



CENTRE FOR POLICY DIALOGUE (CPD)  
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# Climate compatible development: pathway or pipe dream?

Centre for Policy Dialogue Anniversary Lecture, 2015

**By Simon Maxwell, Executive Chair,  
Climate and Development Knowledge Network  
With Introduction by Professor Mustafizur Rahman, Executive Director, CPD**

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### About this CDKN paper

This paper was originally prepared for the Anniversary Lecture at the Centre for Policy Dialogue, Dhaka, Bangladesh, in January 2016. Responsibility for the text is the author's.

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](mailto: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 10 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.

### Acknowledgements

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Centre for Policy Dialogue Anniversary Lecture 2015

By Simon Maxwell, Executive chair, CDKN



Dhaka, Bangladesh

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## Foreword

The Centre for Policy Dialogue's (CPD) first Anniversary Lecture was held on 18 November 2014 as part of its celebration of a two-decades long journey. On that occasion, Professor Louka T. Katseli, a former minister in Greece and the former director of the Organisation for Economic Co-operation and Development's Development Centre in Paris, delivered the lecture on the theme of 'Recent fiscal and labour market adjustment experiences in Europe: lessons for the low-income countries'. The lecture gave the Bangladeshi audience an opportunity to listen to Professor Katseli's views regarding the Eurozone crises and the consequences of high public and private debt, and to get to know her unique insights and critical perspectives on the austerity plans prescribed by international financial institutions.<sup>1</sup>

Following this successful first event, CPD decided to establish this tradition of organising an Anniversary Lecture on a regular basis, and to invite eminent scholars to speak and share forward-looking perspectives on global issues that have relevance and interest to Bangladesh. We were absolutely delighted that Mr Simon Maxwell, CBE, an intellectual of global renown, kindly agreed to deliver the CPD Anniversary Lecture 2015 on the theme of 'Climate compatible development: pathway or pipe dream?'.<sup>2</sup>

Mr Maxwell is the chair of the European Think Tanks Group and former director of the Overseas Development Institute (ODI), London. He is also Executive Chair of the Climate and Development Knowledge Network (CDKN) and specialist adviser to the International Development Select Committee of the United Kingdom's (UK) House of Commons. He is one of the leading thinkers on international development and an influential player in the global climate discourse. His advice and suggestions with regard to climate compatible development are much sought after by policy-makers and development practitioners. With field-level experience in countries spanning across three continents, Mr Maxwell is uniquely placed to offer a very distinctive perspective on the interface between climate change and development.

The lecture theme was particularly pertinent in view of the 21st Conference of the Parties in Paris, which was held shortly beforehand and where the landmark Paris Agreement on climate change was adopted. Mr Maxwell's lecture focused on how climate compatible development could offer poverty-reducing and socially inclusive pathways for development in developing countries, in ways that are aligned with, and integral to, the ambitions embedded in the Sustainable Development Goals (SDGs).

We felt that Mr Maxwell's insights and critical perspectives on mitigation and adaptation, on commitments and implementation in view of the SDGs and Paris Agreement, and his views on issues of mainstreaming climate compatible development, were of great interest to stakeholders in Bangladesh. We also hoped that Mr Maxwell's lecture, and other engagements in Dhaka, would contribute to a better understanding about climate change-related challenges confronting Bangladesh and help to identify opportunities and modalities to address the attendant tasks.

2015 was an eventful time for CPD. The research portfolio of CPD became more diversified, and there was a renewed emphasis on raising the bar in terms of analytical rigour and research quality. Dialogue and outreach activities were designed in a more strategic manner, particularly taking advantage of the two global initiatives that CPD hosted – LDC IV Monitor<sup>2</sup> and Southern Voice on Post-2015 International Development Goals.<sup>3</sup>

The Anniversary Lecture 2015 was also an opportunity to register our deep and sincere gratitude to all well-wishers and partners of CPD for their support and solidarity, and for their valuable contribution to CPD's manifold activities during 2015. We do hope to continue our journey, together, in 2016, in service of the cause of an economically advanced and socially just Bangladesh.

– Mustafizur Rahman, January 2016

## Executive summary

The Anniversary Lecture 2015, given by the author at the Centre for Policy Dialogue, Dhaka, Bangladesh, in January 2016, addressed the challenges posed by 'climate compatible development'. Is there a clear pathway towards 'zero poverty, zero emissions' – eradicating poverty and simultaneously saving the planet? Or are the trade-offs and competing interests so great that this is merely a pipe dream?

The SDGs, agreed in September 2015 by the United Nations (UN) General Assembly, and the Paris Agreement adopted in December 2015 under the UN Framework Convention on Climate change (UNFCCC), together demand economic and social transformation. This is true despite the fact that the concrete mitigation commitments made by countries in the Paris Agreement amount to only about a quarter of those needed by 2030. In the longer term, far more radical cuts will be needed to achieve the complete elimination of CO<sub>2</sub> by 2070, and of other greenhouse gases well before the end of the 21st century.

Climate compatible development provides a framework for thinking about the transition pathway needed to deal with changes on this scale, while simultaneously achieving the poverty reduction and other targets embedded in the SDGs. It emphasises mitigation and adaptation within countries, but also the impacts on individual countries of transformation in the wider global economy. In this context, innovation becomes a key concept and competitiveness an essential tool.

Theoretical pathways to zero poverty, zero emissions are well established, and appear particularly attractive when co- benefits like improved air quality and lower congestion are taken into account. However, the transition pathway is not friction-free. Three elements need to be assembled: policy leadership; policy design; and policy implementation.

The many issues raised by climate compatible development are familiar within the field of development studies. Future work on climate and development must be informed by the lessons of past development research and policy-making, and must build on the values held by those working in the field.



## 1. Introduction

It was an honour and a pleasure to be asked to deliver the Anniversary Lecture and to have the opportunity to speak about climate compatible development. This was partly because it enabled me to pay tribute to the work of the Centre for Policy Dialogue (CPD), and also to recognise the leadership role that Bangladesh has played on climate change.

An important issue in discussions about climate change is values, and the importance to society of open, honest, well informed and widely owned policy dialogue. CPD has championed this perspective throughout its history, in Bangladesh and also internationally; truly, CPD has local roots and global reach. Globally, this includes its work on the international economy and on trade, especially on least developed countries; and also its recent contributions, through Southern Voice, on the framing of the SDGs. CPD has also benefitted from inspiring leadership, especially by Rehman Sobhan, Debapriya Bhattacharya and Mustafizur Rahman.

