Regional Framework for Achieving Development Resilient to Climate Change, and an Implementation Plan. Focus sectors included water, coast management, agriculture and renewable energy.

The Implementation Plan was based on the idea that an effective institutional, administrative and legislative environment is essential for building resilience to the hazards associated with a changing climate in a timely manner. It identified and prioritised stakeholders' actions under each strategic element and goal area of the Regional Framework, which each country then applied to its own unique context. It also established a financial advisory body and coordinated donor support to countries in the region.

As one of the key actions from the Implementation Plan, in July 2013 the CCCCC launched the Caribbean Online Risk Management Tool, an innovative instrument to integrate climate risk management in everyday policy and planning processes.

Sources: McGann (2011);[77] Firth (2012)[78]

Conclusion

I have argued that tackling climate change is a big ask and, like all large-scale change management, it demands leadership with a deep understanding of the forces supporting and opposing change, of the winners and losers, and of the balancing act underpinning the design and implementation of policy. But it might be the case that the public mood changes, and that 'interests' are swept away by the surging waters of repeated climate extremes. Might we, in fact, reach a tipping point?

Some certainly think so. Michael Liebreich, of Bloomberg New Energy Finance, discusses 'phase change'. This idea suggests that when important transitions happen in complex systems, initially little on the surface appears to alter, but then suddenly the change is obvious for the eye to see.[79] 'He argues:

> "For over a hundred years, the orthodox view of the energy system prevailed. Power generation was big, dirty and central. Grids were centralised and dumb. Reliability was provided by holding over-capacity. Vehicle fuels were oil-based. For some years now, we have been saying that this orthodoxy is not going to hold in the future. I predict 2014 is going to be the year when this becomes starkly obvious to most people. Until now, it has been up to the proponents of a new system to argue that change is on its way. In 2014 the tables will turn. Change will be the default assumption, and it will be up to the proponents of orthodoxy to argue why they disagree."

That prediction may or may not come true. As Malcolm Gladwell observes:[80]

> "Tipping Points are a reaffirmation of the potential for change and the power of intelligent action. Look at the world around you, it may seem like an immovable, implacable place. It is not. With the slightest push – in just the right place – it can be tipped."

In the meantime, it behoves us to continue thinking about leadership and change management. To paraphrase Madeline Albright, former US Secretary of State: I am an optimist, but it pays to worry a lot![81]

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About CDKN

The Climate and Development Knowledge Network (CDKN) aims to help decision-makers in developing countries design and deliver climate compatible development. We do this by providing demand-led research and technical assistance, and channelling the best available knowledge on climate change and development to support policy processes at country and international level. CDKN is managed by an alliance of six organisations that brings together a wide range of expertise and experience.

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