Bangladesh has focused very much on the impacts of climate change. The country has championed the importance of vulnerability, played a leading role in the Climate Vulnerability Forum, influenced the spending priorities of the Green Climate Fund, helped to ensure the prominence of adaptation issues in national climate pledges, and helped to drive the ambition of the Paris Agreement. CPD's programme on climate change has contributed to Bangladesh's leadership role in this field.

There are lessons to draw from these experiences. When research influences policy, there is more in play than the originality and respectability of the research. Researchers succeed when they explicitly build bridges to the world of policy: telling good stories; building strong networks; focusing on the practicality of their recommendations; and thinking politically about the context and timing of their interventions. Internationally, think tanks can influence the global agenda when they work together across national borders, a process that can be described as 'policy code-sharing'. CPD exemplifies best practice among think tanks; Bangladesh can be proud of having fostered such an institution.

## 2. The SDGs and the Paris Agreement: a 'wicked problem' for researchers and policy-makers

2015 was a year of sometimes frenzied international activity in the climate change sector, including the 'Financing for Development' conference<sup>4</sup> held in Addis Ababa, Ethiopia, in July, and the World Trade Organization Ministerial<sup>5</sup> held in Nairobi, Kenya, in December. Two processes and meetings stood out, however: the Sustainable Development Goals<sup>6</sup> to 2030, agreed by the UN General Assembly at the New York Summit in September, and the agreement on climate change,<sup>7</sup> agreed in Paris, France, in early December. Neither is perfect, but both are important – and together they set the stage for a remarkable transformation in the global economy and society.

### The Sustainable Development Goals

The SDG Framework is valuable for three reasons. First, it explicitly links economic, social and environmental issues in its comprehensive list of 17 Goals and 169 Targets (see Figure 1). Second, it is explicitly universal, applying to all countries and not just those labelled as 'developing'. And third, it represents a consensus among many stakeholders from the official and non-official sectors: non-governmental organisations and the private sector, as well as governments.

The preamble to the final text of the SDG Declaration, 'Transforming our world: the 2030 Agenda for Sustainable Development',<sup>8</sup> emphasises the interconnectedness of the 17 economic, social and environmental goals under the five 'Ps' – people, planet, prosperity, peace and partnership (see Figure 2, page 5).

The Declaration is wide-ranging, ambitious and the product of intensive consultation and participation. At the same time, it can be criticised for being too wide-ranging and too ambitious, and with too great a commitment to consensus.

It is easy to be irritated by the failure to distinguish ends and means among the 17 Goals and 169 Targets, to be sceptical about the feasibility of some individual targets, and to be disappointed by the paucity

**Figure 1. The new Global Goals**

Source: The Global Goals for Sustainable Development<sup>9</sup>

**Figure 2. Preamble to the SDG Declaration**

#### Preamble

This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. We recognise that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.

All countries and all stakeholders, acting in collaborative partnership, will implement this plan. We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind.

The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what they did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

The Goals and targets will stimulate action over the next fifteen years in areas of critical importance for humanity and the planet:

#### People

We are determined to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment.

#### Planet

We are determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.

#### Prosperity

We are determined to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.

#### Peace

We are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.

#### Partnership

We are determined to mobilize the means required to implement this Agenda through a revitalized Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focussed in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people.

The interlinkages and integrated nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new Agenda is realised. If we realize our ambitions across the full extent of the Agenda, the lives of all will be profoundly improved and our world will be transformed for the better.

Source: The Global Goals for Sustainable Development<sup>10</sup>

of work on sequencing and trade-offs. It is no secret that some would have preferred a shorter, tighter framework of the kind laid out in the 'Report of the High Level Panel on Post-2015'.<sup>11</sup>

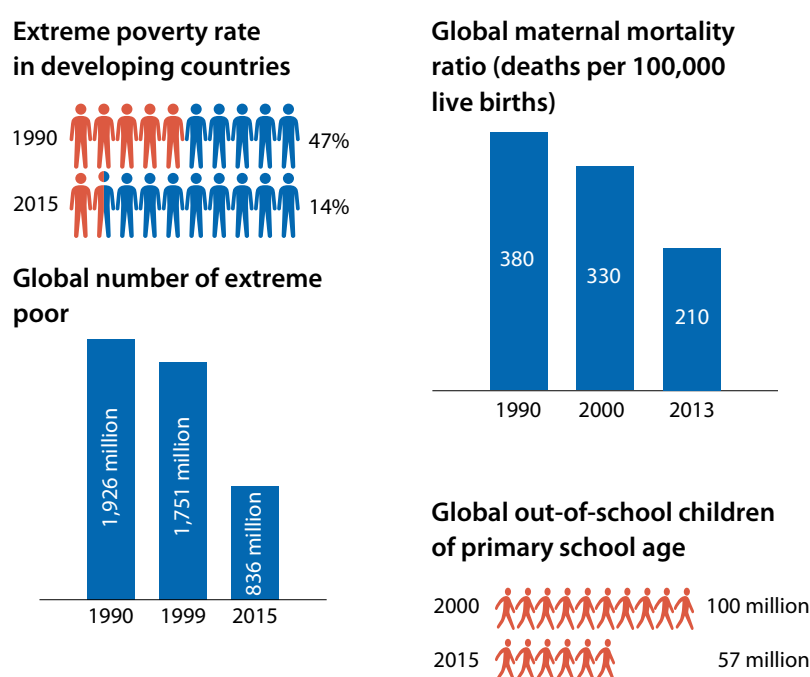
The 'escape hatch', however, is the wording in the SDG Declaration, which says that the SDGs will be global in scope, but that individual countries will shape their own programmes. This is best expressed in Paragraph 21, which says:

"... All of us will work to implement the Agenda within our own countries and at the regional and global levels, taking into account different national realities, capacities and levels of development and respecting national policies and priorities. We will respect national policy space for sustained, inclusive and sustainable economic growth, in particular for developing states, while remaining consistent with relevant international rules and commitments."

This makes the SDGs aspirational, a guiding normative framework rather than a foundation for action. Charles Kenny made a similar point, calling the SDG framework no more than (and no less than) a document that "provides an authorising environment".<sup>12</sup> A key challenge will be how national politicians, from both developed and developing countries, benefit from an inspiring and comprehensive global vision, but also retain control and ownership of the agenda.

It goes without saying that there is a great deal to do if poverty and hunger are to be eliminated by 2030. As the 2015 Millennium Development Goals (MDGs) progress report made clear,<sup>13</sup> over 800 million people still live in absolute poverty, representing 14% of the population of the developing world. As a UN report shows, over 160 million children – a quarter of the world's total – are stunted by malnutrition; over 57 million children are out of school; nearly 300,000 women die in childbirth each year. These figures, some of which are shown in Figure 3, may even be underestimated,<sup>14</sup> owing to the paucity of data from some very poor and conflict-affected countries.

**Figure 3. Progress and outstanding challenge towards some MDGs**



Source: UN<sup>15</sup>



### The Paris Agreement on climate change

The Paris Agreement also represented a major landmark: not enough on its own to end climate change, but a strong signal – and a very good start. This global agreement provides: an ambitious long-term goal (to limit temperature rise to well below 2°C above pre-industrial levels, and if possible no more than 1.5°C); universal commitments; regular review processes; and a raft of necessary instruments, including a commitment by developed countries to finance both mitigation and adaptation. Further, the participation and commitments of many non-state actors in Paris, including cities and the private sector, augured well for rapid technical and institutional innovation, and thus over-delivery on the agreed targets. In the end, the diplomatic process fulfilled its principal function, bringing all countries together in shared recognition that ‘something must be done’.

At the heart of the Paris Agreement lies the long-term mitigation objective in Article 2, reproduced in Figure 4. Underpinning this was some hard negotiation, especially on the inclusion of a 1.5°C target, and also the momentum imparted by specific pledges by 186 countries in the form of voluntary Intended Nationally Determined Contributions (INDCs).

**Figure 4. The mitigation target in the Paris Agreement on climate change**

#### Article 2

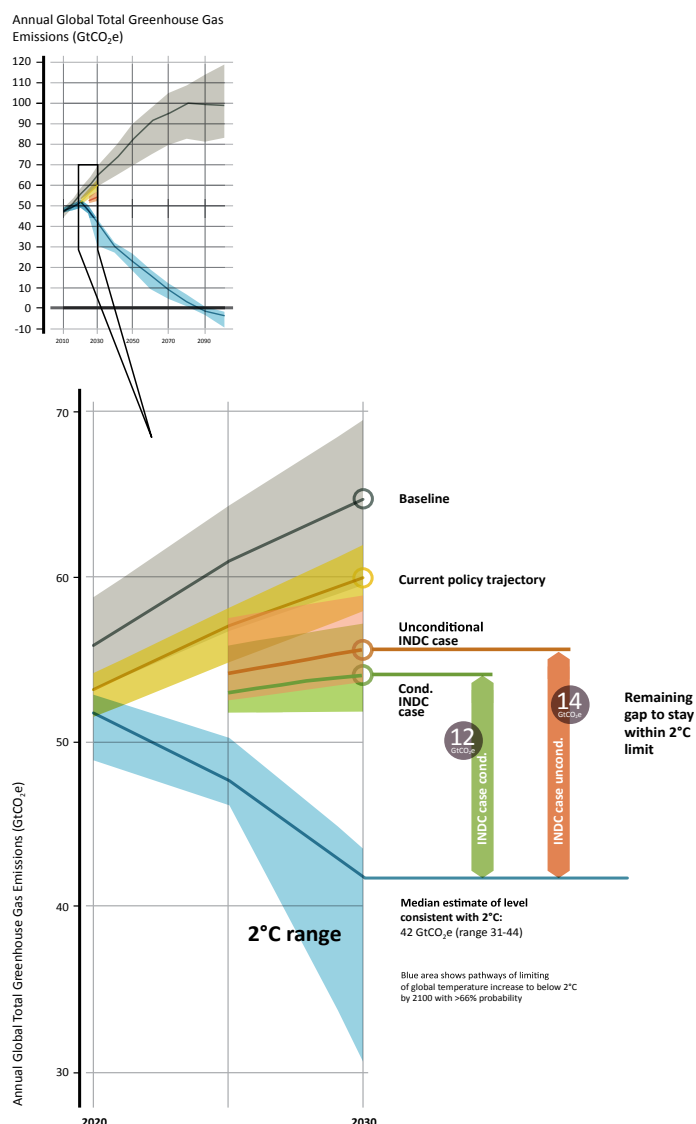
1. This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:
  - (a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
  - (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;
  - (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development.
2. This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

Source: UNFCCC<sup>16</sup>

In this sphere, there is much to do. First, for all the fanfare, the Paris Agreement is alarmingly modest. Adding up all the national commitments in the INDCs shows that the world has so far formally only committed to between a quarter and a third of the reductions in greenhouse gas emissions needed by 2030 to achieve a limit of 2°C, let alone 1.5°C.

The Emissions Gap Report by the United Nations Environment Programme (UNEP)<sup>17</sup> makes this point with chilling clarity. UNEP shows that likely emissions on the current trajectory before the INDCs amounted to about 60 gigatonnes (Gt) being released in 2030, and that the level needed to keep the world on a least-cost path to 2°C is 42 Gt being released in 2030. If all the unconditional INDCs are implemented, the expected level of emissions in 2030 is 56 Gt; the figure might be 54 Gt if conditional INDCs are also fully implemented. That means the INDCs have only ‘filled’ 22–33% of the gap that existed before the process began (see Figure 5).

**Figure 5. The emissions gap**



Source: UNEP<sup>18</sup>

It is clear that some countries have done their share, but many have not. The Climate Action Tracker (CAT)<sup>19</sup> shows that some countries have qualified as those setting an example to others: Bhutan, Costa Rica and Ethiopia are often mentioned. Others, however, have done too little: the CAT league table<sup>20</sup> rates 13 countries as 'inadequate' among those it assessed, including Australia, Canada and Japan, as well as several emerging economies.

The global temperature rise implied by the conditional and unconditional INDCs that countries have submitted suggests that there is a two-thirds chance of warming being held to 3–3.5°C. If only unconditional pledges are considered, the figure could be as high as 4°C. It is not surprising that scientists continue to warn that much more needs to be done in the future to limit warming to the target of 1.5°C.<sup>21</sup>

There is a large amount of action being generated by various non-state actors (including cities), by groupings representing certain sectors (like cement) and by private sector companies. These may or may not reduce emissions further: it is not clear how far such initiatives have already been factored into national INDCs. For the period to 2020, these initiatives may reduce emissions by more than official government pledges. They could contribute up to an additional 2 Gt of emission reductions in 2020. No analysis is available yet for the period after 2020.

There was, in addition, an astonishing number of events and new announcements in Paris by non-state actors, including big contributions to renewable energy in general, for example the Breakthrough Energy Coalition<sup>22</sup> supported by Bill Gates and Mark Zuckerberg, among others, and the roll-out of solar power in particular, including the solar initiative launched by Narendra Modi, the prime minister of India.<sup>23</sup>

Thus, an optimistic take on the figures would be to say that the level of international cooperation represented by INDCs covering 186 countries is unprecedented, and that significant reductions will follow. Many countries will have pledged conservatively, so with luck they will exceed their commitments. Further, the contribution of non-state actors may prove to be greater and more 'additional' than presently thought. There are many technological and policy options in the pipeline, so there is still time to bend the curve further towards 42 Gt of emissions released in 2030.

### A wicked problem?

Together, the adoption of the SDGs and the finalisation of the Paris Agreement highlight the urgency of adopting a new agenda to climate change, and open a new chapter in efforts to do this. Achieving the SDGs will require close integration of poverty, environmental and social action, which is well captured by the concept of 'zero zero': zero poverty by 2030 and zero net emissions of CO<sub>2</sub> by about 2070.<sup>24</sup> Deep decarbonisation will be required in all countries and all sectors.<sup>25</sup> Furthermore, whatever the pace of change is with respect to emissions, current warming will increase the frequency and intensity of extreme weather events.<sup>26</sup> This means that resilience, disaster risk management and social protection will grow in importance.

The new agenda brings to the foreground an issue that would have become evident even if the goals had not been formulated in the way they have – namely that it will not be enough just to carry on with business as usual. New ways of organising production and consumption will be required, with large-scale and often unanticipated adjustments required.

It is also worth remembering in this context that new approaches and trajectories need to be integrated into the transformations that accompany development,<sup>27</sup> with or without climate change: changing demographics, urbanisation, inter-sectoral shifts, integration into the world economy, and the management of financial and trade shocks.

Some commentators see complementarities, pointing to the win–win benefits of combining climate action with poverty reduction. The Overseas Development Institute's (ODI) zero zero work emphasises this point, making use of analysis of the new climate economy by the Global Commission on the Economy and Climate.<sup>28</sup> There is an emphasis in this work on co-benefits like reduced air pollution. But it is reasonable to ask how we are going to handle the disruption that lies ahead, and the political problems likely to be associated with what Schumpeter calls 'creative destruction'.<sup>29</sup> We are left with the questions of: who gains and who loses? Whose interests dominate? And how will the major transformations implied by zero zero be handled?

In tackling these questions, the key issue for the future is mainstreaming. Every country will need to mainstream climate compatible development. Practically, there will be many specifics. From a longer list, we can consider the following priorities:

1. Deliver sustainable energy and energy services at scale.
2. Build sustainable cities in an urbanising world.
3. Decarbonise agriculture.
4. Review industrial policies, especially the implications of climate action for competitiveness.
5. Engage with the private sector to act in ways that are consistent with poverty reduction and sustainable development (including through regulatory re-engineering).
6. Link climate resilience and social protection.

7. Develop green fiscal policies, with important links to public expenditure management and tax structures.
8. Follow up on the INDCs, supporting negotiators with a stream of work on the emissions gap, and on measuring, reporting and verification and related issues, including integrated assessment models. Additional work is also needed on capacity and on the art of negotiation.
9. Review parliamentary and legislative processes, which will include working with think tanks.
10. Build the capacity and increase the skills and resources of knowledge brokers.
11. Conduct further work on climate finance and simplify the architecture around climate finance.

The agenda can be presented as a climate agenda, but what is really striking, especially if the conversation veers towards mainstreaming, is that it is also a development agenda, one with which development studies is entirely familiar. There is not an issue here that is not well known; there is considerable literature on each, active debates, and deep reservoirs of expertise. Central to this whole agenda will be managing the politics: balancing winners and losers, managing trade-offs, and dealing with vested interests.<sup>30</sup>

Achieving the dual objective of poverty reduction and sustainability is, however, a 'wicked problem',<sup>31</sup> perhaps even a 'super-wicked problem'.<sup>32</sup> Figure 6 lists the characteristics of a wicked problem, as identified by the Australian Public Service Commission.<sup>33</sup> Note especially the emphasis on interdependencies and unforeseen consequences, as well as the nod to complexity theory.<sup>34</sup>

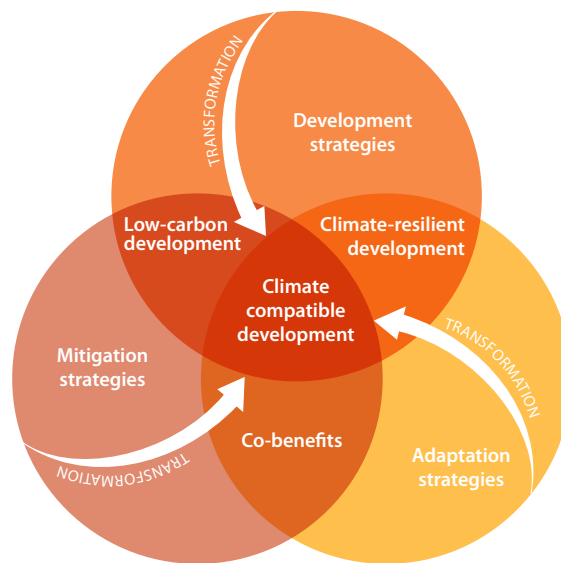
**Figure 6. Characteristics of a wicked problem**

- Wicked problems are difficult to clearly define – different stakeholders have different views of what the problem is and appropriate responses
- Wicked problems have many interdependencies and are often multi-causal – there may be conflicting goals for those involved
- Attempts to address wicked problems often lead to unforeseen consequences – wicked problems exist in complex systems that exhibit unpredictable, emergent behaviour
- Wicked problems are often not stable – understanding of the problem is constantly evolving
- Wicked problems usually have no clear solution – there is no right or wrong response, although there might be worse or better responses
- Wicked problems are socially complex – it is social complexity, rather than technical complexity, that is overwhelming
- Wicked problems hardly ever sit conveniently within the responsibility of any one organisation – these problems cross governance boundaries
- Wicked problems involve changing behaviour – with all the difficulties that poses
- Some wicked problems are characterised by chronic policy failure – they have become intractable, despite numerous attempts at solutions.

Source: Planetcentric<sup>35</sup>

### 3. Climate compatible development as a framework for analysis

An entry point to solving the wicked problem of climate change is the model of climate compatible development, developed for CDKN (Figure 7). Climate compatible development takes place when three things come together: mitigation, adaptation and development, embedded in broader economic transformations. Mitigation and adaptation strategies are widely recognised as the basic building blocks of climate policy. The role of transformation in the development process is emphasised less often, however. It refers to the impact of global climate change (or measures to deal with it) on trade sectors, including import-competing sectors as well as export-oriented ones, and potential as well as actual sectors.

**Figure 7. Climate compatible development**

Source: CDKN<sup>36</sup>

Transformation can affect businesses and governments anywhere in the world. Will international prices change? Will new markets appear? Will old ones disappear? What will happen to the competitive advantage of different firms in different sectors?

Thus, climate-related economic development challenges and opportunities mean that:

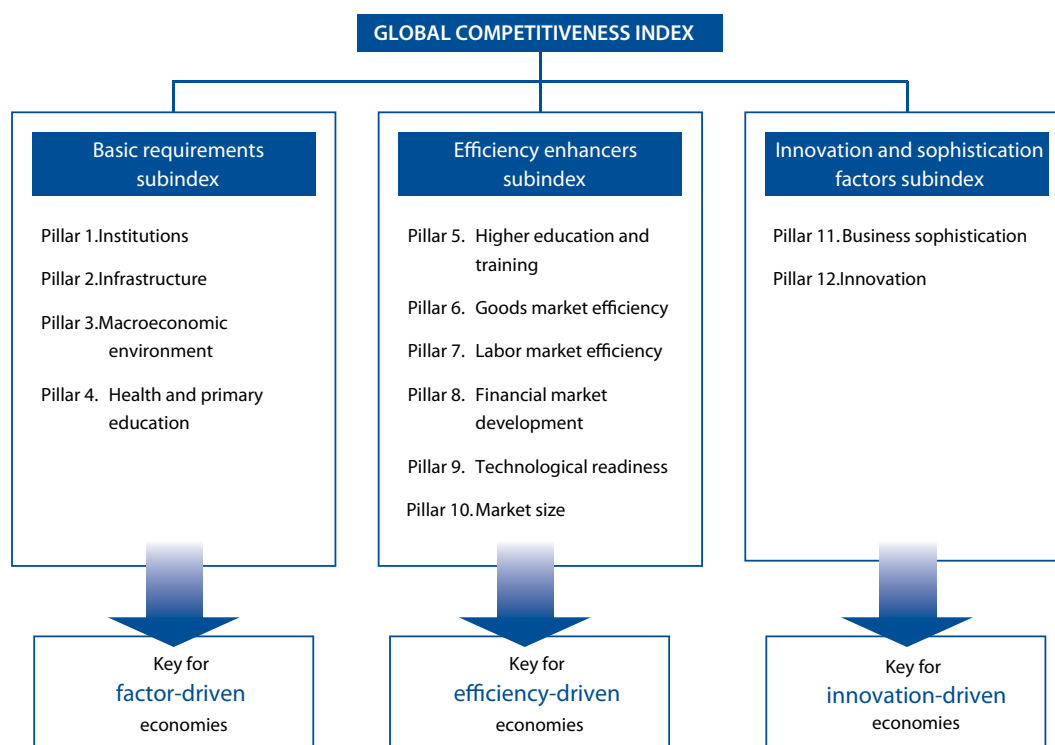
- All exporters are affected by the rising cost of transport or the changing relative prices of transport types. So export-oriented growth strategies may not be as attractive or may require changing. Island economies that are dependent on tourism, for example, may be affected negatively by rising air 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 the 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.<sup>37</sup>

In this context, key questions for climate compatible development are: how to foster innovation, and how to put industrial policy back at the centre of debate? Justin Lin calls this the "new structural economics".<sup>38</sup> Mariana Mazzucato's 'Entrepreneurial State'<sup>39</sup> becomes the instrument of choice to achieve this. However, if the new climate and development agenda is genuinely transformational, which countries will own the successes of 'disruptive innovation'<sup>40</sup> and which will lag?

One way into this debate is to examine a country's competitiveness. The World Economic Forum's Competitiveness Index<sup>41</sup> explicitly recognises the importance of technical readiness and innovation as countries develop (Figure 8). Other approaches include the growth diagnostics developed by Hausmann and colleagues.<sup>42</sup>



**Figure 8. The Global Competitiveness Index Framework**



Source: World Economic Forum<sup>43</sup>

#### 4. Issues in climate compatible development

As climate compatible development has moved from the fringe to the mainstream, seven issues have come to the fore and demand solutions (Figure 9) and are discussed in a book from CDKN.<sup>44</sup> Let me focus here on three cross-cutting issues: policy leadership, policy design and policy implementation.

**Figure 9. Issues in mainstreaming climate compatible development**

1. Eliminating ambiguity in the concept of climate compatible development and exploring possible trade-offs in the implementation of climate-related policies that will deliver the SDG goals and targets.
2. Making the case and winning the argument in countries where leaders face many competing demands on political capital and resources.
3. Managing climate compatible development planning in ways that mainstream climate concerns into development planning and ensure cross-government coherence.
4. Finding the resources to cover any additional costs of climate compatible development, drawing on international as well as domestic sources.
5. Creating the right culture and instruments for implementation to ensure that plans are not blown off course.
6. Delivering at scale so that impact is transformational in scale and irreversible.
7. Linking the national to the global, so that national interests are well represented in global negotiations and global agreements are reflected in national action.

Source: CDKN<sup>45</sup>

#### Policy leadership

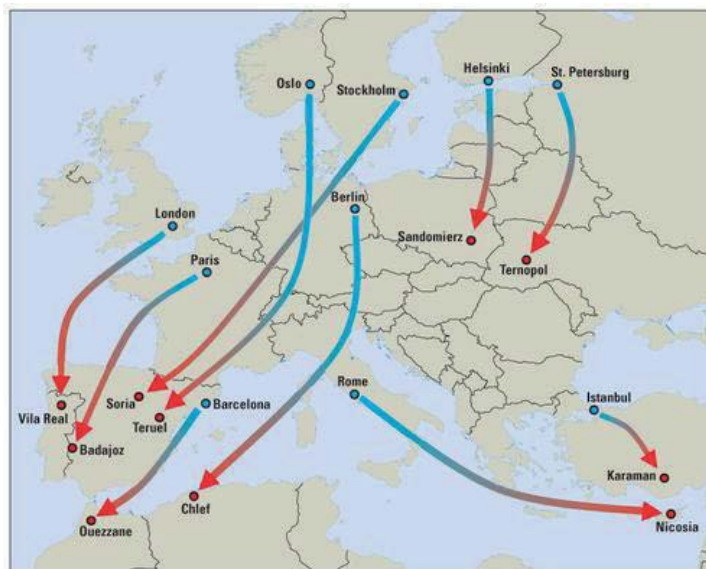
It may seem strange to give prominence to the issue of leadership so soon after the apparently successful conclusion of the climate talks in Paris – talks marked by the deep personal engagement of around 150 leaders from around the world, including religious as well as political figures.<sup>46</sup> However, as Andrew Adonis, a former UK government minister, reminds us in his book on education,<sup>47</sup> “reform is a marathon and not a sprint”, and leaders need to “lead and explain, lead and explain” (Figure 10).

**Figure 10. Lessons on leadership**

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

Source: Adonis (2012)<sup>48</sup>

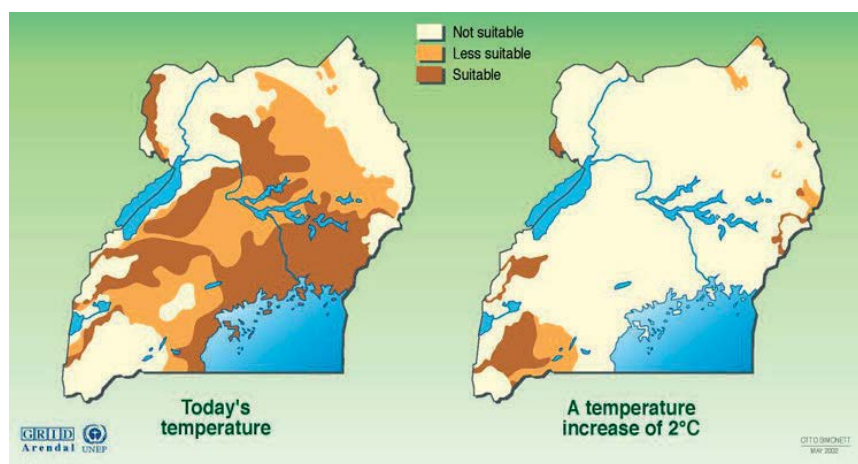
Climate change is complex and explanation is a science in itself. Jonathan Haidt, for example, discusses the way in which messages can be crafted to reach people with very different moral 'taste-buds'.<sup>49</sup> Sometimes, images can make a powerful case. For example, the World Bank's World Development Report on development and climate change from 2010<sup>50</sup> shows which places European capitals are likely to resemble by about 2050 (Figure 11). Oslo and Stockholm are relocated, so to speak, to northern Spain; London to northern Portugal; and Berlin to Chlef in Algeria.

**Figure 11. Northern cities need to prepare for a Mediterranean climate**

Source: World Bank<sup>51</sup>

Another example (Figure 12) shows the area suitable for robusta coffee in Uganda, now and if the temperature rises by 2°C. These maps, from the Uganda National Climate Change Adaptation Plan of 2007,<sup>52</sup> show coffee almost disappearing from Uganda unless new technology can be found. It is worth noting that coffee production employs 3.5 million people in Uganda, and provides 30% of its export earnings. There are many similar examples: tea in Kenya, or coffee in Colombia. In Colombia, the areas suitable for coffee production will move up mountains by 400 metres – a very significant change.

**Figure 12. Impact of temperature rise on robusta coffee in Uganda**



Source: Government of Uganda (2007)<sup>53</sup>

It is important to leave people feeling empowered not powerless, though, with an optimistic message that something can be done. As Anthony Giddens observed in his book on the politics of climate change,<sup>54</sup> Martin Luther King did not stir his audience in 1963 by declaiming ‘I have a nightmare’.

There are other important lessons about leadership in Adonis’ list. One is to “build coalitions, not tabernacles”. This, among other things, implies a role for parliamentarians, working together in cross-party consensus. In the UK, for example, the Climate Change Act (2008), which set a long-term decarbonisation goal and established an independent committee to monitor progress, was passed by the House of Commons (which comprises members of different political parties) with only five votes against.<sup>55</sup>

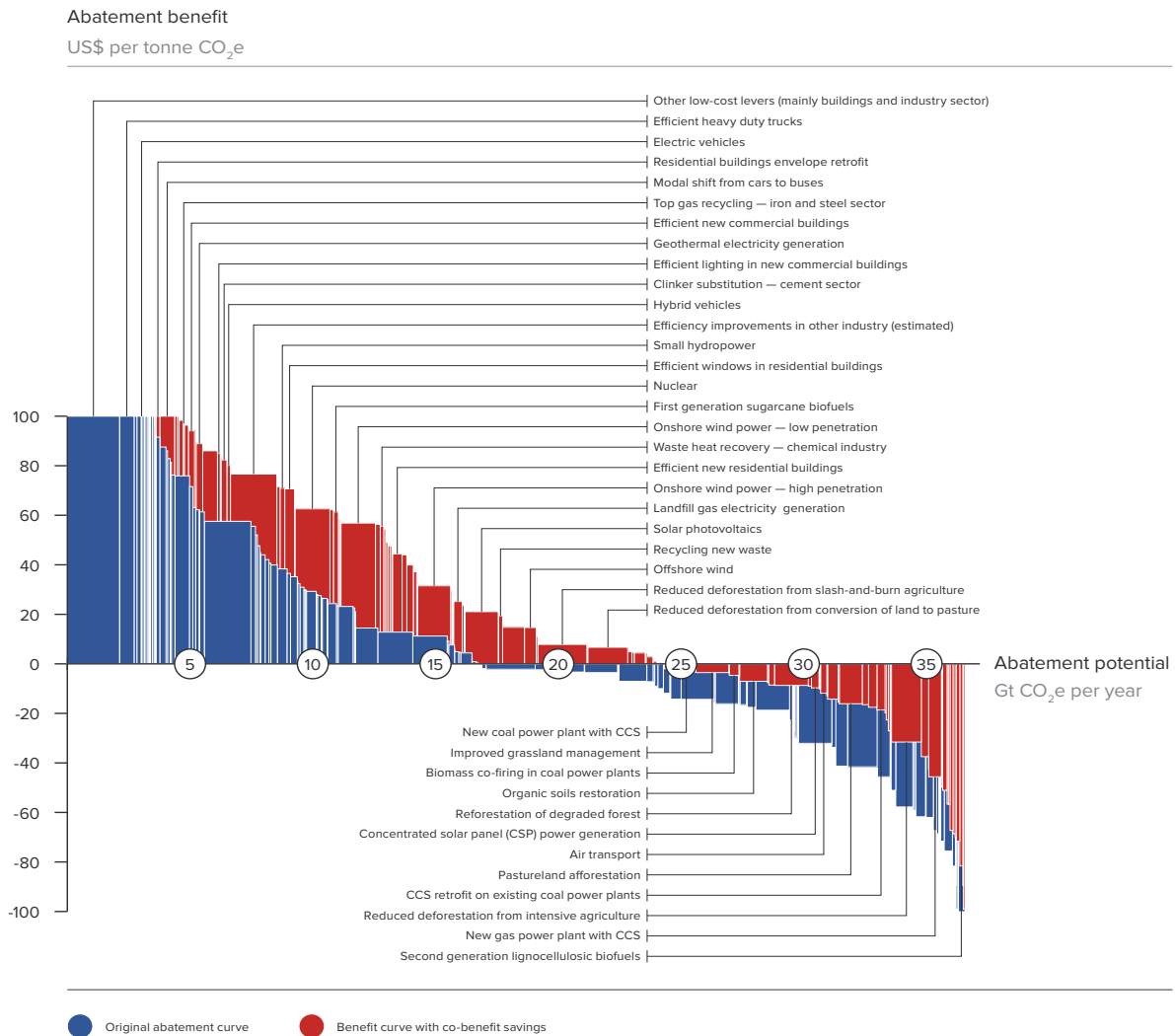
### Policy design

There is considerable literature on the technicalities of forming climate change policy in developing countries: at international, national and local levels; both fiscal and administrative policies; and climate-specific or more general policies. For example, there is no shortage of guidance on how to design a cap-and-trade regime, or an energy policy that favours renewable resources, or a package to strengthen resilience to climate shocks. CDKN has published many policy briefs and ‘Inside Stories’<sup>56</sup> that deal with these topics. The *New Climate Economy Report* has many more examples, for example using marginal abatement benefits curves (Figure 13). The UNEP’s *Emissions Gap Report 2015* provides an accessible list of successful innovations, including those in such fields as transport, energy efficiency and agriculture (Figure 14). It is important in policy design to assess the impact on the poorest people. ODI’s *Zero Poverty, Zero Emissions* report illustrates how this can be done (Table 1).

It is worth noting that the impacts are not necessarily positive: climate compatible development cannot be assumed. Indeed, there is a more general point: most policy change, on any topic, creates winners and losers, some of whom may be poor and some not. Policy design for climate compatible development is not simply about choosing the best technical interventions. That is why managing transition is central to effective climate compatible development.

For example, Morocco used a staged approach to reducing energy subsidies, which cost the country 5.5% of its gross domestic product. First, the public were educated about the cost rises, and then efforts were made to ensure that losers from the elimination of subsidies were compensated through a social programme. Similarly, Australia’s carbon pricing mechanism legislation<sup>57</sup> included the following measures:

- The 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.

**Figure 13. Marginal abatement benefits curve for 2030**

Source: Global Commission on the Economy and Climate<sup>58</sup>

- Assistance was given to emissions-intensive, trade-exposed industries, in the form of free permit allocations (but on a declining basis) and targeted grant programmes. Both were designed to provide incentives to improve emissions intensity.
- Households were given assistance in the form of tax cuts and increased payments to pensioners and welfare recipients, paid for by directing 50% of all revenues raised from carbon pricing to households.
- The Climate Change Authority and the Productivity Commission regularly reviewed the legislation and its impacts.

### Policy implementation

Finally, it is worth remembering that leadership is measured by actions, not words. As Tony Blair, the former UK prime minister, observed in a piece for his Africa Governance Initiative:

“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.”<sup>59</sup>

**Figure 14. Summary of proven policies for reducing greenhouse gas emissions**

**Summary of proven policies for reducing greenhouse gas emissions and achieving development goals highlighted in previous UNEP emissions gap reports (source: UNEP 2012, 2013, 2014)**

The 2012, 2013 and 2014 UNEP Emission Gap Reports identify policies in key areas that have proven successful in reducing greenhouse gas emissions in many different countries, while contributing to national development goals. Such policies have the potential to make a significant contribution to bridging the gap, if scaled up in terms of ambition and geographical coverage.

**Energy**

These policies are related to improvements in energy efficiency in various sectors:

- Building sector – Regulations for building energy performance or codes for new construction: especially with regards to energy efficiency in heating, cooling appliances and lighting. Most developed countries also need to pay attention to renovating existing buildings in an energy efficient manner
- Industry sector – Country- and subsector-specific approaches rather than standardized policies: due to the diverse nature of the industry sector target policies have proven most effective
- Transport sector – Mandatory fuel economy standards for road vehicles: principal means for slowing down the growing fossil fuel consumption. Often supplemented with measure such as labelling, taxes and incentives, while promoting more efficient transportation modes
- Appliance standards – Regulations that prescribe the energy performance of manufactured products
- Appliance labels – Energy-efficiency labels that are fixed to manufactured products to describe the products' energy performance.

**Agriculture**

- Promotion of no-tillage practices
- Improved nutrient and water management in rice production
- Agroforestry: different agricultural management practices that all deliberately include woody perennials on farms and the landscape, and which promote a greater uptake of carbon dioxide from the atmosphere by biomass and soils.

**Buildings**

Policies that lower energy use and therefore reduce carbon-dioxide and other emissions (see also under Energy):

- Building codes: regulatory instruments that set standards for specific technologies or energy performance levels and that can be applied to both new buildings and retrofits of existing buildings.

**Transport**

These policies reduce energy use and therefore reduce carbon dioxide and other emissions (see also under Energy):

- Transit-oriented development: the practice of mixing residential, commercial and recreational land uses to promote high-density neighbourhoods around public transit stations
- Bus Rapid Transit (BRT): key elements of bus rapid transit include frequent, high-capacity service; higher operating speeds than conventional buses; separated lanes; distinct stations with level boarding; and fare prepayment and unique branding
- Vehicle performance standards: establish minimum requirements based on fuel consumption or greenhouse gas emissions per unit of distance travelled by certain vehicle classes.

The policies included above do not represent a comprehensive list. Moreover, some policies will be more appropriate and successful in reducing emissions in some countries than in others. Their success also depends on how stringently they are implemented.

Source: UNEP<sup>60</sup>

Tony Blair created controversy in the UK with a speech<sup>61</sup> complaining about the “scars on my back” from trying to reform the public sector. He 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*.<sup>62</sup> This brought about a strongly target-based, quantitative and not uncontroversial approach to monitoring progress.

CDKN has acquired useful experience in supporting implementation at the country level.<sup>63</sup> Climate compatible development planning cannot be the prerogative of ministries of environment, however vital these are as catalysts of process. In the countries where CDKN has worked, climate compatible development becomes credible only when the ministries responsible for finance, planning, energy,



**Table 1. Examples of climate mitigation actions and their impact on the livelihoods of the extreme poor**

Mitigation action	Impact on the livelihoods of the extreme poor	Additional pro-poor considerations
Climate-smart agriculture practices	Direct increase of agricultural productivity and income for those in extreme poverty. Direct increase in the value of land for poor land-owners. Increased resilience and reduced risk of large income fluctuations.	Benefits dependent on the availability of financing and technical capabilities for those in extreme poverty. Most effective when combined with the formalisation of land rights.
Preserving and increasing natural carbon sinks	Job and income creation or enhancement for those reliant on forest products. Increase in the value of land for poor land-owners benefiting from associated eco-system services (e.g. water regulation, soil conservation).	Job and income creation targeted at those who may have lost source of livelihood through forest preservation.
Increased public transport	Reduction in health-related costs from air pollution. Greater mobility at lower cost, which expands employment opportunities and net benefits.	Public transport designed and priced to ensure that benefits accrue to those in extreme poverty.
Low-emissions waste management	Reduction in health-related costs from poor sanitation.	Waste treatment priced to ensure that benefits accrue to those in extreme poverty.
Energy-efficient residential buildings	Reduced long-term cost of housing and related services. Improved asset value for the home-owning poor.	Benefits dependent on the availability of financing and technical capabilities for those in extreme poverty. Most effective when combined with the formalisation of property rights.
Distributed renewable energy (electric and household thermal)	Reduction in health-related costs from indoor pollution. Access to energy at lower cost than high-carbon alternatives.	Distributed renewable energy may be limited to providing energy services that only meet basic needs
Centralised renewable energy (electric and thermal)	Reduction in health-related costs from ambient air pollution when replacing coal-fired generation. Job creation (IRENA). Higher cost of energy could have a negative impact on the resources of those in extreme poverty.	Avoiding impacts on energy prices would require compensation through other mechanisms.
Increased bio-energy (power or transport)	Higher agricultural crop prices could improve the incomes of poor farmers. Higher food prices could have a negative impact on those in extreme poverty in urban areas	Avoiding impacts on food prices would require clear restrictions on where bio-energy crops are grown.
Reduced subsidies for fossil fuels and agricultural inputs (including fertilisers)	Better-targeted technical and cash transfers increase the income of those in extreme poverty.	Dependent on replacing regressive subsidies with better-targeted assistance.

Source: ODI<sup>64</sup>

infrastructure, industry and agriculture become fully committed. All stakeholders need to be involved, including the many private sector actors and civil society groups.

CDKN's experience shows that successful policy implementation also depends on strong cross-government coordination, and this in turn benefits greatly from having sufficient numbers of people exposed to climate change issues and trained in relevant analysis. Capacity can be built in various ways: internally, through on-the-job training, or via fellowships and secondments, including internationally. As a knowledge network, CDKN has also demonstrated the value of knowledge brokers in building and maintaining countries' capacity.

There are also lessons about how to avoid becoming trapped in a 'pilot phase syndrome'. CDKN's experience points to the importance of telling good stories, supporting project champions, and providing leaders with compelling evidence derived from good monitoring and evaluation. Once a 'snowball effect' has been induced, professional networks play a role through learning and peer exchange.

These lessons are not very different to those garnered from more general change management experience, for example Kotter's '8-step process for leading change', which emphasises the importance of building on the success of short-term wins (Figure 15). However, it is worth emphasising one key lesson from CDKN's experience: there is no single blueprint to the challenge of climate compatible development.<sup>65</sup> Progress at country level, and subnationally, will be idiosyncratic, progressive and probably uneven, characterised by sudden leaps forward and occasional, unexpected setbacks. The challenge for all those engaged in climate compatible development is to prepare for such a process.<sup>66</sup>

**Figure 15. The 8-step process for leading change**



Source: Kotter International<sup>67</sup>

## 5. Conclusion

Climate compatible development is really a development agenda and it is time for development studies to lead the charge on climate change. This imposes a special responsibility on all of us who work in development think tanks – to build on the good work that already exists.

Development studies will bring many assets to the table. For example, the wider climate field will benefit from the methods of development studies, especially multi-disciplinarity, ranging across issues, and linking the macro to the micro.

More fundamental, however, is the importance of the values so strongly embedded in development studies, and so strongly represented at many think tanks: trust-building, dialogue, independence, sharing, and a commitment to praxis.

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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 the country level.

## About CPD

The Centre for Policy Dialogue (CPD) was established in 1993 as a non-profit civil society initiative with a view to advance the cause of a participatory, inclusive and accountable development process in Bangladesh and contribute to Bangladesh's socioeconomic development and strengthened regional and global economic integration. In undertaking these endeavours, CPD seeks particularly to give voice to the interests and concerns of marginalized stakeholders in society.



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